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NOTE

From:	General Secretariat of the Council
To:	Delegations
Subject:	Additional information provided by the Commission related to impact assessment on ESR, EE and RES

Delegations will find attached, for information and as received from the Commission services, three reports related to national modelling results from PRIMES plus the macroeconomic modelling:

- Technical report on Member State results of the EUCO policy scenarios, by E3MLab & IIASA, December 2016
- Technical report on macroeconomic Member State results of the EUCO policy scenarios, by E3MLab, December 2016
- Summary of E3ME Modelling, by Cambridge econometrics, December 2016

The Commission provided the following additional information concerning the above documents:

With the release of the Impact Assessment accompanying the proposal for an Effort Sharing Regulation, SWD(2016) 247 final, Member States have asked for additional information at Member State level related to the used policy scenarios. As indicated in the Working Party Environment, DG CLIMA and DG ENER would look into making this type of information available once the related proposals, notably

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on Energy Efficiency and Renewable Energy and their impact assessments (SWD(2016) 405 final and SWD(2016) 418 final), would be available.

In response to this, three technical reports have been prepared by the scenario modellers representing this further information at Member State level, for the different policy scenarios used in the different Impact Assessments.

The first report contains additional information related to the EUCO27 and EUCO30 scenarios carried out by the PRIMES + GAINS modelling suite, as used in the IA for the Effort Sharing Regulation. This report also includes additional scenarios with higher energy efficiency and renewables penetration. These additional scenarios were used in the IAs on Energy Efficiency and Renewable Energy.

The second and third report contain result at Member State level related to macro economic projections for scenarios by respectively the E3ME model and the GEM E3 model. These projections, looking at the achievement of higher energy efficiency targets were used for the Energy Efficiency Impact Assessment.

Technical report on Member State results of the EUCO policy scenarios

By E3MLab & IIASA, December 2016

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Introduction

In the context of the 2016 Impact Assessment work of the European Commission, two core policy scenarios, EUCO27 and EUCO30, were prepared by a consortium led by E3MLab¹, hosted at the National Technical University of Athens (NTUA), and including the International Institute for Applied System Analysis (IIASA). The two policy scenarios were built based on the EU Reference Scenario 2016² and designed to achieve the 2030 targets as agreed by the European Council³. The analysis of impacts of the two policy scenarios was the input⁴ to the Effort Sharing Regulation Impact Assessment⁵ and the Staff Working Document⁶ accompanying the Communication on low-emission mobility strategy published in July 2016, as well as the Impact Assessment accompanying the proposal for recast of the Directive on the promotion of energy from renewable sources⁷ and

¹ <http://www.e3mlab.eu>

² https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf

³ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145397.pdf

⁴ The scenario runs in this document are those used for the Effort Sharing Regulation Impact Assessment and the Impact Assessment accompanying the proposal for a revised Energy Efficiency Directive. Some minor technical changes were performed for sector-specific modelling in other analytical documents.

⁵ http://ec.europa.eu/clima/policies/effort/proposal/index_en.htm

⁶ http://ec.europa.eu/transport/themes/strategies/new/s/2016-07-20-decarbonisation_en

⁷ <https://ec.europa.eu/energy/en/news/eu-leading-renewable-energy>

the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive⁸ published in November 2016⁹. Using two core scenarios ensures consistency of the proposals and increases the robustness of policy conclusions.

In addition, the EUCO+ scenarios and the EUCO3030 sensitivity were also prepared. The EUCO+ scenarios were presented only in the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive. The EUCO3030 sensitivity was presented both in the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive and the Impact Assessment accompanying the proposal for recast of the Directive on the promotion of energy from renewable sources.

Construction of scenarios

The two core policy scenarios used in all Impact Assessments reflect the 2030 targets agreed by the European Council:

- EUCO27: A scenario that achieves the at least 40% GHG emissions (compared to 1990) reduction target (with the split ETS/non-ETS reducing by 43%/30% in 2030 compared to 2005), a 27% share of renewables and a 27% energy efficiency target¹⁰.
- EUCO30: A scenario that achieves the at least 40% GHG emissions reduction target (with the split ETS/non-ETS reducing by 43%/30% in 2030 compared to 2005), a 27% share of

renewables and the energy efficiency target of 30%¹¹.

The EUCO+ scenarios (EUCO+33, EUCO+35 and EUCO+40) build on the EUCO30 scenario but as they explore more ambitious energy efficiency targets (33%, 35% and 40% respectively), they overshoot the European Council targets:

- for GHG emissions in ETS sectors, they achieve reductions above 44%;
- for GHG emissions in non-ETS sectors, they achieve reductions above 33%;
- for overall GHG emissions, they achieve reductions above 43%;
- for RES, they achieve a 28% share.

The EUCO3030 sensitivity builds on the EUCO30 scenario with 30% energy efficiency target but also achieves a 30% RES share. This scenario was built to analyse potential impacts of higher renewable deployment, in line with European Parliament positions. This sensitivity was simplified by assuming the same ETS carbon price as in the EUCO30 scenario. Overall, the GHG emissions reduction target in the ETS sector target is overshoot (48% reduction), the GHG emissions reduction in non-ETS sector target is overshoot (31% reduction) and the scenario achieves higher reduction in overall GHG emissions reduction (43%).

All scenarios also achieve the long term milestone to reduce GHG emissions domestically in the EU by 80%.

All scenarios reflect the current EU policy design when modelling the cost-effective achievement of 2030 targets. In doing so, they provide a basis for a coherent analysis of the impacts of energy efficiency and renewable targets, notably on non-ETS emissions at Member State level.

⁸ <https://ec.europa.eu/energy/en/news/commission-proposes-30-energy-efficiency-target>

⁹ The EUCO27 was also the starting point for the Impact Assessment accompanying the proposal for revised rules for the electricity market, risk preparedness and ACER.

¹⁰ Compared to 2007 baseline projections for the year 2030.

¹¹ Compared to 2007 baseline projections for the year 2030.

The approach followed for the modelling of all scenarios is to use a combination of policy instruments including carbon pricing to reduce emissions in the ETS and non-CO₂ emissions in the effort sharing sectors, standards, some specific transport policies, reduction of market barriers as well as broad incentives/obligations related to energy efficiency and renewables policies representing yet to be defined policies. All these policy instruments are applied in a coherent manner across all Member States, taking into account the current policy framework (as developed in the EU Reference scenario 2016). Most of these policies are varied in stringency/intensity between scenarios. While some policies are fully harmonised on the EU level (standards, carbon pricing) others take into account national conditions¹².

Overall, this reflects a cost-efficient achievement of GHG reductions in the context of different sets of EE and RES targets and existing policy mix.

Importantly, modelling is based on cost-effective achievement of targets and often simplified or aggregated representation of national and European policies and circumstances. National results should be read in this context and they do not prejudice the national plans to be developed in the governance process. It is also noted that distributional elements of proposals on the Effort Sharing Regulation or the EU ETS Revision are not taken into account in the scenarios.

Description of the modelling tools

The modelling suite used for quantification of all policy scenarios is the same one used for the elaboration of the EU Reference Scenario 2016, which is based on a series of interlinked models that combine technical and economic methodologies. The models have been peer-

reviewed and used for numerous publications in peer-reviewed journals.

The models produce detailed projections per sector and per country. They use detailed and updated databases. The calibration ensures continuity between historical data and projections.

The models used follow an approach which is based on micro-economics, they solve achieving a price-driven market equilibrium, and combine engineering with economic representations for all sectors. The energy system model PRIMES, central to the modelling suite, allows for mixed-complementarity to enable handling of multiple targets through dual variables (shadow prices) associated with targets constraints. This is for example useful for analysing simultaneously emissions reduction, energy efficiency and renewable energy targets. PRIMES is also able to incorporate technology dynamics (vintages) in order to represent in detail technology progress that influences emission formation and emission reduction.

The modelling suite is owned by a consortium led by E3MLab. While broad documentation, including model manuals is publicly available, the model codes are not available in the public domain.

Models outputs can only be claimed to represent the real world developments if respective, simplifying assumptions are held and all other conditions are unchanged. Consequently, each projection into the future is subject to significant uncertainties.

Description and role of each model

The PRIMES modelling suite was the core element of the modelling framework for transport, energy and CO₂ emission projections, whereas the GAINS model was used for non-CO₂ emission projections.

¹² For full description see EED Impact Assessment SWD (2016) 405 final.

A brief description of the models is provided below¹³.

PRIMES

The PRIMES model is an EU energy system model which simulates energy consumption and the energy supply system. It is a partial equilibrium modelling system that simulates an energy market equilibrium in the European Union and each of its Member States. This includes consistent EU carbon price trajectories.

Decision making behaviour is forward looking and grounded in micro economic theory. The model also represents in an explicit and detailed way energy demand, supply and emission abatement technologies, and includes technology vintages.

The core model is complemented by a set of sub-modules (i.e. the transport sector module and the biomass supply module). Industrial non-energy related CO₂ emissions are covered by a sub-module so that total CO₂ emissions can be projected. The model proceeds in five year steps and is for the years 2000 to 2010 calibrated to Eurostat data.

The PRIMES model is suitable for analysing the impacts of different sets of climate, energy and transport policies on the energy system as a whole, notably on the fuel mix, CO₂ emissions, investment needs and energy purchases as well as overall system costs. It is also suitable for analysing the interaction of policies on combating climate change, promotion of energy efficiency and renewables. Through the formalised linkages with GAINS non-CO₂ emission results and cost curves, it also covers total GHG emissions and total ESD sector emissions. It provides details on the Member State level, showing differential impacts across Member States.

PRIMES has been used for the analysis underpinning the Commission's proposal on the EU

¹³ Detailed model descriptions can be found at <http://ec.europa.eu/clima/policies/strategies/analysis/models>.

2020 targets (including energy efficiency), the Low Carbon Economy and Energy 2050 Roadmaps as well as the 2030 policy framework for climate and energy.

PRIMES is a private model and has been developed and is maintained by E3MLab/ICCS of National Technical University of Athens in the context of a series of research programmes co-financed by the European Commission.

The model has been successfully peer reviewed¹⁴, most recently in 2011¹⁵.

GAINS

The GAINS (Greenhouse gas and Air Pollution Information and Simulation) model is an integrated assessment model of air pollutant and greenhouse gas emissions and their interactions. GAINS brings together data on economic development, the structure, control potential and costs of emission sources and the formation and dispersion of pollutants in the atmosphere.

In addition to the projection and mitigation of greenhouse gas emissions at detailed sub-sectorial level, GAINS assesses air pollution impacts on human health from fine particulate matter and ground-level ozone, vegetation damage caused by ground-level ozone, the acidification of terrestrial and aquatic ecosystems and excess nitrogen deposition of soils.

Model uses include the projection of non-CO₂ GHG emissions and air pollutant emissions for EU Reference scenario and policy scenarios, calibrated to UNFCCC emission data as historical data source. This allows for an assessment, per Member State, of the (technical) options and emission potential for reducing non-CO₂ emissions. Health and environmental co-benefits of climate and energy

¹⁴ https://ec.europa.eu/clima/sites/clima/files/strategies/analysis/models/docs/primex_model_2013-2014_en.pdf

¹⁵ https://ec.europa.eu/energy/sites/ener/files/documents/sec_2011_1569_2.pdf

policies such as energy efficiency can also be assessed.

The GAINS model is accessible for expert users through a model interface¹⁶ and has been developed and is maintained by the International Institute of Applied Systems Analysis¹⁷. The underlying algorithms are described in publicly available literature. GAINS and its predecessor RAINS have been peer reviewed multiple times, in 2004, 2009 and 2011.

Detailed description of the policy scenarios

The EUCO and EUCO+ scenarios were developed by E3Mlab, with IIASA contributing non-CO₂ GHG mitigation cost curves, based on detailed guidance provided by the European Commission.

All scenarios start from the EU Reference scenario 2016 and add the targets and policies described in detail below. In addition, coordination policies are assumed, which enable long-term decarbonisation of the economy. Coordination policies are policies that ensure the necessary conditions materialise for decarbonisation in a 2050 perspective. They relate to infrastructure developments that will enable a larger exploitation of cost-effective options after 2020, such as grid developments as well as R&D and public acceptance that are expected to be needed to meet long term decarbonisation objectives. Coordination policies are fully costed in the scenarios.

In the EUCO27 scenario, energy efficiency delivers a large part of GHG emissions reduction in the effort-sharing sectors. This reduction is complemented by cost-effective reductions in non-CO₂ emissions across all sectors.

The EUCO30 scenario is constructed similarly to the EUCO27 scenario, but raises the ambition level of the specific energy efficiency policies, in a cost effective way. It implements the European Council guidance of having in mind 30% for the review of the Energy Efficiency target. A relevant implication is that more ambitious energy efficiency policies deliver all necessary reductions in the effort-sharing sectors, and no reductions in non-CO₂ sectors beyond Reference take place.

The tables below summarises the assumptions on climate, renewable energy and energy efficiency policies in the EUCO scenarios that have been modelled.

¹⁶ <http://gains.iiasa.ac.at/models/>

¹⁷ <http://www.iiasa.ac.at/>

Table 1. Specifications of the core policy scenarios EUCO27 and EUCO30

EUCO27	EUCO30
This scenarios is designed to meet all 2030 targets set by the European Council: • At least 40% GHG reduction (wrt 1990); • 43% GHG emissions reduction in ETS sectors (wrt 2005); • 30% GHG emissions reduction in effort sharing sectors (wrt 2005); • At least 27% share of RES in final energy consumption; • 27% primary energy consumption reduction (i.e. achieving 1369 Mtoe in 2030) compared to the PRIMES 2007 baseline (1887 Mtoe in 2030). This equals a reduction of primary energy consumption of 20% compared to historic 2005 primary energy consumption (1713 Mtoe in 2005).	This scenarios is designed to meet all 2030 targets set by the European Council: • At least 40% GHG reduction (wrt 1990); • 43% GHG emissions reduction in ETS sectors (wrt 2005); • 30% GHG emissions in effort sharing sectors (wrt 2005); • At least 27% share of RES in final energy consumption; • 30% primary energy consumption reduction (i.e. achieving 1321 Mtoe in 2030) compared to the PRIMES 2007 baseline (1887 Mtoe in 2030). This equals a reduction of primary energy consumption of 23% compared to historic 2005 primary energy consumption (1713 Mtoe in 2005).
Main policies and incentives additional to the EU Reference Scenario 2016:	
Revised EU ETS	
• Increase of ETS linear factor to 2.2% for 2021-30; • After 2030 cap trajectory to achieve 90% emission reduction in 2050 in line with Low Carbon Economy Roadmap.	• Increase of ETS linear factor to 2.2% for 2021-30; • After 2030 cap trajectory to achieve 90% emission reduction in 2050 in line with Low Carbon Economy Roadmap.
Renewables policies	
• Renewables policies necessary to achieve 27% target, reflected by RES values applied in the electricity, heating & cooling and transport sectors.	• Renewables policies necessary to achieve 27% target, reflected by RES values applied in the electricity, heating & cooling and transport sectors.
Energy efficiency policies: <i>Residential and services sector</i>	
• Increasing energy efficiency of buildings via increasing the rate of renovation and depth of renovation as well as behavioural change¹⁸. In this model, better implementation of EPBD and EED, continuation of Art 7 of EED and dedicated national policies are depicted by the application of energy efficiency values (EEVs); • Financial instruments and other financing measures on the European level facilitating	• Further increasing energy efficiency of buildings via increasing the rate and depth of renovation as well as behavioural change. In this model, better implementation of EPBD and EED, continuation of Art 7 of EED and dedicated national policies are depicted by the application of energy efficiency values (EEVs). EE values are increased compared to EUCO27; • Financial instruments and other financing measures on the European level facilitating

¹⁸ The behavioral indicator is calculated ex-post (after the model results) to indicate a rebound effect following refurbishment. The changes from Reference scenario are, however, negligible (for both EUCO27 and EUCO30).

access to capital for investment in thermal renovation of buildings. This, together with further labelling policies for heating equipment, is depicted by a reduction of behavioural discount rates for households from 12% to 11.5%; • More stringent (than in the Reference Scenario 2016) ecodesign standards banning the least efficient technologies.	access to capital for investment in thermal renovation of buildings. This, together with further labelling policies for heating equipment, is depicted by a reduction of behavioural discount rates for households from 12% to 11.5%; • More stringent (than in EUCO27) ecodesign standards banning the least efficient technologies; • Policies facilitating the uptake of heat pumps.
<i>Industry</i>	
• More stringent (than in Reference) ecodesign standards for motors.	• More stringent (compared to EUCO27) ecodesign standards for motors; • Application of energy efficiency values in industry (fraction of those applied in residential and services sector) leading to deeper energy efficiency effort and heat recovery
<i>Transport</i>	
• CO₂ standard for cars: 85g/km in 2025, 75g/km in 2030 and 25 gCO₂/km in 2050¹⁹; • CO₂ standards for vans: 135g/km in 2025; 120g/km in 2030; 60g/km in 2050²⁰; • 1.5% average annual energy efficiency improvements for new conventional and hybrid heavy duty vehicles (HGVs) between 2010-2030 and 0.7% between 2030-2050; • Measures on management of transport demand: - recently adopted measures for road freight, railways and inland navigation²¹; - gradual internalisation of transport local externalities²² as of 2025 and full internalisation by 2050 on the inter-urban network.	• CO₂ standard for cars: 80g/km in 2025, 70g/km in 2030 and 25 gCO₂/km in 2050; • CO₂ standards for vans: 130g/km in 2025; 110g/km in 2030; 60g/km in 2050; • 1.5% average annual energy efficiency improvement for new conventional and hybrid heavy goods vehicles (HGVs) between 2010-2030 and 0.7% between 2030-2050; • Measures on management of transport demand: - recently adopted measures for road freight, railways and inland navigation; - gradual internalisation of transport local externalities as of 2025 and full internalisation by 2050 on the inter-urban network; - modulation of infrastructure charges for HGVs according to CO₂ emissions leading to faster fleet renewal; - eco-driving; - deployment of Collaborative Intelligent Transport Systems.
<i>Non-CO₂ policies</i>	
• In 2030 carbon values of €0.05 applied to non-CO₂ GHG emissions in order to trigger	• No policy incentive until 2030.

¹⁹ On NEDC test-cycle.

²⁰ On NEDC test-cycle.

²¹ Directive on Weights & Dimensions, Fourth railway package, NAIADES II package, Ports Package.

²² Costs of infrastructure wear & tear, congestion, air pollution and noise.

cost-effective emissions reductions in these sectors; these measures correspond to all such measures available at zero costs. In 2025, a selection of such measures is assumed in order to gradually reduce emissions in the period up to 2030.	

The table below summarises the assumptions on specific energy efficiency policies in the EUCO+33, EUCO+35 and EUCO+40 scenarios that have been modelled. These scenarios build on the EUCO30 policy scenario and they are progressively scaled up in terms of ambition of energy efficiency policies. Consequently, only the differences that illustrate the increases level of ambition are listed²³.

Table 2. Specifications of the EUCO+33, EUCO+35, EUCO+40 and EUCO3030 policy scenarios

EUCO+33	As EUCO30 except: • 33% primary energy consumption reduction target is set (i.e. achieving 1260 Mtoe in 2030) compared to PRIMES 2007 baseline (1887 Mtoe in 2030). This equals a reduction of primary energy consumption of 26% compared to 2005 primary energy consumption (1713 Mtoe in 2005); • As a result some 2030 GHG targets set by the European Council are slightly overshoot: - 43% GHG reduction (wrt 1990); - 44% GHG reduction in ETS sectors (wrt 2005); - 34% GHG emissions reduction in Effort Sharing Decision sectors (wrt 2005); • Also, as a result of energy efficiency policies reducing demand, 28% RES share in final energy consumption is achieved. Main policies and incentives additional to EUCO30: <u>Energy efficiency policies:</u> <i>Residential and services sector</i> • Further increasing of energy efficiency values compared to EUCO30; • Financial instrument and other financing measures are made more widely available on the European level further facilitating access to capital for investment in thermal renovation of buildings and further labelling policies for heating equipment are pursued – depicted by reduction of the discount rates for households from 11.5% (in EUCO30) to 11%; • More ambitious policies (than in EUCO30) facilitating uptake of heat pumps. <i>Industry</i> • Increasing energy efficiency values in industry (fraction of those applied in residential and services sector) leading to deeper energy efficiency effort and heat recovery (compared to EUCO30); • Application of Best Available Techniques. <i>Transport</i> • Promotion of public procurement that provides effective incentives for purchasing cleaner vehicles (i.e. Revision of Clean Vehicles Directive); • Additional measures on management of transport demand:

²³ In EUCO+33, EUCO+35 and EUCO+40, the EU ETS is modelled with the linear factor and cap trajectory as in EUCO30

	- full internalisation of transport local externalities as of 2025 on the inter-urban network; - more ambitious deployment of Collaborative Intelligent Transport Systems and support for multimodal travel information; - promoting efficiency improvements and multimodality (e.g. review of Combined Transport Directive, review of Rail Freight Corridors Regulation, review of market access rules for road transport); - promotion of urban policies curbing pollutant emissions.
EUCO+35	As EUCO+33 except: • 35% primary energy consumption reduction target is set (i.e. achieving 1220 Mtoe in 2030) compared to PRIMES 2007 baseline (1887 Mtoe in 2030). This equals a reduction of primary energy consumption of 29% compared to 2005 primary energy consumption (1713 Mtoe in 2005); • As a result all 2030 GHG targets set by the European Council are slightly overshoot: - 44% GHG emissions reduction (wrt. 1990); - 44% GHG emissions reduction in ETS sectors (wrt 2005); - 36% GHG emissions reduction in Effort Sharing Decision sectors (wrt 2005); - also, as a result of energy efficiency policies reducing energy demand, 28% RES share in final energy consumption is achieved. Main policies and incentives additional to EUCO+33: <u>Energy efficiency policies:</u> <i>Residential and services sector</i> • Further increasing of energy efficiency values compared to EUCO+33; • More ambitious (than in EUCO+33) policies facilitating uptake of heat pumps. <i>Industry</i> • Increasing EEVs in industry (fraction of those applied in residential and services sector) leading to deeper energy efficiency effort and heat recovery (compared to EUCO+33); • Application of more advanced (compared to EUCO+33) Best Available Techniques. <i>Transport</i> • CO₂ standard for cars: 77g/km in 2025, 67g/km in 2030 and 25 gCO₂/km in 2050; • CO₂ standards for vans: 118g/km in 2025, 106g/km in 2030 and 60g/km in 2050; • Energy taxation aligning the minimum tax rates of petrol and gas oil used as motor fuel.
EUCO+40	As EUCO+35 except: • 40% primary energy consumption reduction target is set (i.e. achieving 1129 Mtoe in 2030) compared to PRIMES 2007 baseline (1887 Mtoe in 2030). This equals a reduction of primary energy consumption of 34% compared to 2005 primary energy consumption (1713 Mtoe in 2005); • As a result all 2030 GHG targets set by the European Council are significantly over - 47% GHG emissions reduction (wrt 1990) is achieved; - 48% GHG emissions reduction in ETS sectors (wrt 2005) is achieved; - 39% GHG emission reduction in Effort Sharing Decision sectors (wrt 2005) is achieved;

	- Also, as a result of energy efficiency policies reducing demand, 28% RES share in final energy consumption is achieved. Main policies and incentives additional to EUCO+35: <u>Energy efficiency policies:</u> <i>Residential and services sector</i> - Further increasing of energy efficiency values compared to EUCO+35; - Financial instrument and other financing measures are made more widely available on the European level lowering access to capital for investment in thermal renovation of buildings and further labelling policies for heating equipment are pursued – depicted by reduction of the discount rates for households from 11% (in EUCO35) to 10%; - More ambitious policies facilitating uptake of heat pumps. <i>Industry</i> - Further increasing EEVs in industry (fraction of those applied in residential and services sector) leading to deeper energy efficiency effort and heat recovery (compared to EUCO+35); - Application of more advanced (compared to EUCO+35) Best Available Techniques. <i>Transport</i> - CO₂ standard for cars: 74g/km in 2025, 64g/km in 2030 and 25 gCO₂/km in 2050²⁴; - CO₂ standards for vans: 106g/km in 2025, 97g/km in 2030; 60g/km in 2050²⁵; 1.6% average annual energy efficiency improvements for new conventional and hybrid heavy goods vehicles between 2010-2030 and 0.9% between 2030-2050.
EUCO3030	As EUCO30 except: 30% RES share in final energy consumption - This sensitivity used the same ETS carbon prices as the EUCO30 scenario. - As a result all 2030 GHG targets set by the European Council significantly overshoot: 43% GHG emissions reduction (wrt 1990) is achieved; 48% GHG emissions reduction in ETS sectors (wrt 2005) is achieved; 31% GHG emission reduction in Effort Sharing Decision sectors (wrt 2005) is achieved.

²⁴ The level of standards corresponds to the more ambitious edge of the range of standards for cars discussed for 2025 in recent trilogue discussions.

²⁵ The level of standards corresponds to the more ambitious edge of the range of standards for vans discussed for 2025 in recent trilogue discussions.

Appendix I.a: EUCO27 scenario - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 M€13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	1726888	1824722	1760315	1666600	1642233	1566073	1486070	0.2	-0.7	-1.0
Solids	321292	318127	282994	277891	252240	214145	163830	-1.3	-1.1	-4.2
Oil	660025	677021	612954	579805	545441	507993	470396	-0.7	-1.2	-1.5
Natural gas	396144	445263	447394	387731	385744	372746	351086	1.2	-1.5	-0.9
Nuclear	243841	257516	236562	213043	188974	174739	186630	-0.3	-2.2	-0.1
Electricity	2030	1412	712	1761	1247	522	-42	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206370	268588	295928	314170	5.7	4.1	1.6
Energy Branch Consumption	86261	91922	86455	81622	75849	69019	63536	0.0	-1.3	-1.8
Non-Energy Uses	113106	116080	110230	106709	112514	115736	117001	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	944996	903986	835772	758584	758712	727718	707183	-1.2	-1.0	-0.7
Solids	214596	196030	164837	148196	135633	118993	92518	-2.6	-1.9	-3.8
Oil	173901	135553	100408	78529	69713	57864	47563	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106369	92033	77796	-2.7	-4.0	-3.1
Nuclear	243841	257516	236562	213043	188974	174739	186630	-0.3	-2.2	-0.1
Renewable energy sources	103222	124116	174017	200378	258023	284289	302677	5.4	4.0	1.6
Hydro	30703	26859	32312	31167	32356	32376	32653	0.5	0.0	0.1
Biomass & Waste	65583	85060	119573	132613	164894	171283	170817	6.2	3.3	0.4
Wind	1913	6058	12836	23588	39823	48477	59490	21.0	12.0	4.1
Solar and others	436	827	3775	11001	17735	28372	34170	24.1	16.7	6.8
Geothermal	4587	5312	5521	2009	3214	3781	5547	1.9	-5.3	5.6
Net Imports (ktoe)	826349	979676	955004	962880	939723	896067	838816	1.5	-0.2	-1.1
Solids	98320	125363	111814	129695	116607	95152	71312	1.3	0.4	-4.8
Oil	532226	597491	558847	556140	531180	506052	477539	0.5	-0.5	-1.1
Crude oil and Feedstocks	514686	578712	537586	515210	493090	469609	445334	0.4	-0.9	-1.0
Oil products	17540	18779	21261	40930	38090	36443	32204	1.9	6.0	-1.7
Natural gas	193432	254054	278015	269292	280124	282703	278514	3.7	0.1	-0.1
Electricity	2030	1412	712	1761	1247	522	-42	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	55.2	54.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251285	3374657	3458653	3526071	1.0	0.1	0.4
Nuclear energy	944993	997699	916610	867402	772986	717746	775283	-0.3	-1.7	0.0
Solids	933855	965565	830393	846833	773114	646195	486822	-1.2	-0.7	-4.5
Oil (including refinery gas)	181296	142772	86899	34612	21898	17435	16081	-7.1	-12.9	-3.0
Gas (including derived gases)	514267	705961	798645	566060	589785	606844	565470	4.5	-3.0	-0.4
Biomass-waste	46401	87831	145814	188811	214402	264873	297633	12.1	3.9	3.3
Hydro (pumping excluded)	357072	312372	375785	362406	376231	376464	379683	0.5	0.0	0.1
Wind	22254	70455	149278	274278	463058	563687	691741	21.0	12.0	4.1
Solar	117	1458	22502	103798	154722	256492	303625	69.1	21.3	7.0
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	9732	2.6	2.1	1.4
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1031500	1076501	1131045	2.3	1.9	0.9
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	475424	572686	652197	6.3	7.1	3.2
Hydro (pumping excluded)	115841	119177	122922	127470	131613	132231	133335	0.6	0.7	0.1
Wind	12730	40485	85701	141580	207326	237903	284013	21.0	9.2	3.2
Solar	178	2292	29774	97443	135999	201862	233813	66.9	16.4	5.6
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	441873	398764	368943	1.6	-1.0	-1.8
of which cogeneration units	92439	107819	107430	109519	87949	92609	99202	1.5	-2.0	1.2
of which CCS units	0	0	0	0	833	1083	1883	0.0	0.0	8.5
Solids fired	194525	185353	180110	176559	146237	117717	99396	-0.8	-2.1	-3.8
Gas fired	123821	163333	215485	219628	211350	206670	200127	5.7	-0.2	-0.5
Oil fired	83315	74582	69295	53085	31445	20708	15304	-1.8	-7.6	-6.9
Biomass-waste fired	12657	16610	21719	27908	51798	52626	53073	5.5	9.1	0.2
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1030	2.4	3.1	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.6	35.2	34.3			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.5	40.7	41.8			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	11.4	11.3	11.9			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.4			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	59.0	63.3	69.7			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	340885	326195	282736	0.7	-2.0	-1.9
Solids	223608	229335	197694	200223	178394	148300	111129	-1.2	-1.0	-4.6
Oil (including refinery gas)	40868	32485	20566	7340	5031	4444	4024	-6.6	-13.1	-2.2
Gas (including derived gases)	105105	137667	151968	100069	99907	104271	95779	3.8	-4.1	-0.4
Biomass & Waste	14651	26766	41420	43077	55621	67248	69873	11.0	3.0	2.3
Geothermal heat	4114	4645	4828	1184	1932	1932	1932	1.6	-8.8	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997999	908897	859654	806983	778942	-0.7	-1.5	-1.0
Refineries	735106	756042	667606	609584	582987	550172	516355	-1.0	-1.3	-1.2
Biofuels and hydrogen production	709	3279	13086	16149	20796	19689	19657	33.8	4.7	-0.6
District heating	15899	17445	19101	16261	16212	15098	14989	1.9	-1.6	-0.8
Derived gases, cokeries etc.	316179	324441	298206	266904	239659	222024	227940	-0.6	-2.2	-0.5

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28: EUQO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7157	7491	7858	0.8	1.0	0.9
Public road transport	549	541	528	546	569	585	599	-0.4	0.8	0.5
Private cars and motorcycles	4466	4721	4843	5001	5254	5418	5621	0.8	0.8	0.7
Rail	450	464	499	540	599	669	735	1.0	1.8	2.1
Aviation ⁽³⁾	458	528	539	608	692	773	854	1.7	2.5	2.1
Inland navigation	42	42	40	40	43	46	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2980	3215	3455	1.1	1.5	1.5
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2108	2257	2412	1.3	1.5	1.4
Rail	405	416	394	428	482	538	595	-0.3	2.0	2.1
Inland navigation	300	343	354	361	390	419	448	1.7	1.0	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350701	335505	325598	0.5	-0.2	-0.7
Public road transport	8775	8725	8834	9040	9262	9264	9159	0.1	0.5	-0.1
Private cars and motorcycles	206270	212102	211618	204765	189963	171385	160963	0.3	-1.1	-1.6
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81798	82695	83604	1.3	0.6	0.2
Rail	8168	7668	7129	7395	7899	8460	8895	-1.4	1.0	1.2
Aviation	44876	49959	49230	53303	56434	58058	57059	0.9	1.4	0.1
Inland navigation	6156	6798	5673	5051	5346	5643	5918	-0.8	-0.6	1.0
By transport activity										
Passenger transport	266294	275041	273897	271237	259967	243272	231898	0.3	-0.5	-1.1
Freight transport	75231	89484	85505	86825	90734	92234	93700	1.3	0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.8	1.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.4	6.6			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559891	1529719	1450337	1369069	0.2	-0.8	-1.1
Final Energy Demand	1129427	1186370	1155879	1133457	1135379	1083696	1031401	0.2	-0.2	-1.0
by sector										
Industry	330627	327576	283437	284539	294657	283173	269235	-1.5	0.4	-0.9
Energy intensive industries	215899	215115	182721	182407	188555	178680	166333	-1.7	0.3	-1.2
Other industrial sectors	114728	112461	100716	102131	106102	104493	102903	-1.3	0.5	-0.3
Residential	288564	307594	313829	299747	299089	285114	267453	0.8	-0.5	-1.1
Tertiary	166677	183368	196770	188333	188042	176980	166179	1.7	-0.5	-1.2
Transport ⁽⁵⁾	343558	367831	361842	360838	353591	338430	328534	0.5	-0.2	-0.7
by fuel										
Solids	61977	53988	50512	47694	45589	40592	29441	-2.0	-1.0	-4.3
Oil	487065	502509	455207	437598	405007	369296	334648	-0.7	-1.2	-1.9
Gas	267588	281191	273366	265878	264120	248294	236734	0.2	-0.3	-1.1
Electricity	217644	239548	244471	241010	251769	259335	264991	1.2	0.3	0.5
Heat (from CHP and District Heating)	48044	52425	52875	49062	50695	50574	50781	1.4	-0.4	0.0
Renewable energy forms	49109	56708	79448	92104	117824	114143	112342	4.9	4.0	-0.5
Other	0	0	0	111	376	1463	2464	0.0	0.0	20.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	154	148	137	124	113	100	89	-1.2	-1.9	-2.3
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	68	62	-2.2	-0.6	-2.0
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	70	61	-0.6	-1.7	-2.6
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	83	73	64	0.0	-1.8	-2.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	26	24	-0.8	-1.8	-2.3
Freight transport (toe/Mtkm)	33	34	33	32	30	29	27	0.2	-0.9	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4278.8	3899.2	3411.9	-0.9	-1.3	-2.2
of which ETS sectors (2013 scope) GHG emissions		2501.2	2179.1	2016.7	1890.2	1706.5	1424.0		-1.4	-2.8
of which ESD sectors (2013 scope) GHG emissions		2847.9	2699.9	2566.7	2388.6	2192.7	1987.9		-1.2	-1.8
CO ₂ Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3284.7	2967.1	2579.7	-0.5	-1.4	-2.4
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1069.1	946.9	755.0	-0.5	-2.3	-3.4
Energy Branch	167.3	170.7	155.2	148.7	132.4	117.6	106.3	-0.7	-1.6	-2.2
Industry	691.0	634.1	511.8	505.5	493.4	429.9	357.8	-3.0	-0.4	-3.2
Residential	468.0	484.2	466.9	422.7	385.1	355.7	315.8	0.0	-1.9	-2.0
Tertiary	257.9	271.6	267.9	245.8	221.8	186.0	156.1	0.4	-1.9	-3.5
Transport	1001.7	1079.8	1036.6	1023.4	983.0	931.1	888.7	0.3	-0.5	-1.0
CO ₂ Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	248.0	243.0	216.9	-1.5	0.4	-1.3
Non-CO ₂ GHG emissions	1057.0	939.6	855.4	820.5	746.1	689.1	615.3	-2.1	-1.4	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	74.3	67.7	59.3	-0.9	-1.3	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.39	0.37	0.33	0.30	0.26	0.23	0.18	-1.6	-2.3	-3.8
Final energy demand (t of CO ₂ /toe)	2.14	2.08	1.98	1.94	1.83	1.76	1.67	-0.8	-0.7	-1.0
Industry	2.09	1.94	1.81	1.78	1.67	1.52	1.33	-1.5	-0.8	-2.3
Residential	1.62	1.57	1.49	1.41	1.29	1.25	1.18	-0.9	-1.4	-0.9
Tertiary	1.55	1.48	1.36	1.31	1.18	1.05	0.94	-1.3	-1.4	-2.3
Transport	2.92	2.94	2.86	2.84	2.78	2.75	2.71	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.1	24.1	27.0			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.4	27.0			
RES-E share	13.3	14.8	19.7	28.2	35.5	42.0	47.3			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	14.1	17.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	94	93	92	2.1	3.7	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	153	159	164	0.0	1.2	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1794.7	1932.2	2060.5	3.4	2.0	1.4
as % of GDP	9.4	10.4	11.4	11.2	12.3	12.4	12.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Austria : EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5		
GDP (in 000 ME13)	257	279	298	316	345	373	400	1.5	1.5	1.5		
Gross Inland Consumption (ktoe)	28996	34373	34604	32933	33457	32335	30700	1.8	-0.3	-0.9		
Solids	3597	4000	3365	3333	3406	2975	1965	-0.7	0.1	-5.4		
Oil	12173	14448	12833	12275	11736	10907	10122	0.5	-0.9	-1.5		
Natural gas	6519	8159	8215	6454	7664	7188	6882	2.3	-0.7	-1.1		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Renewable energy forms	6825	7537	9991	9810	10211	10931	11428	3.9	0.2	1.1		
Energy Branch Consumption	1306	1566	1504	1593	1501	1369	1244	1.4	0.0	-1.9		
Non-Energy Uses	1718	1717	1850	2037	2202	2312	2359	0.7	1.8	0.7		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	9776	10012	12114	11277	11474	11397	11441	2.2	-0.5	0.0		
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0		
Oil	1092	1003	1036	813	673	343	111	-0.5	-4.2	-16.5		
Natural gas	1533	1404	1486	1270	1139	666	449	-0.3	-2.6	-8.9		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	6859	7605	9592	9195	9661	10388	10880	3.4	0.1	1.2		
Hydro	3597	3154	3299	3527	3698	3811	3845	-0.9	1.1	0.4		
Biomass & Waste	3169	4214	5914	5018	5160	5182	4920	6.4	-1.4	-0.5		
Wind	6	114	178	340	382	527	1054	40.8	8.0	10.7		
Solar and others	63	93	168	260	358	782	933	10.3	7.9	10.0		
Geothermal	25	30	35	49	64	85	128	3.4	6.3	7.2		
Net Imports (ktoe)	18970	24517	21577	21656	21963	20938	19260	1.3	0.2	-1.3		
Solids	3019	3971	3358	3333	3406	2975	1965	1.1	0.1	-5.4		
Oil	10850	13204	11510	11462	11062	10564	10010	0.6	-0.4	-1.0		
Crude oil and Feedstocks	7791	8100	7011	8001	7815	7670	7423	-1.1	1.1	-0.5		
Oil products	3059	5104	4499	3461	3248	2894	2587	3.9	-3.2	-2.2		
Natural gas	5253	7153	6115	5184	6525	6522	6433	1.5	0.7	-0.1		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Import Dependency (%)	65.4	71.3	62.4	65.8	65.7	64.8	62.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59617	71974	75888	78834	1.3	0.6	0.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	5727	7165	4918	4194	4942	3242	46	-1.5	0.0	-37.4		
Oil (including refinery gas)	1702	1641	1273	208	215	71	67	-2.9	-16.3	-11.0		
Gas (including derived gases)	8864	14347	16137	6774	14624	12170	11250	6.2	-1.0	-2.6		
Biomass-waste	1675	2882	5088	2592	3568	4469	4028	11.8	-3.5	1.2		
Hydro (pumping excluded)	41836	36677	38363	41009	42995	44320	44710	-0.9	1.1	0.4		
Wind	67	1331	2064	3958	4443	6133	12254	40.9	8.0	10.7		
Solar	3	21	88	871	1174	5472	6467	38.2	29.5	18.6		
Geothermal and other renewables	0	2	2	11	11	11	11	0.0	21.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23337	27387	30191	1.8	0.8	2.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	11668	12440	13841	16437	17371	21927	25055	1.7	2.3	3.7		
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13702	13797	0.9	0.8	0.1		
Wind	50	778	981	2412	2583	3337	5493	34.7	10.2	7.8		
Solar	5	30	154	876	1090	4887	5766	40.9	21.6	18.1		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6243	6652	7662	6552	5966	5460	5135	2.1	-2.5	-1.5		
of which cogeneration units	2632	3253	3157	3003	3063	2963	2720	1.8	-0.3	-1.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1887	1660	1359	873	804	778	778	-3.2	-5.1	-0.3		
Gas fired	2816	3389	4512	4074	3567	3335	3009	4.8	-2.3	-1.7		
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4		
Biomass-waste fired	280	456	650	633	778	862	923	8.8	1.8	1.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	2	1	2	2	2	2	0.0	7.2	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	33.9	30.6	29.0					
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	43.9	39.4	38.3					
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.9	18.0	16.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.5	79.6	85.6					
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4575	4353	3462	4.0	-2.2	-2.7		
Solids	1216	1507	1019	908	1072	729	14	-1.8	0.5	-35.3		
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.8		
Gas (including derived gases)	1961	2836	2868	1406	2589	2399	2231	3.9	-1.0	-1.5		
Biomass & Waste	421	814	1649	604	834	1192	1186	14.6	-6.6	3.6		
Geothermal heat	0	2	1	10	10	10	10	0.0	23.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	11349	11946	11472	12554	11809	11073	10356	0.1	0.3	-1.3		
Refineries	8865	9275	8040	9141	8778	8263	7744	-1.0	0.9	-1.2		
Biofuels and hydrogen production	16	50	495	571	444	424	425	41.2	-1.1	-0.5		
District heating	558	613	869	678	635	601	584	4.5	-3.1	-0.8		
Derived gases, cokeries etc.	1910	2009	2068	2164	1952	1785	1604	0.8	-0.6	-1.9		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	96	101	107	112	119	126	131	1.1	1.1	1.0
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.6
Private cars and motorcycles	68	72	75	78	80	84	87	1.0	0.7	0.7
Rail	12	13	15	16	18	20	22	1.9	2.2	1.7
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.2
Freight transport activity (Gtkm)	50	54	61	65	70	75	80	2.0	1.3	1.3
Heavy goods and light commercial vehicles	31	33	39	43	45	48	51	2.3	1.5	1.2
Rail	17	19	20	20	22	24	26	1.8	0.9	1.6
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8038	7569	7370	2.3	-0.6	-0.9
Public road transport	92	97	101	103	106	107	107	0.9	0.5	0.1
Private cars and motorcycles	4520	5616	5043	4708	4265	3814	3572	1.1	-1.7	-1.8
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2605	2549	2552	6.3	0.9	-0.2
Rail	267	242	247	249	265	274	279	-0.8	0.7	0.5
Aviation	591	679	707	776	773	800	834	1.8	0.9	0.8
Inland navigation	28	45	22	23	24	26	27	-2.1	0.8	1.0
By transport activity										
Passenger transport	5260	6438	5894	5634	5197	4777	4570	1.1	-1.3	-1.3
Freight transport	1527	2377	2613	2846	2841	2793	2800	5.5	0.8	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.1	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30896	31254	30023	28342	1.8	-0.5	-1.0
Final Energy Demand	23692	28185	28423	28425	28041	26990	25926	1.8	-0.1	-0.8
by sector										
Industry	7283	8825	9195	9724	9936	9622	9377	2.4	0.8	-0.6
Energy intensive industries	5321	6148	6212	6588	6643	6322	6081	1.6	0.7	-0.9
Other industrial sectors	1962	2676	2983	3136	3293	3300	3296	4.3	1.0	0.0
Residential	6332	6828	6797	6669	6518	6299	5854	0.7	-0.4	-1.1
Tertiary	3070	3449	3686	3285	3264	3218	3045	1.8	-1.2	-0.7
Transport ⁽⁵⁾	7007	9082	8744	8746	8323	7851	7650	2.2	-0.5	-0.8
by fuel										
Solids	1403	1466	1169	1135	1186	1228	991	-1.8	0.2	-1.8
Oil	9818	12084	10539	9934	9336	8504	7768	0.7	-1.2	-1.8
Gas	4464	5125	5259	5142	5121	4740	4558	1.7	-0.3	-1.2
Electricity	4432	5013	5358	5436	5801	6001	6238	1.9	0.8	0.7
Heat (from CHP and District Heating)	1020	1353	1832	2008	1901	1984	1955	6.0	0.4	0.3
Renewable energy forms	2555	3145	4266	4769	4690	4511	4380	5.3	1.0	-0.7
Other	0	0	0	2	5	21	37	0.0	0.0	21.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	113	123	116	104	97	87	77	0.3	-1.8	-2.3
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	95	87	0.8	-0.4	-1.8
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	77	68	59	-0.7	-1.9	-2.6
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	69	61	0.1	-2.7	-2.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	31	29	0.1	-2.6	-2.5
Freight transport (toe/Mtkm)	30	44	43	44	41	37	35	3.4	-0.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.1	96.8	89.0	82.8	82.2	75.1	66.0	0.3	-0.8	-2.2
of which ETS sectors (2013 scope) GHG emissions	38.3	35.2	32.7	34.4	30.5	25.3			-0.3	-3.0
of which ESD sectors (2013 scope) GHG emissions	58.4	53.7	50.0	47.9	44.5	40.6			-1.2	-1.6
CO2 Emissions (energy related)	65.6	78.6	71.5	65.7	65.8	59.4	51.6	0.9	-0.8	-2.4
Power generation/District heating	12.5	17.0	15.1	11.2	14.1	12.4	9.0	1.9	-0.7	-4.3
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.2	2.9	1.3	-0.3	-2.3
Industry	16.8	18.5	17.6	17.8	17.2	15.2	13.1	0.5	-0.3	-2.7
Residential	8.9	8.6	7.7	6.8	6.4	5.7	5.0	-1.5	-1.9	-2.4
Tertiary	3.9	4.4	3.2	2.0	1.8	1.6	1.2	-1.8	-5.8	-3.8
Transport	20.2	26.5	24.1	23.9	22.8	21.3	20.5	1.8	-0.5	-1.1
CO2 Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.2	5.2	1.6	-0.3	-0.3
Non-CO2 GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.2	-2.7	-0.8	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.3	94.3	82.9	0.3	-0.8	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.17	0.21	0.17	0.13	0.15	0.12	0.09	-0.3	-1.2	-5.0
Final energy demand (t of CO2/toe)	2.10	2.06	1.85	1.77	1.72	1.62	1.53	-1.3	-0.7	-1.1
Industry	2.31	2.10	1.92	1.83	1.73	1.58	1.39	-1.9	-1.0	-2.1
Residential	1.41	1.26	1.13	1.02	0.98	0.91	0.85	-2.2	-1.4	-1.4
Tertiary	1.26	1.27	0.88	0.60	0.54	0.49	0.40	-3.6	-4.7	-3.1
Transport	2.88	2.91	2.76	2.73	2.74	2.71	2.68	-0.4	0.0	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.2	37.8	41.0			
RES-H&C share	20.4	22.0	29.7	37.0	36.4	35.8	37.7			
RES-E share	66.9	62.4	65.7	68.0	68.4	76.6	83.0			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.6	15.9	20.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	65	72	75	0.0	-0.5	1.4
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	140	150	151	0.9	-0.2	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.6	42.6	45.5	4.2	1.6	1.7
as % of GDP	8.5	10.2	11.0	10.2	11.2	11.4	11.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Belgium: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual % Change	
Population (in million)	10	10	11	11	12	12	13	0.8	0.9	0.9		
GDP (in 000 M€13)	324	350	372	385	414	443	479	1.4	1.1	1.5		
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54727	50166	47606	0.3	-1.1	-1.4		
Solids	7922	5081	3673	3205	2006	2009	1669	-7.4	-5.9	-1.8		
Oil	24136	24721	24699	23472	21993	21085	19996	0.2	-1.2	-0.9		
Natural gas	13369	14728	16999	14941	14149	16853	16322	2.4	-1.8	1.4		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Renewable energy forms	1081	1658	3560	4242	6207	6809	7165	12.7	5.7	1.4		
Energy Branch Consumption	2366	2403	2246	2406	2216	2112	2031	-0.5	-0.1	-0.9		
Non-Energy Uses	6739	7516	8541	8464	8523	8597	8536	2.4	0.0	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14086	7337	6467	1.2	-0.9	-7.5		
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0		
Oil	0	6	-7	-14	-14	-14	-13	1692.2	7.2	-0.3		
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Renewable energy sources	977	1377	2996	3725	5468	6110	6480	11.9	6.2	1.7		
Hydro	40	25	27	31	32	45	49	-3.8	1.7	4.5		
Biomass & Waste	931	1327	2793	2944	3957	3948	4014	11.6	3.5	0.1		
Wind	1	20	111	431	1032	1487	1633	54.9	25.0	4.7		
Solar and others	1	3	60	313	440	618	763	50.7	22.0	5.6		
Geothermal	3	3	4	6	7	12	22	3.0	5.7	11.3		
Net Imports (ktoe)	50502	53396	53753	52611	49720	52253	50928	0.6	-0.8	0.2		
Solids	7220	5150	3591	3205	2006	2009	1669	-6.7	-5.7	-1.8		
Oil	29527	32605	32752	32035	31039	30066	28595	1.0	-0.5	-0.8		
Crude oil and Feedstocks	34177	32251	31004	27409	27194	26879	26291	-1.0	-1.3	-0.3		
Oil products	-4650	354	1749	4626	3845	3188	2304	0.0	8.2	-5.0		
Natural gas	13278	14817	16791	14941	14195	17309	17526	2.4	-1.7	2.1		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.7	88.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	73990	69735	70247	1.3	-2.3	-0.5		
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0		
Solids	12916	8199	4190	2975	195	288	42	-10.6	-26.4	-14.3		
Oil (including refinery gas)	797	1740	406	96	674	696	716	-6.5	5.2	0.6		
Gas (including derived gases)	19091	25143	33178	23812	18283	36048	37851	5.7	-5.8	7.5		
Biomass-waste	1336	2516	5882	5914	3251	4069	5351	16.0	-5.8	5.1		
Hydro (pumping excluded)	460	288	312	365	368	522	571	-3.8	1.7	4.5		
Wind	16	227	1292	5009	11998	17289	18984	55.1	25.0	4.7		
Solar	0	1	560	3376	4013	5750	6732	0.0	21.8	5.3		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	14674	14867	17071	18515	20998	22695	24384	1.5	2.1	1.5		
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0		
Renewable energy	117	274	1934	5560	8494	11810	13389	32.4	15.9	4.7		
Hydro (pumping excluded)	103	105	118	119	119	163	177	1.4	0.1	4.1		
Wind	14	167	912	2229	4558	6204	6860	51.8	17.5	4.2		
Solar	0	2	904	3212	3818	5443	6352	0.0	15.5	5.2		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	8636	8672	9216	9048	7449	7844	10995	0.7	-2.1	4.0		
of which cogeneration units	1112	1893	2575	1552	657	1468	1263	8.8	-12.8	6.8		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2290	1450	1184	825	43	43	16	-6.4	-28.2	-9.7		
Gas fired	4392	5201	6468	6799	6270	6778	9937	3.9	-0.3	4.7		
Oil fired	1581	1494	836	646	266	246	215	-6.2	-10.8	-2.1		
Biomass-waste fired	373	527	727	777	869	778	828	6.9	1.8	-0.5		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.8	34.3	32.3					
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.4	46.9	51.5					
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.1	17.4	17.6					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.1	46.9	45.0					
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4343	7530	7344	1.7	-6.4	5.4		
Solids	2629	1833	936	761	47	66	9	-9.8	-25.8	-15.8		
Oil (including refinery gas)	180	411	57	29	223	230	237	-10.8	14.6	0.6		
Gas (including derived gases)	3790	4612	5671	4111	2951	5931	5561	4.1	-6.3	6.5		
Biomass & Waste	492	821	1722	1414	1122	1303	1538	13.4	-4.2	3.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	54711	52964	50595	41255	42569	34987	32946	-0.8	-1.7	-2.5		
Refineries	38602	37483	35454	31882	31696	31396	30795	-0.8	-1.1	-0.3		
Biofuels and hydrogen production	0	0	352	341	871	801	770	0.0	9.5	-1.2		
District heating	45	29	6	15	19	17	18	-11.8	11.8	-0.2		
Derived gases, cokeries etc.	16064	15452	14782	9016	9983	2773	1363	-0.8	-3.8	-18.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Belgium: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	137	145	154	158	169	176	184	1.2	1.0	0.9
Public road transport	13	18	17	18	18	18	18	1.8	2.7	0.2
Private cars and motorcycles	107	109	115	117	126	130	134	0.8	0.9	0.6
Rail	9	10	12	12	13	15	16	3.1	1.2	2.3
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.5
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.4
Freight transport activity (Gtkm)	70	65	63	66	76	84	92	-1.1	1.8	2.0
Heavy goods and light commercial vehicles	55	48	46	47	54	60	64	-1.7	1.5	1.8
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.4
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	10007	9858	9807	0.8	-0.6	-0.2
Public road transport	158	204	292	290	287	280	271	6.4	-0.2	-0.6
Private cars and motorcycles	4815	4463	5177	4757	4258	3852	3669	0.7	-1.9	-1.5
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3635	3752	3847	1.8	0.6	0.6
Rail	184	186	177	181	210	237	262	-0.4	1.7	2.2
Aviation	1530	1281	1382	1389	1442	1547	1550	-1.0	0.4	0.7
Inland navigation	204	219	152	164	176	189	208	-2.9	1.5	1.7
By transport activity										
Passenger transport	6608	6016	6932	6518	6076	5778	5596	0.5	-1.3	-0.8
Freight transport	3139	3956	3661	3660	3931	4080	4210	1.6	0.7	0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.2	9.1			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46204	41569	39070	0.0	-1.3	-1.7
Final Energy Demand	37766	36705	37534	36239	36443	35199	34083	-0.1	-0.3	-0.7
by sector										
Industry	14218	11775	11688	11055	11231	10689	10219	-1.9	-0.4	-0.9
Energy intensive industries	10700	9088	8641	8013	8027	7674	7282	-2.1	-0.7	-1.0
Other industrial sectors	3518	2686	3047	3042	3204	3015	2936	-1.4	0.5	-0.9
Residential	8974	9299	9266	9230	9329	9182	8606	0.3	0.1	-0.8
Tertiary	4827	5658	5982	5722	5825	5417	5400	2.2	-0.3	-0.8
Transport ⁽⁵⁾	9747	9973	10598	10232	10058	9911	9859	0.8	-0.5	-0.2
by fuel										
Solids	3403	2019	1621	1505	1357	1264	1030	-7.2	-1.8	-2.7
Oil	16661	16586	15314	14610	13007	12090	11153	-0.8	-1.6	-1.5
Gas	10010	10009	11147	10465	10567	10329	10104	1.1	-0.5	-0.4
Electricity	6667	6896	7163	7033	7247	7384	7705	0.7	0.1	0.6
Heat (from CHP and District Heating)	492	428	640	567	607	670	733	2.7	-0.5	1.9
Renewable energy forms	533	767	1650	2058	3635	3375	3240	12.0	8.2	-1.1
Other	0	0	0	3	23	89	119	0.0	0.0	18.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	183	168	165	142	132	113	99	-1.0	-2.2	-2.8
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	69	62	-1.3	-1.3	-2.2
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	71	61	-1.1	-1.4	-2.5
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	79	72	0.5	-1.4	-2.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	27	25	-1.1	-2.5	-1.9
Freight transport (toe/Mtkm)	45	61	58	55	52	48	46	2.6	-1.1	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	154.0	148.3	136.1	127.3	112.1	114.1	104.6	-1.2	-1.9	-0.7
of which ETS sectors (2013 scope) GHG emissions	70.1	58.6	52.1	42.8	42.8	48.9	44.5		-3.1	0.4
of which ESD sectors (2013 scope) GHG emissions	78.3	77.6	75.2	69.3	65.2	60.1			-1.1	-1.4
CO2 Emissions (energy related)	122.7	114.2	106.4	97.8	84.7	88.7	82.8	-1.4	-2.3	-0.2
Power generation/District heating	25.1	24.0	20.4	15.8	9.0	17.8	16.7	-2.0	-7.9	6.4
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.6	-2.3	0.4	-1.0
Industry	34.5	24.8	22.1	19.7	18.4	16.0	14.1	-4.4	-1.8	-2.6
Residential	20.3	20.5	18.9	18.4	16.9	16.5	14.9	-0.7	-1.1	-1.2
Tertiary	8.7	10.6	10.2	9.5	9.0	7.9	7.3	1.6	-1.3	-2.1
Transport	29.2	29.9	30.9	29.7	27.4	26.8	26.3	0.6	-1.2	-0.4
CO2 Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.1	7.6	1.6	0.4	-2.5
Non-CO2 GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	14.1	-1.3	-1.4	-2.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	75.9	69.6	-1.2	-1.9	-0.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.26	0.20	0.20	0.11	0.22	0.21	-3.5	-5.8	6.6
Final energy demand (t of CO2/toe)	2.45	2.34	2.19	2.14	1.97	1.91	1.83	-1.1	-1.1	-0.7
Industry	2.43	2.11	1.89	1.79	1.63	1.50	1.38	-2.5	-1.4	-1.7
Residential	2.26	2.21	2.04	2.00	1.81	1.80	1.73	-1.0	-1.2	-0.4
Tertiary	1.80	1.87	1.71	1.66	1.55	1.45	1.35	-0.5	-1.0	-1.4
Transport	2.99	3.00	2.91	2.91	2.72	2.70	2.66	-0.3	-0.7	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.0	15.9	17.1			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	13.7	14.2			
RES-E share	1.1	2.4	7.1	15.2	20.0	28.2	31.2			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	12.9	16.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	105	117	115	3.2	6.0	0.9
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	146	157	162	0.9	0.5	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	58.9	64.5	70.1	4.0	1.9	1.8
as % of GDP	10.2	10.3	13.1	12.3	14.2	14.5	14.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EUCo27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7	
GDP (in 000 ME13)	25	33	38	40	45	50	53	4.1	1.8	1.7	
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16346	15466	14893	-0.4	-0.8	-0.9	
Solids	6433	6895	6887	5983	5649	4501	3728	0.7	-2.0	-4.1	
Oil	4068	4725	3888	3732	3544	3459	3290	-0.5	-0.9	-0.7	
Natural gas	2931	2804	2300	2118	2120	1852	1829	-2.4	-0.8	-1.5	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7	
Renewable energy forms	788	1156	1465	1870	2170	2794	3122	6.4	4.0	3.7	
Energy Branch Consumption	905	911	1032	907	859	757	697	1.3	-1.8	-2.1	
Non-Energy Uses	980	851	422	427	498	563	604	-8.1	1.7	2.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	9867	10629	10531	9856	10691	10355	10180	0.7	0.2	-0.5	
Solids	4295	4178	4942	4055	4632	3661	3149	1.4	-0.6	-3.8	
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9	
Natural gas	12	384	59	125	128	129	139	17.0	8.0	0.8	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Renewable energy sources	792	1182	1512	1883	2135	2763	3087	6.7	3.5	3.8	
Hydro	230	373	435	349	373	364	363	6.6	-1.5	-0.3	
Biomass & Waste	562	776	975	1283	1485	1552	1584	5.7	4.3	0.6	
Wind	0	0	59	98	102	424	628	0.0	5.7	20.0	
Solar and others	0	0	12	118	140	390	480	0.0	28.4	13.1	
Geothermal	0	33	33	34	36	33	33	0.0	0.9	-0.9	
Net Imports (ktoe)	8544	9276	7075	6717	5801	5272	4885	-1.9	-2.0	-1.7	
Solids	2258	2553	1700	1928	1017	840	579	-2.8	-5.0	-5.5	
Oil	3944	4943	4025	3820	3670	3592	3422	0.2	-0.9	-0.7	
Crude oil and Feedstocks	5228	6145	5916	6308	5992	5724	5411	1.2	0.1	-1.0	
Oil products	-1284	-1202	-1891	-2489	-2322	-2132	-1989	3.9	2.1	-1.5	
Natural gas	2742	2458	2131	1993	1994	1725	1702	-2.5	-0.7	-1.6	
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7	
Import Dependency (%)	46.0	46.7	39.6	40.5	35.2	33.7	32.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48844	48731	48560	48362	1.2	0.6	-0.1	
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0	
Solids	16941	18458	22606	23316	22636	17844	14656	2.9	0.0	-4.3	
Oil (including refinery gas)	661	606	393	441	70	0	0	-5.1	-15.8	-100.0	
Gas (including derived gases)	2178	1896	1967	3035	3866	2281	2225	-1.0	7.0	-5.4	
Biomass-waste	15	17	49	54	164	389	607	12.6	12.8	14.0	
Hydro (pumping excluded)	2673	4337	5057	4062	4334	4235	4218	6.6	-1.5	-0.3	
Wind	0	5	681	1144	1183	4930	7304	0.0	5.7	20.0	
Solar	0	0	15	1129	1152	3553	4024	0.0	54.2	13.3	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11805	13488	14366	-0.5	1.7	2.0	
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0	
Renewable energy	1016	1992	2697	4081	4110	7100	8171	10.3	4.3	7.1	
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0	
Wind	0	8	488	691	703	2018	2765	0.0	3.7	14.7	
Solar	0	0	25	1052	1069	2744	3069	0.0	45.6	11.1	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	5845	5878	5326	5967	5775	4468	4275	-0.9	0.8	-3.0	
of which cogeneration units	1129	1191	1017	1814	1694	1766	1746	-1.0	5.2	0.3	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	5100	5100	4703	5313	4813	3495	3385	-0.8	0.2	-3.5	
Gas fired	689	737	607	626	909	877	791	-1.3	4.1	-1.4	
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0	
Biomass-waste fired	0	0	3	15	51	94	97	0.0	32.3	6.7	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.3	38.4	36.2				
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	39.0	38.3	38.2				
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.6	9.3	8.5				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.1	45.5	58.6	65.1				
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7553	6282	5891	4606	3933	2.4	-2.5	-4.0	
Solids	4928	5817	6610	5466	5210	4166	3465	3.0	-2.4	-4.0	
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0	
Gas (including derived gases)	884	697	720	692	625	349	333	-2.0	-1.4	-6.1	
Biomass & Waste	3	2	4	15	38	91	135	1.4	25.9	13.5	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	12213	13505	11285	10638	10379	10107	9788	-0.8	-0.8	-0.6	
Refineries	5310	6421	6041	6617	6291	6025	5698	1.3	0.4	-1.0	
Biofuels and hydrogen production	0	0	13	106	188	182	190	0.0	30.3	0.1	
District heating	324	368	304	96	98	109	114	-0.6	-10.7	1.5	
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3792	3786	-2.9	-2.6	0.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	48	56	65	72	76	80	84	3.2	1.4	1.1
Public road transport	15	14	11	11	11	12	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	57	58	5.7	1.3	0.7
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.8
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.3
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	1.9	2.4
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2880	2855	2838	4.0	0.6	-0.1
Public road transport	399	362	262	263	270	268	263	-4.1	0.3	-0.3
Private cars and motorcycles	956	1389	1581	1628	1560	1449	1392	5.2	-0.1	-1.1
Heavy goods and light commercial vehicles	305	652	590	646	700	719	710	6.8	1.7	0.1
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.3
Aviation	101	201	182	207	244	301	349	6.1	3.0	3.6
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
By transport activity										
Passenger transport	1473	1965	2034	2106	2083	2029	2016	3.3	0.2	-0.3
Freight transport	369	718	685	731	797	825	823	6.4	1.5	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.5	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	15848	14903	14289	-0.1	-0.9	-1.0
Final Energy Demand	9106	10184	8843	9205	9466	9415	9262	-0.3	0.7	-0.2
by sector										
Industry	3967	4037	2561	2709	2776	2804	2811	-4.3	0.8	0.1
Energy intensive industries	3124	3161	1789	1929	1918	1894	1873	-5.4	0.7	-0.2
Other industrial sectors	843	876	772	780	858	909	938	-0.9	1.1	0.9
Residential	2155	2117	2246	2307	2374	2352	2262	0.4	0.6	-0.5
Tertiary	972	1128	1174	1179	1268	1248	1201	1.9	0.8	-0.5
Transport ⁽⁵⁾	2013	2903	2862	3011	3048	3011	2988	3.6	0.6	-0.2
by fuel										
Solids	879	979	414	487	415	314	247	-7.3	0.0	-5.0
Oil	3026	3712	3125	3134	3046	2978	2821	0.3	-0.3	-0.8
Gas	1681	1565	1058	1052	1078	1041	1033	-4.5	0.2	-0.4
Electricity	2085	2211	2331	2382	2507	2578	2669	1.1	0.7	0.6
Heat (from CHP and District Heating)	880	939	960	841	863	913	899	0.9	-1.1	0.4
Renewable energy forms	555	778	956	1309	1556	1588	1588	5.6	5.0	0.2
Other	0	0	0	0	0	2	4	0.0	0.0	28.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	733	599	472	415	362	310	278	-4.3	-2.6	-2.6
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	30	-9.4	-0.6	-1.6
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	52	46	-3.9	-1.4	-2.4
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	63	57	-2.1	-1.3	-2.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	24	23	0.0	-1.3	-1.5
Freight transport (toe/Mtkm)	35	44	37	37	36	34	31	0.7	-0.4	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	64.4	67.0	61.2	55.6	51.0	44.2	39.9	-0.5	-1.8	-2.4
of which ETS sectors (2013 scope) GHG emissions	39.4	35.6	30.0	28.3	23.1	19.8		-2.3	-3.5	
of which ESD sectors (2013 scope) GHG emissions	27.6	25.6	25.6	22.7	21.1	20.1		-1.2	-1.2	
CO ₂ Emissions (energy related)	44.3	49.1	45.9	40.1	38.1	32.2	28.3	0.4	-1.8	-2.9
Power generation/District heating	24.6	27.9	31.2	25.1	23.7	18.6	15.6	2.4	-2.7	-4.1
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.8	-1.8	-1.6
Industry	10.6	9.8	3.7	4.0	3.9	3.6	3.1	-10.0	0.6	-2.2
Residential	1.4	1.2	1.0	1.0	0.7	0.5	0.4	-3.1	-4.0	-5.7
Tertiary	1.2	1.1	0.8	0.7	0.7	0.6	0.5	-4.0	-1.5	-3.8
Transport	5.7	8.3	8.3	8.4	8.3	8.2	8.1	3.7	0.1	-0.3
CO ₂ Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.4
Non-CO ₂ GHG emissions	16.7	14.0	12.3	12.5	9.8	8.8	8.4	-3.0	-2.2	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	46.3	40.1	36.2	-0.5	-1.8	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.46	0.49	0.51	0.41	0.39	0.30	0.26	1.2	-2.7	-4.1
Final energy demand (t of CO ₂ /toe)	2.07	2.01	1.55	1.53	1.44	1.37	1.30	-2.8	-0.8	-1.0
Industry	2.67	2.43	1.44	1.47	1.41	1.28	1.11	-6.0	-0.2	-2.3
Residential	0.63	0.58	0.44	0.41	0.28	0.21	0.16	-3.5	-4.5	-5.2
Tertiary	1.24	0.97	0.69	0.61	0.54	0.47	0.39	-5.8	-2.3	-3.3
Transport	2.85	2.88	2.88	2.80	2.73	2.73	2.71	0.1	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	21.1	27.1	30.6			
RES-H&C share	10.5	14.1	25.2	30.8	34.0	35.9	38.8			
RES-E share	4.0	8.5	12.3	17.4	18.1	34.9	42.4			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	10.7	12.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	69	75	82	0.8	1.8	1.8
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	106	129	138	5.4	3.5	2.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.6	16.5	6.2	3.0	2.5
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.2	30.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EU027					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3			
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3			
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8225	7764	7463	0.9	-0.4	-1.0			
Solids	431	683	683	751	684	310	252	4.7	0.0	-9.5			
Oil	3929	4490	3699	3414	3232	3073	2855	-0.6	-1.3	-1.2			
Natural gas	2210	2370	2632	2144	2474	2368	2216	1.8	-0.6	-1.1			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1			
Renewable energy forms	880	906	1138	1195	1422	1663	1730	2.6	2.3	2.0			
Energy Branch Consumption	821	825	745	726	707	595	582	-1.0	-0.5	-1.9			
Non-Energy Uses	656	675	596	514	529	534	536	-0.9	-1.2	0.1			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	3580	3799	4222	3368	3654	3641	3469	1.7	-1.4	-0.5			
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0			
Oil	1345	1029	767	466	461	436	391	-5.5	-5.0	-1.6			
Natural gas	1355	1865	2215	1431	1537	1311	1117	5.0	-3.6	-3.1			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	880	906	1240	1471	1656	1894	1961	3.5	2.9	1.7			
Hydro	505	545	716	533	544	549	550	3.6	-2.7	0.1			
Biomass & Waste	375	360	500	859	1021	1008	998	2.9	7.4	-0.2			
Wind	0	1	12	56	60	138	183	0.0	17.5	11.8			
Solar and others	0	0	5	16	23	192	222	0.0	16.0	25.5			
Geothermal	0	0	7	7	8	8	8	0.0	1.3	-0.1			
Net Imports (ktoe)	4134	5208	4461	4657	4578	4130	4000	0.8	0.3	-1.3			
Solids	478	624	699	751	684	310	252	3.9	-0.2	-9.5			
Oil	2406	3583	2980	2955	2778	2644	2470	2.2	-0.7	-1.2			
Crude oil and Feedstocks	3952	4334	3647	2979	2839	2756	2637	-0.8	-2.5	-0.7			
Oil products	-1546	-751	-667	-24	-61	-113	-166	-8.1	-21.2	10.5			
Natural gas	905	562	476	713	937	1058	1099	-6.2	7.0	1.6			
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1			
Import Dependency (%)	52.9	58.4	52.1	58.0	55.6	53.1	53.6						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14103	14590	14446	2.7	0.1	0.2			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	1551	2328	2385	2671	2640	905	762	4.4	1.0	-11.7			
Oil (including refinery gas)	1687	1855	560	77	25	281	212	-10.4	-26.7	23.9			
Gas (including derived gases)	1571	1814	2553	2232	4062	3310	2792	5.0	4.8	-3.7			
Biomass-waste	1	14	33	98	285	299	351	41.9	24.1	2.1			
Hydro (pumping excluded)	5874	6333	8329	6200	6324	6387	6392	3.6	-2.7	0.1			
Wind	0	10	139	650	699	1604	2133	0.0	17.5	11.8			
Solar	0	0	0	68	68	1803	1803	0.0	0.0	38.8			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4928	6359	6548	1.1	1.6	2.9			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	2079	2066	2220	2668	2702	4323	4658	0.7	2.0	5.6			
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2190	0.3	0.2	0.0			
Wind	0	6	79	423	457	867	1202	0.0	19.2	10.2			
Solar	0	0	0	55	55	1266	1266	0.0	0.0	36.7			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	1707	1879	1996	2216	2226	2036	1890	1.6	1.1	-1.6			
of which cogeneration units	558	515	486	298	596	898	605	-1.4	2.1	0.2			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0			
Gas fired	781	919	1031	1706	1396	1196	1089	2.8	3.1	-2.4			
Oil fired	615	646	649	185	150	157	111	0.5	-13.6	-2.9			
Biomass-waste fired	0	3	5	13	24	27	33	0.0	17.3	3.3			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	31.8	25.8	24.8						
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	47.6	43.7	42.5						
% of gross electricity from CHP	16.8	0.0	14.3	15.5	19.0	17.9	18.7						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	52.3	69.2	73.9						
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1268	944	834	0.2	0.0	-4.1			
Solids	357	537	532	612	557	208	187	4.1	0.5	-10.3			
Oil (including refinery gas)	395	447	120	14	8	78	63	-11.3	-23.4	22.6			
Gas (including derived gases)	497	490	611	350	648	599	511	2.1	0.6	-2.3			
Biomass & Waste	0	4	7	17	55	60	72	36.6	23.2	2.8			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	5394	5327	4409	3555	3569	3448	3261	-2.0	-2.1	-0.9			
Refineries	5299	5210	4304	3414	3270	3162	3000	-2.1	-2.7	-0.9			
Biofuels and hydrogen production	0	0	3	70	223	204	185	0.0	56.1	-1.9			
District heating	83	104	97	70	74	74	65	1.6	-2.7	-1.3			
Derived gases, cokeries etc.	12	13	4	1	2	9	11	-10.0	-5.6	16.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	1.0
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.6
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.9
Rail	2	2	2	2	3	3	3	2.7	1.3	0.9
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.7	2.6
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.7
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.6
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.7
Rail	2	3	3	3	3	3	3	3.9	1.4	1.4
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.0
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2135	2074	2041	3.0	0.3	-0.4
Public road transport	41	39	61	63	66	66	65	3.9	0.8	-0.1
Private cars and motorcycles	1192	1192	1332	1324	1320	1234	1183	1.1	-0.1	-1.1
Heavy goods and light commercial vehicles	161	508	479	465	511	522	532	11.5	0.6	0.4
Rail	46	52	50	48	52	53	55	0.8	0.5	0.5
Aviation	76	98	108	134	144	154	160	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	0.9
<i>By transport activity</i>										
Passenger transport	1329	1340	1514	1535	1543	1467	1423	1.3	0.2	-0.8
Freight transport	215	581	554	540	592	606	619	9.9	0.7	0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.4	9.8			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7696	7231	6927	1.1	-0.3	-1.0
Final Energy Demand	5371	6343	6347	6190	6301	6118	5905	1.7	-0.1	-0.6
<i>by sector</i>										
Industry	1378	1563	1366	1394	1388	1307	1240	-0.1	0.2	-1.1
Energy intensive industries	847	907	752	745	734	674	624	-1.2	-0.2	-1.6
Other industrial sectors	531	656	614	649	654	633	617	1.5	0.6	-0.6
Residential	1666	1922	1893	1784	1779	1757	1668	1.3	-0.6	-0.6
Tertiary	781	935	1018	934	996	977	952	2.7	-0.2	-0.5
Transport ⁽⁵⁾	1547	1923	2070	2078	2139	2077	2045	3.0	0.3	-0.4
<i>by fuel</i>										
Solids	74	146	150	139	127	102	65	7.3	-1.6	-6.5
Oil	2683	3108	2902	2755	2565	2398	2199	0.8	-1.2	-1.5
Gas	1009	1236	1288	1170	1228	1226	1204	2.5	-0.5	-0.2
Electricity	1018	1240	1364	1317	1392	1394	1447	3.0	0.2	0.4
Heat (from CHP and District Heating)	213	258	246	226	239	254	252	1.4	-0.3	0.5
Renewable energy forms	375	356	397	582	747	735	726	0.6	6.5	-0.3
Other	0	0	0	1	2	9	12	0.0	0.0	17.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	214	196	184	179	168	150	135	-1.5	-0.9	-2.2
Industry (Energy on Value added, index 2000=100)	100	97	88	106	98	89	81	-1.3	1.1	-1.9
Residential (Energy on Private Income, index 2000=100)	100	91	88	95	86	79	70	-1.2	-0.3	-1.9
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	92	84	77	-0.1	-0.8	-1.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	34	31	-1.2	-1.2	-1.8
Freight transport (toe/Mtkm)	48	49	47	45	43	41	39	-0.2	-0.8	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	24.9	22.1	20.0	0.8	-1.3	-2.2
of which ETS sectors (2013 scope) GHG emissions	12.7	10.8	9.6	10.0	8.0	7.1		-0.8	-3.4	
of which ESD sectors (2013 scope) GHG emissions	17.9	17.7	15.7	14.9	14.0	12.9		-1.7	-1.4	
CO₂ Emissions (energy related)	17.0	20.2	18.6	17.0	17.0	14.7	13.4	0.9	-0.9	-2.3
Power generation/District heating	4.1	5.1	4.3	3.5	4.0	2.6	2.2	0.3	-0.6	-5.6
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.4	1.4	-1.0	-0.5	-2.2
Industry	2.9	3.5	2.8	2.9	2.7	2.3	1.9	-0.2	-0.5	-3.4
Residential	1.9	2.4	2.1	1.7	1.7	1.7	1.5	1.0	-2.1	-1.6
Tertiary	1.5	1.5	1.4	1.2	1.2	1.1	1.0	-0.6	-1.6	-1.4
Transport	4.5	5.7	6.2	6.0	5.7	5.5	5.4	3.1	-0.8	-0.5
CO₂ Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.4	2.1	-0.3	0.1	-1.8
Non-CO₂ GHG emissions	6.7	7.4	7.4	5.9	5.4	5.0	4.5	0.9	-3.1	-1.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	70.3	62.2	56.5	0.8	-1.3	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.30	0.32	0.25	0.23	0.23	0.14	0.12	-2.1	-0.7	-6.0
Final energy demand (t of CO ₂ /toe)	2.01	2.06	1.97	1.90	1.79	1.74	1.65	-0.2	-1.0	-0.8
Industry	2.09	2.23	2.08	2.08	1.94	1.78	1.53	-0.1	-0.7	-2.3
Residential	1.15	1.24	1.12	0.95	0.96	0.95	0.87	-0.3	-1.5	-1.0
Tertiary	1.89	1.57	1.37	1.26	1.19	1.14	1.08	-3.2	-1.4	-0.9
Transport	2.94	2.97	2.97	2.88	2.65	2.64	2.63	0.1	-1.1	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.3	26.0	28.3			
RES-H&C share	13.0	10.9	13.1	18.0	18.8	20.8	24.7			
RES-E share	36.2	32.8	34.2	39.1	39.1	54.2	55.7			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.1	12.6	14.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	68	80	87	-2.1	0.1	2.5
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	122	132	137	1.3	1.2	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.2	11.1	5.5	1.7	2.1
as % of GDP	12.2	12.9	16.4	16.8	18.5	19.7	20.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Cyprus: EUC027			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3	
GDP (in 000 ME13)	14	16	18	16	19	21	22	2.8	0.2	1.9	
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2150	2033	1979	1.3	-2.4	-0.8	
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-11.3	
Oil	2334	2446	2611	1995	1346	1217	1161	1.1	-6.4	-1.5	
Natural gas	0	0	0	0	558	535	512	0.0	0.0	-0.9	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	6.4	
Renewable energy forms	46	57	112	162	245	281	306	9.4	8.1	2.2	
Energy Branch Consumption	54	22	19	17	15	8	8	-9.7	-2.4	-6.4	
Non-Energy Uses	86	73	85	38	42	43	43	-0.1	-7.0	0.4	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	44	51	89	137	195	2106	2976	7.2	8.2	31.3	
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Natural gas	0	0	0	0	0	1874	2717	0.0	0.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	44	51	89	137	195	232	259	7.2	8.2	2.9	
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biomass & Waste	9	10	24	28	37	46	53	10.5	4.3	3.8	
Wind	0	0	3	21	36	36	47	0.0	29.7	2.6	
Solar and others	36	41	61	86	118	144	153	5.6	6.8	2.6	
Geothermal	0	0	1	2	4	6	6	0.0	18.6	3.5	
Net Imports (ktoe)	2565	2843	2945	2243	2198	192	-712	1.4	-2.9	0.0	
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-11.3	
Oil	2531	2794	2910	2218	1587	1477	1421	1.4	-5.9	-1.1	
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0	
Oil products	1371	2794	2910	2218	1587	1477	1421	7.8	-5.9	-1.1	
Natural gas	0	0	0	0	561	-1333	-2180	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	-0.3	
Import Dependency (%)	98.6	100.7	100.8	94.3	91.8	8.4	-31.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4932	5288	5435	4.7	-0.8	1.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	3370	4376	5249	4086	434	22	22	4.5	-22.1	-25.7	
Gas (including derived gases)	0	0	0	0	3441	3835	3663	0.0	0.0	0.6	
Biomass-waste	0	0	35	45	59	109	172	0.0	5.4	11.3	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	31	248	422	422	548	0.0	29.8	2.6	
Solar	0	0	6	195	576	899	1030	0.0	58.4	6.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	2169	2281	4.3	2.8	1.4	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	0	0	89	292	554	715	826	0.0	20.1	4.1	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	82	158	216	216	266	0.0	10.2	2.1	
Solar	0	0	7	135	338	499	560	0.0	47.4	5.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	983	1119	1409	1462	1426	1455	1455	3.7	0.1	0.2	
of which cogeneration units	0	5	22	2	2	1	2	0.0	-21.7	2.6	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	0	0	0	0	0	0	0	0.0	0.0	35.8	
Gas fired	0	0	0	0	34	514	514	0.0	0.0	31.3	
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9	
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.2	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.4	27.3	26.7				
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.9	61.6	61.9				
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	0.8				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.4	27.0	32.2				
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	652	554	536	3.0	-5.8	-2.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	881	1077	1178	731	81	0	0	2.9	-23.4	-100.0	
Gas (including derived gases)	0	0	0	0	558	534	510	0.0	0.0	-0.9	
Biomass & Waste	0	0	4	10	13	20	26	0.0	12.6	7.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	1178	0	15	17	41	37	32	-35.4	10.5	-2.4	
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0	
Biofuels and hydrogen production	0	0	15	17	41	36	31	0.0	10.5	-2.6	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	15.6	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.3	1.9
Public road transport	1	1	1	1	1	1	1	1.4	0.8	0.2
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.3
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	963	951	942	2.0	-0.9	-0.2
Public road transport	32	35	37	37	38	37	35	1.5	0.3	-0.6
Private cars and motorcycles	373	444	577	490	483	433	391	4.5	-1.8	-2.1
Heavy goods and light commercial vehicles	173	197	152	125	126	126	128	-1.3	-1.8	0.1
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	316	354	387	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	687	785	898	791	836	824	814	2.7	-0.7	-0.3
Freight transport	173	197	152	125	126	126	128	-1.3	-1.8	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.5	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.9	3.3			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2108	1990	1936	1.3	-2.3	-0.8
Final Energy Demand	1650	1834	1926	1700	1761	1750	1704	1.6	-0.9	-0.3
by sector										
Industry	445	320	235	202	204	198	192	-6.2	-1.4	-0.6
Energy intensive industries	240	221	171	141	145	145	149	-3.3	-1.7	0.3
Other industrial sectors	205	98	63	61	60	53	43	-11.1	-0.6	-3.2
Residential	211	322	333	323	315	307	287	4.7	-0.5	-0.9
Tertiary	134	209	309	259	279	294	284	8.7	-1.0	0.2
Transport ⁽⁵⁾	860	983	1050	916	963	951	942	2.0	-0.9	-0.2
by fuel										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-11.3
Oil	1317	1403	1384	1226	1223	1174	1118	0.5	-1.2	-0.9
Gas	0	0	0	0	0	1	2	0.0	0.0	17.5
Electricity	258	341	420	360	390	426	438	5.0	-0.7	1.2
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.5	-1.3
Renewable energy forms	42	54	105	114	146	147	144	9.6	3.4	-0.2
Other	0	0	0	0	0	1	2	-100.0	0.0	24.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	175	157	151	131	115	98	88	-1.5	-2.6	-2.6
Industry (Energy on Value added, index 2000=100)	100	70	56	57	53	47	43	-5.6	-0.6	-2.0
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	91	79	1.3	-1.1	-2.5
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	142	135	119	5.2	-1.5	-1.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	34	30	0.5	-3.2	-2.3
Freight transport (toe/Mtkm)	129	135	133	109	104	97	93	0.3	-2.5	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	11.3	10.4	10.3	8.2	7.3	6.7	6.4	-0.9	-3.4	-1.3
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.3	3.3		-4.9	-0.6
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.5	3.1		-1.8	-1.9
CO2 Emissions (energy related)	7.2	8.0	8.1	6.1	5.3	4.9	4.6	1.2	-4.1	-1.4
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.3	1.2	2.9	-8.4	-2.7
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.5	0.4	-7.6	-1.6	-2.4
Residential	0.2	0.5	0.4	0.3	0.3	0.2	0.2	4.7	-2.4	-4.2
Tertiary	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	-1.9	-3.3
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.7	1.8	-1.2	-0.2
CO2 Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.6	-3.5	-0.5	-0.2
Non-CO2 GHG emissions	3.2	1.5	1.6	1.6	1.4	1.3	1.2	-6.9	-1.5	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	115.6	107.1	101.9	-0.9	-3.4	-1.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.85	0.80	0.71	0.52	0.32	0.24	0.22	-1.7	-7.7	-3.6
Final energy demand (t of CO2/toe)	2.57	2.45	2.24	2.22	2.14	2.07	2.02	-1.3	-0.5	-0.5
Industry	3.16	3.11	2.70	2.73	2.64	2.47	2.22	-1.6	-0.2	-1.7
Residential	1.11	1.44	1.11	1.04	0.91	0.79	0.65	0.0	-1.9	-3.3
Tertiary	0.00	0.43	0.69	0.73	0.63	0.52	0.45	0.0	-0.9	-3.4
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.88	-0.2	-0.3	0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.9	17.5	20.1			
RES-H&C share	7.9	10.0	18.2	21.8	24.3	27.2	31.3			
RES-E share	0.0	0.0	1.4	10.6	21.4	27.0	32.2			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	10.8	11.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	112	109	114	3.1	-3.1	0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	198	183	188	3.2	0.9	-0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.4	3.0	3.3	3.6	8.1	2.0	1.8
as % of GDP	8.3	12.0	13.7	14.8	16.4	16.1	16.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EU027					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1		
GDP (in 000 ME13)	112	137	157	165	181	197	216	3.4	1.4	1.8		
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	41000	40823	39686	0.8	-0.9	-0.3		
Solids	21643	20248	18364	15061	14939	14369	13228	-1.6	-2.0	-1.2		
Oil	7881	9899	9306	8965	8818	8576	8462	1.7	-0.5	-0.4		
Natural gas	7500	7703	8070	7797	7178	7211	6772	0.7	-1.2	-0.6		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Renewable energy forms	1429	1955	2980	3521	3857	4482	5123	7.6	2.6	2.9		
Energy Branch Consumption	1768	1796	2068	1808	1763	1733	1657	1.6	-1.6	-0.6		
Non-Energy Uses	2093	2948	2783	2447	2583	2691	2753	2.9	-0.7	0.6		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	27869	28640	27752	0.3	-1.2	0.0		
Solids	25049	23570	20730	16524	16883	17018	15527	-1.9	-2.0	-0.8		
Oil	386	591	290	223	222	210	190	-2.8	-2.7	-1.5		
Natural gas	169	154	202	191	181	172	162	1.8	-1.1	-1.1		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Renewable energy sources	1426	2142	3101	3560	3786	4442	5075	8.1	2.0	3.0		
Hydro	151	205	240	208	218	211	223	4.7	-0.9	0.2		
Biomass & Waste	1275	1933	2770	3106	3235	3722	3979	8.1	1.6	2.1		
Wind	0	2	29	44	65	181	535	76.2	8.5	23.4		
Solar and others	0	3	62	202	266	325	331	0.0	15.7	2.2		
Geothermal	0	0	0	0	2	3	6	0.0	0.0	12.4		
Net Imports (ktoe)	9414	12641	11447	13826	13131	12183	11934	2.0	1.4	-1.0		
Solids	-4721	-3270	-2968	-1463	-1944	-2649	-2299	-4.5	-4.1	1.7		
Oil	7512	9649	8974	8742	8597	8366	8273	1.8	-0.4	-0.4		
Crude oil and Feedstocks	5596	7730	7837	6115	6054	5946	5925	3.4	-2.5	-0.2		
Oil products	1916	1919	1137	2627	2542	2421	2347	-5.1	8.4	-0.8		
Natural gas	7482	7535	6846	7606	6997	7039	6610	-0.9	0.2	-0.6		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Import Dependency (%)	22.9	28.0	25.6	33.6	32.0	29.8	30.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	80216	83023	85798	1.6	-0.6	0.7		
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0		
Solids	52752	49522	47113	41095	42446	40167	37299	-1.1	-1.0	-1.3		
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0		
Gas (including derived gases)	3907	4215	4121	5853	3559	5562	5952	0.5	-1.5	5.3		
Biomass-waste	531	739	2188	2214	1099	2673	3620	15.2	-6.7	12.7		
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2449	2593	4.7	-0.9	0.2		
Wind	1	21	335	508	759	2108	6220	78.9	8.5	23.4		
Solar	0	0	615	2149	2214	2466	2518	0.0	13.7	1.3		
Geothermal and other renewables	0	0	1	0	2	2	2	0.0	9.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18573	19550	20726	2.5	0.3	1.1		
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0		
Renewable energy	953	1043	2989	3628	3816	4570	6382	12.1	2.5	5.3		
Hydro (pumping excluded)	952	1020	1049	1080	1080	1085	1115	1.0	0.3	0.3		
Wind	1	22	213	282	408	923	2650	70.9	6.7	20.6		
Solar	0	1	1727	2266	2328	2563	2617	0.0	3.0	1.2		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	11079	11265	11000	11182	10751	10974	10337	-0.1	-0.2	-0.4		
of which cogeneration units	3733	5199	4792	3852	3973	3190	2771	2.5	-1.9	-3.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	9823	9935	9571	9656	9487	9414	8797	-0.3	-0.1	-0.8		
Gas fired	1097	1110	1176	1220	935	1232	1137	0.7	-2.3	2.0		
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2		
Biomass-waste fired	19	80	136	171	258	264	339	21.7	6.6	2.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	45.8	45.2	44.2					
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	32.8	32.1	32.2					
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.4	15.9	15.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	42.6	44.9	49.6					
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12354	12953	12528	-0.3	-2.1	0.1		
Solids	13945	14025	13445	10677	11109	10905	10243	-0.4	-1.9	-0.8		
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0		
Gas (including derived gases)	1236	1292	1134	1938	959	1312	1342	-0.9	-1.7	3.4		
Biomass & Waste	253	224	562	626	284	734	942	8.3	-6.6	12.7		
Geothermal heat	0	0	0	0	2	2	2	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	15035	19758	20049	17183	17047	16871	16565	2.9	-1.6	-0.3		
Refineries	6151	8144	8337	6497	6449	6339	6301	3.1	-2.5	-0.2		
Biofuels and hydrogen production	62	3	231	285	595	534	528	14.1	9.9	-1.2		
District heating	975	916	787	650	692	699	594	-2.1	-1.3	-1.5		
Derived gases, cokeries etc.	7846	10696	10693	9751	9311	9299	9142	3.1	-1.4	-0.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Czech Republic: EUQ27				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
							Annual % Change				
TRANSPORT											
Passenger transport activity (Gpkm)	103	112	108	113	124	135	146	0.5	1.4	1.6	
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.3	
Private cars and motorcycles	67	72	67	68	75	80	86	0.0	1.1	1.4	
Rail	15	15	16	18	20	22	24	0.1	2.6	1.9	
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.5	
Heavy goods and light commercial vehicles	29	34	34	35	38	41	43	1.7	1.1	1.4	
Rail	17	15	14	15	17	19	20	-2.4	2.1	1.9	
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.0	
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6313	6101	6082	3.7	0.3	-0.4	
Public road transport	233	296	379	385	401	410	415	5.0	0.6	0.3	
Private cars and motorcycles	2563	3389	3394	3319	3297	3035	2916	2.8	-0.3	-1.2	
Heavy goods and light commercial vehicles	1038	1753	1810	1914	2003	1999	2040	5.7	1.0	0.2	
Rail	216	197	193	211	235	248	264	-1.1	2.0	1.2	
Aviation	197	343	341	345	373	405	442	5.6	0.9	1.7	
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	1.8	
By transport activity											
Passenger transport	3107	4132	4229	4175	4216	4004	3938	3.1	0.0	-0.7	
Freight transport	1145	1850	1892	2003	2097	2097	2144	5.1	1.0	0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	0.9				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.1				
ENERGY EFFICIENCY											
Primary energy consumption	39004	42175	41899	38675	38417	38132	36933	0.7	-0.9	-0.4	
Final Energy Demand	24798	26026	24853	24635	25291	24656	23868	0.0	0.2	-0.6	
by sector											
Industry	10129	9681	7933	7883	8102	7926	7830	-2.4	0.2	-0.3	
Energy intensive industries	6420	6748	5015	5079	5067	4916	4721	-2.4	0.1	-0.7	
Other industrial sectors	3709	2934	2919	2804	3035	3009	3110	-2.4	0.4	0.2	
Residential	6150	6345	6665	6340	6582	6474	6047	0.8	-0.1	-0.8	
Tertiary	4151	3904	3979	4098	4141	3995	3740	-0.4	0.4	-1.0	
Transport ⁽⁵⁾	4368	6095	6276	6315	6466	6261	6250	3.7	0.3	-0.3	
by fuel											
Solids	5134	3769	2424	2616	2238	1866	1443	-7.2	-0.8	-4.3	
Oil	5322	6817	6541	6366	6159	5823	5654	2.1	-0.6	-0.9	
Gas	6491	6741	6662	6128	6320	6076	5813	0.3	-0.5	-0.8	
Electricity	4246	4754	4919	5012	5279	5504	5673	1.5	0.7	0.7	
Heat (from CHP and District Heating)	2624	2478	2249	2102	2275	2379	2301	-1.5	0.1	0.1	
Renewable energy forms	981	1467	2058	2411	3018	2995	2959	7.7	3.9	-0.2	
Other	0	0	0	1	2	13	25	-100.0	0.0	28.1	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	366	329	285	250	227	208	184	-2.5	-2.3	-2.1	
Industry (Energy on Value added, index 2000=100)	100	69	44	43	40	37	33	-7.8	-1.0	-2.0	
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	62	52	-2.2	-1.4	-2.9	
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	67	59	50	-2.7	-1.3	-2.9	
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	27	25	2.2	-1.5	-2.4	
Freight transport (toe/Mtkm)	25	38	40	40	38	35	34	4.8	-0.4	-1.3	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	121.7	117.5	108.9	-0.8	-1.5	-1.1	
of which ETS sectors (2013 scope) GHG emissions	87.1	79.4	68.7	65.9	65.3	61.0	61.0		-1.9	-0.8	
of which ESD sectors (2013 scope) GHG emissions	63.6	61.4	59.9	55.8	52.2	47.9	47.9		-1.0	-1.5	
CO2 Emissions (energy related)	125.7	124.3	114.6	102.9	99.3	96.1	89.7	-0.9	-1.4	-1.0	
Power generation/District heating	66.8	66.2	63.2	52.8	51.8	51.8	48.7	-0.6	-2.0	-0.6	
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.5	2.4	1.6	-1.8	-0.8	
Industry	28.3	24.7	17.5	17.0	15.7	14.4	12.7	-4.7	-1.1	-2.1	
Residential	8.8	8.4	8.3	7.8	7.5	7.0	6.4	-0.6	-0.9	-1.6	
Tertiary	6.8	4.9	4.9	4.8	4.7	3.9	3.3	-3.3	-0.4	-3.4	
Transport	12.4	17.8	17.6	17.6	17.0	16.5	16.3	3.6	-0.4	-0.4	
CO2 Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.1	5.0	-1.7	1.1	-0.5	
Non-CO2 GHG emissions	21.7	21.1	21.5	20.5	17.1	16.3	14.2	-0.1	-2.3	-1.9	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	61.6	59.5	55.1	-0.8	-1.5	-1.1	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.60	0.55	0.52	0.46	0.45	0.44	0.41	-1.4	-1.4	-1.0	
Final energy demand (t of CO2/toe)	2.27	2.15	1.94	1.92	1.78	1.69	1.62	-1.6	-0.9	-0.9	
Industry	2.79	2.55	2.21	2.16	1.94	1.82	1.62	-2.3	-1.3	-1.8	
Residential	1.43	1.33	1.24	1.24	1.14	1.08	1.06	-1.4	-0.8	-0.8	
Tertiary	1.63	1.26	1.22	1.18	1.13	0.97	0.88	-2.9	-0.8	-2.5	
Transport	2.85	2.92	2.81	2.79	2.63	2.63	2.61	-0.1	-0.7	-0.1	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.6	15.5	18.4				
RES-H&C share	5.9	9.1	12.6	15.5	17.3	19.4	22.1				
RES-E share	3.4	3.8	7.5	10.3	9.0	12.7	19.2				
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.6	11.6				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	83	90	90	2.0	3.3	0.8	
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	132	135	144	7.9	-0.8	0.9	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.1	35.2	38.1	6.8	1.2	1.7	
as % of GDP	13.1	14.8	18.1	16.7	17.7	17.9	17.7				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUC027				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	5	5	6	6	6	6	6	0.4	0.4	0.5		
GDP (in 000 ME13)	233	248	247	256	289	321	350	0.6	1.6	1.9		
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16823	15987	15710	0.2	-1.7	-0.7		
Solids	3985	3713	3809	1860	1679	912	671	-0.5	-7.9	-8.8		
Oil	9101	8063	7568	6738	6251	5775	5322	-1.8	-1.9	-1.6		
Natural gas	4465	4413	4435	3680	2643	2487	2318	-0.1	-5.0	-1.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1		
Renewable energy forms	2124	3246	4326	3795	5635	6108	7033	7.4	2.7	2.2		
Energy Branch Consumption	1121	1205	1132	911	890	739	610	0.1	-2.4	-3.7		
Non-Energy Uses	301	289	263	283	313	328	341	-1.3	1.8	0.9		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	27958	30781	22915	15259	15897	13631	11998	-2.0	-3.6	-2.8		
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0		
Oil	18465	18464	12040	8158	7712	6411	4428	-4.2	-4.4	-5.4		
Natural gas	7428	9397	7356	4188	3858	2459	1803	-0.1	-6.2	-7.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	2065	2920	3520	2913	4327	4761	5767	5.5	2.1	2.9		
Hydro	3	2	2	2	2	2	2	-3.6	0.2	1.1		
Biomass & Waste	1688	2335	2825	1819	2823	3021	3032	5.3	0.0	0.7		
Wind	365	569	672	1007	1318	1495	2015	6.3	7.0	4.3		
Solar and others	8	10	16	80	100	126	174	7.2	19.9	5.8		
Geothermal	1	4	5	6	85	117	544	13.8	32.6	20.3		
Net Imports (ktoe)	-7370	-10130	-3257	2304	1728	3206	4617	-7.8	0.0	10.3		
Solids	3783	3505	2642	1860	1679	912	671	-3.5	-4.4	-8.8		
Oil	-8386	-9068	-3586	-676	-666	196	1714	-8.1	-15.5	0.0		
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-738	92	1604	-5.4	-17.5	0.0		
Oil products	397	1865	1447	-7	72	104	110	13.8	-25.9	4.4		
Natural gas	-2882	-5010	-3022	-508	-1207	46	600	0.5	-8.8	0.0		
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1		
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	9.8	19.0	27.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30692	30950	36529	0.8	-2.3	1.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	16673	15463	17006	6440	5410	2728	1856	0.2	-10.8	-10.1		
Oil (including refinery gas)	4439	1375	774	214	7	66	58	-16.0	-37.5	23.5		
Gas (including derived gases)	8774	8780	7906	4589	705	1441	1535	-1.0	-21.5	8.1		
Biomass-waste	1895	3989	5340	3223	8455	8544	8857	10.9	4.7	0.5		
Hydro (pumping excluded)	30	23	21	21	21	21	24	-3.5	0.2	1.1		
Wind	4241	6614	7809	11709	15325	17381	23432	6.3	7.0	4.3		
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13242	13754	1.3	0.2	0.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2401	3141	3818	5910	6456	6682	8297	4.7	5.4	2.5		
Hydro (pumping excluded)	10	11	9	9	9	9	10	-1.0	0.0	1.1		
Wind	2390	3127	3802	5064	5609	5835	7450	4.8	4.0	2.9		
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	9386	9880	9601	9297	7179	6561	5457	0.2	-2.9	-2.7		
of which cogeneration units	5578	5685	5806	7114	6166	5435	4679	0.4	0.6	-2.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6		
Gas fired	1862	2278	2274	2274	1135	1135	897	2.0	-6.7	-2.3		
Oil fired	860	860	1017	1017	492	223	218	1.7	-7.0	-7.8		
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2870	2.4	5.6	-1.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.7	25.8	29.5					
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.4	32.7	32.7					
% of gross electricity from CHP	52.6	52.1	49.2	53.6	46.9	40.1	31.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.3	80.1	86.3	90.6					
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3759	3363	3237	-0.3	-6.8	-1.5		
Solids	3669	3444	3770	1696	1529	818	604	0.3	-8.6	-8.9		
Oil (including refinery gas)	1354	346	221	65	2	21	17	-16.6	-39.0	27.0		
Gas (including derived gases)	2112	1996	1812	1197	202	379	389	-1.5	-19.7	6.7		
Biomass & Waste	699	1341	1821	880	2026	2145	2227	10.0	1.1	1.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	9001	8288	8139	8416	8109	7572	7372	-1.0	0.0	-0.9		
Refineries	8435	7700	7175	7493	6974	6501	6026	-1.6	-0.3	-1.5		
Biofuels and hydrogen production	0	0	27	277	434	368	317	0.0	32.1	-3.1		
District heating	549	575	923	644	691	670	985	5.3	-2.9	3.6		
Derived gases, cokeries etc.	17	13	13	3	10	34	43	-2.9	-2.2	15.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Denmark: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.6
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3
Aviation ⁽³⁾	8	9	10	12	13	14	16	2.7	2.5	2.2
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1
Freight transport activity (Gtkm)	21	22	23	25	29	31	33	0.6	2.3	1.3
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.3
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4965	4732	4603	0.7	-0.4	-0.8
Public road transport	203	202	199	204	213	215	212	-0.2	0.7	0.0
Private cars and motorcycles	2627	2866	2828	2599	2399	2119	1993	0.7	-1.6	-1.8
Heavy goods and light commercial vehicles	864	1003	1011	971	1060	1073	1061	1.6	0.5	0.0
Rail	103	107	113	118	125	132	137	0.9	1.0	0.9
Aviation	856	955	874	960	997	1013	1014	0.2	1.3	0.2
Inland navigation	163	192	156	158	171	180	186	-0.4	0.9	0.8
<i>By transport activity</i>										
Passenger transport	3874	4197	4049	3915	3774	3523	3401	0.4	-0.7	-1.0
Freight transport	942	1128	1132	1094	1191	1209	1202	1.9	0.5	0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.6	7.9			
ENERGY EFFICIENCY										
Primary energy consumption	19432	19264	19777	16536	16510	15660	15369	0.2	-1.8	-0.7
Final Energy Demand	14717	15497	15606	14800	14759	14291	13695	0.6	-0.6	-0.7
<i>by sector</i>										
Industry	2934	2864	2417	2568	2706	2637	2548	-1.9	1.1	-0.6
Energy intensive industries	1156	1107	849	908	934	857	785	-3.0	1.0	-1.7
Other industrial sectors	1778	1757	1569	1659	1771	1780	1763	-1.2	1.2	0.0
Residential	4162	4453	4916	4345	4188	4075	3808	1.7	-1.6	-0.9
Tertiary	2805	2856	3094	2879	2900	2847	2736	1.0	-0.6	-0.6
Transport ⁽⁵⁾	4816	5324	5179	5009	4965	4732	4603	0.7	-0.4	-0.8
<i>by fuel</i>										
Solids	290	253	166	163	149	94	67	-5.4	-1.1	-7.7
Oil	7058	7293	6759	6083	5659	5177	4739	-0.4	-1.8	-1.8
Gas	1667	1708	1771	1744	1826	1689	1639	0.6	0.3	-1.1
Electricity	2791	2877	2783	2733	2836	2962	3149	0.0	0.2	1.1
Heat (from CHP and District Heating)	2255	2424	2840	2556	2495	2463	2264	2.3	-1.3	-1.0
Renewable energy forms	656	943	1287	1519	1784	1871	1788	7.0	3.3	0.0
Other	0	0	0	3	10	34	49	-100.0	0.0	16.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	85	79	81	66	58	50	45	-0.4	-3.3	-2.6
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	80	72	-0.9	-0.1	-2.2
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	62	53	0.2	-3.5	-3.0
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	70	62	0.1	-2.3	-2.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	30	27	-0.4	-2.2	-2.3
Freight transport (toe/Mtkm)	44	51	50	44	42	39	37	1.3	-1.7	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	71.7	66.3	63.9	50.5	45.7	39.1	35.1	-1.1	-3.3	-2.6
of which ETS sectors (2013 scope) GHG emissions	29.3	27.9	18.0	14.6	11.4	9.7			-6.3	-4.0
of which ESD sectors (2013 scope) GHG emissions		37.0	36.0	32.5	31.1	27.7	25.4		-1.4	-2.0
CO₂ Emissions (energy related)	53.3	50.0	48.8	35.8	31.1	26.1	23.2	-0.9	-4.4	-2.9
Power generation/District heating	24.5	20.3	21.2	10.6	7.1	4.5	3.5	-1.4	-10.4	-6.8
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.4
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.9	-3.2	0.4	-3.6
Residential	3.9	3.6	3.2	2.6	2.2	2.0	1.7	-2.0	-3.7	-2.6
Tertiary	3.0	2.7	2.9	2.5	2.4	1.9	1.6	-0.3	-1.8	-4.1
Transport	14.3	15.9	15.5	14.2	13.5	12.9	12.5	0.8	-1.3	-0.8
CO₂ Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.5	1.4	1.2	-6.1	1.0	-2.3
Non-CO₂ GHG emissions	15.8	14.0	13.7	13.3	13.1	11.6	10.7	-1.4	-0.4	-2.0
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.3	54.1	48.6	-1.1	-3.3	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.36	0.28	0.26	0.17	0.11	0.07	0.05	-3.0	-8.3	-7.0
Final energy demand (t of CO ₂ /toe)	1.81	1.76	1.63	1.58	1.51	1.42	1.36	-1.0	-0.8	-1.0
Industry	1.85	1.79	1.63	1.58	1.52	1.31	1.12	-1.3	-0.7	-3.0
Residential	0.95	0.80	0.66	0.59	0.53	0.50	0.45	-3.6	-2.1	-1.7
Tertiary	1.05	0.95	0.93	0.88	0.83	0.65	0.58	-1.2	-1.2	-3.5
Transport	2.97	2.99	2.99	2.83	2.72	2.72	2.72	0.0	-0.9	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	33.9	39.4	44.5			
RES-H&C share	15.3	22.2	30.8	28.2	36.9	45.3	49.4			
RES-E share	15.0	25.0	33.1	42.0	62.7	66.4	79.4			
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	15.5	20.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	108	112	102	1.8	1.9	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	207	210	212	1.4	0.6	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.2	30.6	2.4	1.0	1.8
as % of GDP	7.9	8.8	9.4	8.2	8.8	8.8	8.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Estonia: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.8		
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6		
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6429	6287	5620	2.1	0.4	-1.3		
Solids	2968	3190	3917	3589	3674	3604	2853	2.8	-0.6	-2.5		
Oil	916	1182	1109	1065	976	898	847	1.9	-1.3	-1.4		
Natural gas	662	800	563	796	855	805	700	-1.6	4.3	-2.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Renewable energy forms	513	589	847	995	1039	1077	1151	5.1	2.1	1.0		
Energy Branch Consumption	163	193	199	190	186	178	144	2.0	-0.7	-2.5		
Non-Energy Uses	180	229	90	280	295	305	310	-6.7	12.6	0.5		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	3435	4250	5467	5368	5402	5340	4620	4.8	-0.1	-1.6		
Solids	2669	3176	3943	3594	3675	3614	2862	4.0	-0.7	-2.5		
Oil	249	375	532	681	649	595	544	7.9	2.0	-1.7		
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	512	692	988	1093	1077	1131	1214	6.8	0.9	1.2		
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0		
Biomass & Waste	512	686	962	1040	1015	1063	1086	6.5	0.5	0.7		
Wind	0	5	24	49	57	62	119	0.0	9.2	7.5		
Solar and others	0	0	0	0	2	3	6	0.0	0.0	13.0		
Geothermal	0	0	0	0	0	0	1	0.0	0.0	19.3		
Net Imports (ktoe)	1628	1489	862	1219	1262	1182	1237	-6.2	3.9	-0.2		
Solids	270	23	-22	-5	-2	-10	-9	0.0	-23.0	18.9		
Oil	786	917	760	625	555	525	507	-0.3	-3.1	-0.9		
Crude oil and Feedstocks	-125	-225	-394	-560	-524	-472	-423	12.2	2.9	-2.1		
Oil products	911	1142	1153	1185	1080	997	931	2.4	-0.7	-1.5		
Natural gas	657	792	558	796	861	818	732	-1.6	4.4	-1.6		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Import Dependency (%)	32.0	25.9	13.5	18.5	18.9	18.1	21.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11315	11361	9401	4.3	-1.4	-1.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	7682	9302	11167	8608	9082	9059	6483	3.8	-2.0	-3.3		
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0		
Gas (including derived gases)	757	760	712	689	658	626	573	-0.6	-0.8	-1.4		
Biomass-waste	13	35	740	859	873	925	933	49.8	1.7	0.7		
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0		
Wind	0	54	277	575	668	717	1379	0.0	9.2	7.5		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2276	2295	2511	-0.3	-2.1	1.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2	36	114	312	343	367	573	49.8	11.6	5.3		
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0		
Wind	0	31	108	303	334	358	564	0.0	12.0	5.4		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2910	2648	2713	2377	1933	1929	1939	-0.7	-3.3	0.0		
of which cogeneration units	452	1604	447	437	266	260	465	-0.1	-5.0	5.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2684	2411	2430	1871	1413	1413	1413	-1.0	-5.3	0.0		
Gas fired	218	224	224	362	371	364	371	0.3	5.2	0.0		
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0		
Biomass-waste fired	0	5	51	144	148	152	154	0.0	11.2	0.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	51.2	51.1	39.1					
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.3	33.9	33.7					
% of gross electricity from CHP	11.0	10.2	10.3	12.7	11.1	9.4	11.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.9	14.7	24.9					
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2662	2693	2036	2.5	-1.6	-2.6		
Solids	2199	2353	2715	2171	2288	2309	1652	2.1	-1.7	-3.2		
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0		
Gas (including derived gases)	226	227	209	168	166	166	162	-0.8	-2.3	-0.2		
Biomass & Waste	2	10	179	205	208	218	223	55.3	1.5	0.7		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	926	1271	1523	1753	1790	1683	1574	5.1	1.6	-1.3		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	0	10	65	55	45	0.0	0.0	-3.5		
District heating	454	489	446	418	434	420	403	-0.2	-0.3	-0.7		
Derived gases, cokeries etc.	473	782	1077	1325	1290	1209	1125	8.6	1.8	-1.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.8
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.5
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.5
Rail	0	0	0	0	0	0	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.3
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	795	739	709	3.0	0.2	-1.1
Public road transport	62	62	67	74	76	76	74	0.7	1.3	-0.2
Private cars and motorcycles	349	475	499	524	484	415	371	3.6	-0.3	-2.6
Heavy goods and light commercial vehicles	95	135	116	132	139	143	146	2.0	1.9	0.4
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	65	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
By transport activity										
Passenger transport	441	589	614	647	618	558	521	3.4	0.1	-1.7
Freight transport	138	178	167	164	176	181	188	1.9	0.5	0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.7	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6134	5982	5310	2.4	0.1	-1.4
Final Energy Demand	2434	2877	2907	3036	3092	3014	2901	1.8	0.6	-0.6
by sector										
Industry	571	718	575	713	745	741	720	0.1	2.6	-0.4
Energy intensive industries	245	273	231	294	305	302	290	-0.6	2.8	-0.5
Other industrial sectors	327	446	343	419	441	438	429	0.5	2.5	-0.3
Residential	929	890	1028	963	989	982	943	1.0	-0.4	-0.5
Tertiary	348	495	520	544	557	546	522	4.1	0.7	-0.6
Transport ⁽⁵⁾	586	774	785	816	800	745	715	3.0	0.2	-1.1
by fuel										
Solids	118	118	83	64	56	46	35	-3.4	-3.8	-4.7
Oil	772	982	941	966	861	770	711	2.0	-0.9	-1.9
Gas	177	263	207	286	329	324	284	1.6	4.7	-1.4
Electricity	431	519	594	614	653	681	708	3.3	1.0	0.8
Heat (from CHP and District Heating)	511	547	531	484	512	507	498	0.4	-0.4	-0.3
Renewable energy forms	425	447	550	622	681	686	659	2.6	2.1	-0.3
Other	0	0	0	0	0	2	6	-100.0	0.0	37.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	465	372	405	346	314	283	234	-1.4	-2.5	-2.9
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	61	56	-4.0	-0.2	-1.6
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	47	41	-2.9	-3.4	-2.4
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	76	67	0.8	-2.4	-2.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	32	29	0.3	-1.6	-2.6
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.7	16.2	12.6	1.0	-1.2	-2.8
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	11.9	11.9	8.8		-1.4	-3.0
of which ESD sectors (2013 scope) GHG emissions		5.1	5.0	5.1	4.7	4.3	3.7		-0.5	-2.3
CO ₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.4	14.1	10.9	1.6	-1.3	-2.8
Power generation/District heating	10.7	11.3	12.7	10.1	10.6	10.7	7.8	1.7	-1.7	-3.1
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.0	-2.4
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.5	-1.8	0.0	-3.2
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-4.2	0.5	-1.9
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.3	2.1	1.9	-3.5
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.9	3.1	-0.6	-1.2
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.4	0.4	-6.0	3.0	-2.7
Non-CO ₂ GHG emissions	2.3	1.9	2.0	1.9	1.8	1.6	1.3	-1.4	-1.0	-2.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	41.5	40.2	31.4	1.0	-1.2	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.59	0.60	0.49	-0.6	-0.6	-1.8
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.09	1.03	-0.5	-0.8	-1.3
Industry	1.58	1.43	1.31	1.07	1.01	0.93	0.75	-1.8	-2.6	-2.9
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.18	-5.2	0.9	-1.4
Tertiary	0.91	1.05	0.75	0.92	0.84	0.70	0.63	-2.0	1.2	-2.9
Transport	2.96	2.98	2.99	2.96	2.75	2.74	2.72	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.9	27.1	30.5			
RES-H&C share	31.8	32.2	43.2	39.9	38.8	40.9	44.7			
RES-E share	0.2	1.1	10.4	14.4	14.9	15.6	22.2			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.5	11.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	42	43	47	65	66	74	95	1.0	3.5	3.8
Average Price of Electricity in Final demand sectors (€133/MWh)	59	63	80	109	124	139	151	3.2	4.5	2.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	5.1	8.6	4.1	1.7
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.6	21.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Finland: EUCO27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5	
GDP (in 000 ME13)	157	179	187	188	199	210	226	1.7	0.6	1.3	
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35239	34925	32800	1.3	-0.5	-0.7	
Solids	5131	4936	6874	4106	4615	4187	3042	3.0	-3.9	-4.1	
Oil	9342	10335	10121	9288	8370	7454	6449	0.8	-1.9	-2.6	
Natural gas	3422	3598	3838	2821	2677	2864	2848	1.2	-3.5	0.6	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Renewable energy forms	7816	8195	9508	10767	10556	12206	13732	2.0	1.1	2.7	
Energy Branch Consumption	1168	1209	1529	1577	1541	1346	1251	2.7	0.1	-2.1	
Non-Energy Uses	1040	1155	1229	1157	1191	1224	1234	1.7	-0.3	0.4	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	20966	22721	22248	1.7	1.7	0.6	
Solids	1088	2136	1803	1007	1113	1272	1293	5.2	-4.7	1.5	
Oil	189	257	389	433	393	354	314	7.5	0.1	-2.2	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Renewable energy sources	7816	8273	9589	10905	10726	12361	13978	2.1	1.1	2.7	
Hydro	1261	1185	1111	1350	1215	1269	1296	-1.3	0.9	0.6	
Biomass & Waste	6549	7072	8451	9354	9034	10199	11774	2.6	0.7	2.7	
Wind	7	15	25	198	464	868	868	14.2	33.8	6.5	
Solar and others	1	1	1	2	13	23	35	10.0	26.3	10.0	
Geothermal	0	0	0	0	0	1	5	0.0	0.0	39.5	
Net Imports (ktoe)	18337	18979	17869	16077	14480	12403	10748	-0.3	-2.1	-2.9	
Solids	3537	3341	3977	3099	3502	2914	1749	1.2	-1.3	-6.7	
Oil	10357	10655	9232	9068	8179	7290	6310	-1.1	-1.2	-2.6	
Crude oil and Feedstocks	11964	10713	11206	13148	11844	10685	9533	-0.7	0.6	-2.1	
Oil products	-1607	-58	-1974	-4080	-3665	-3394	-3223	2.1	6.4	-1.3	
Natural gas	3422	3598	3838	2821	2680	2872	2869	1.2	-3.5	0.7	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Import Dependency (%)	55.2	54.2	47.9	47.0	40.9	35.3	32.6				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71480	84109	97598	91121	1.4	0.4	0.8	
Nuclear energy	22479	23271	22800	23137	36999	37079	28850	0.1	5.0	-2.5	
Solids	12452	10998	20826	8559	11120	11985	8706	5.3	-6.1	-2.4	
Oil (including refinery gas)	587	500	484	635	39	264	248	-1.9	-22.2	20.2	
Gas (including derived gases)	10816	11921	11847	7771	6538	8951	8980	0.9	-5.8	3.2	
Biomass-waste	8860	9891	11413	13361	9892	14463	19160	2.6	-1.4	6.8	
Hydro (pumping excluded)	14660	13784	12922	15702	14123	14756	15067	-1.3	0.9	0.6	
Wind	78	170	294	2307	5392	10095	10095	14.2	33.8	6.5	
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7	
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19614	20502	19055	0.4	1.6	-0.3	
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5	
Renewable energy	2923	3121	3359	4289	5628	7243	7326	1.4	5.3	2.7	
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3374	3447	0.9	0.4	0.5	
Wind	38	82	197	1001	2343	3860	3860	17.9	28.1	5.1	
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	10363	10739	10605	11158	9609	8882	8330	0.2	-1.0	-1.4	
of which cogeneration units	8280	5832	6168	6361	5448	5704	5001	-2.9	-1.2	-0.9	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4676	4633	4532	4340	3303	2308	1770	-0.3	-3.1	-6.0	
Gas fired	2570	2481	2703	2698	2825	3108	2906	0.5	0.4	0.3	
Oil fired	1519	1505	1194	1532	643	628	607	-2.4	-6.0	-0.6	
Biomass-waste fired	1597	2120	2176	2589	2838	2838	3046	3.1	2.7	0.7	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.0	52.2	52.4				
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.5	34.9	35.2				
% of gross electricity from CHP	36.4	38.9	36.2	33.7	26.9	28.9	31.2				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	79.0	78.3	80.3				
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	6887	8794	9052	3.9	-4.1	2.8	
Solids	3181	2998	5098	2421	2886	2914	2016	4.8	-5.5	-3.5	
Oil (including refinery gas)	122	98	99	168	13	65	59	-2.1	-18.6	16.7	
Gas (including derived gases)	2119	2385	2516	1493	1282	1556	1543	1.7	-6.5	1.9	
Biomass & Waste	1744	2302	2747	3480	2706	4259	5433	4.6	-0.2	7.2	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	21306	21544	23155	24530	26264	24284	20420	0.8	1.3	-2.5	
Refineries	13059	12876	14265	15688	14229	12823	11363	0.9	0.0	-2.2	
Biofuels and hydrogen production	0	0	140	334	374	342	325	0.0	10.3	-1.4	
District heating	1059	1265	1600	1434	1503	1313	1227	4.2	-0.6	-2.0	
Derived gases, cokeries etc.	7188	7403	7149	7074	10159	9806	7505	-0.1	3.6	-3.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.7
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.3
Private cars and motorcycles	57	63	66	68	69	70	71	1.5	0.4	0.4
Rail	4	4	4	5	5	6	6	1.4	1.5	1.5
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.1
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.6
Freight transport activity (Gtkm)	42	42	42	43	46	49	53	-0.2	1.0	1.4
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.2
Rail	10	10	10	10	11	12	13	-0.4	1.4	1.8
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4738	4477	4254	1.1	-0.2	-1.1
Public road transport	120	116	121	121	121	119	116	0.1	0.0	-0.4
Private cars and motorcycles	2334	2542	2693	2631	2401	2128	1936	1.4	-1.1	-2.1
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1164	1146	1155	-0.3	0.3	-0.1
Rail	90	92	90	94	101	106	110	0.0	1.2	0.9
Aviation	469	526	619	746	785	806	759	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
<i>By transport activity</i>										
Passenger transport	3086	3310	3549	3604	3418	3168	2927	1.4	-0.4	-1.5
Freight transport	1251	1314	1278	1292	1320	1309	1327	0.2	0.3	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.0	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.4			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32815	34049	33701	31566	1.3	-0.5	-0.8
Final Energy Demand	24510	25239	26243	24732	24697	23310	22328	0.7	-0.6	-1.0
<i>by sector</i>										
Industry	12313	11922	11428	10647	10745	9896	9488	-0.7	-0.6	-1.2
Energy intensive industries	10172	9616	9017	8347	8411	7526	7117	-1.2	-0.7	-1.7
Other industrial sectors	2141	2306	2412	2299	2334	2370	2371	1.2	-0.3	0.2
Residential	4544	5053	5804	5338	5405	5206	5008	2.5	-0.7	-0.8
Tertiary	3296	3616	4169	3837	3795	3717	3564	2.4	-0.9	-0.6
Transport ⁽⁵⁾	4356	4648	4842	4910	4752	4490	4267	1.1	-0.2	-1.1
<i>by fuel</i>										
Solids	1109	873	843	702	698	645	460	-2.7	-1.9	-4.1
Oil	7850	8102	7619	7073	6495	5558	4631	-0.3	-1.6	-3.3
Gas	1209	1082	1012	981	983	1048	1191	-1.8	-0.3	1.9
Electricity	6507	6942	7178	6788	6896	7204	7235	1.0	-0.4	0.5
Heat (from CHP and District Heating)	3334	3972	4656	4143	4253	3945	3630	3.4	-0.9	-1.6
Renewable energy forms	4501	4268	4935	5042	5364	4891	5150	0.9	0.8	-0.4
Other	0	0	0	3	7	20	30	0.0	1586.5	16.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	207	193	199	181	177	166	145	-0.4	-1.2	-1.9
Industry (Energy on Value added, index 2000=100)	100	81	79	75	74	65	59	-2.3	-0.8	-2.2
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	75	67	-0.2	-1.8	-2.1
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	85	76	0.9	-1.7	-1.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	23	-0.6	-1.5	-2.4
Freight transport (toe/Mtkm)	30	31	31	30	29	27	25	0.4	-0.6	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	73.1	71.5	78.2	61.1	58.8	53.7	45.0	0.7	-2.8	-2.6
of which ETS sectors (2013 scope) GHG emissions		37.2	43.9	30.8	31.6	29.5	23.3		-3.2	-3.0
of which ESD sectors (2013 scope) GHG emissions		34.3	34.3	30.3	27.2	24.2	21.7		-2.3	-2.2
CO₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.6	42.9	35.2	1.2	-3.1	-3.0
Power generation/District heating	22.5	23.0	32.3	17.5	18.7	18.3	14.2	3.7	-5.3	-2.7
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.1	1.9	1.2	0.0	-3.9
Industry	14.2	12.7	11.0	10.1	9.5	7.8	6.1	-2.5	-1.4	-4.4
Residential	2.4	2.3	1.8	1.4	1.3	1.1	0.7	-2.6	-3.5	-5.9
Tertiary	3.6	3.5	3.4	2.8	2.4	1.4	0.9	-0.6	-3.6	-8.7
Transport	12.9	13.8	14.0	13.6	13.0	12.2	11.4	0.8	-0.8	-1.3
CO₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.2	1.8	3.8	0.3	-2.3
Non-CO₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.1	-2.3	-1.8	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.3	74.2	62.2	0.7	-2.8	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.14	0.12	0.10	1.4	-5.2	-2.7
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.96	0.86	-1.6	-0.8	-2.1
Industry	1.15	1.06	0.96	0.95	0.89	0.79	0.64	-1.8	-0.8	-3.2
Residential	0.52	0.45	0.32	0.26	0.24	0.21	0.14	-5.0	-2.8	-5.2
Tertiary	1.09	0.97	0.81	0.74	0.62	0.38	0.27	-2.9	-2.6	-8.1
Transport	2.97	2.97	2.89	2.77	2.73	2.71	2.67	-0.3	-0.6	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	42.1	46.5	52.8			
RES-H&C share	38.2	39.1	44.4	55.2	57.9	61.9	71.0			
RES-E share	27.3	26.9	27.7	36.2	33.2	42.6	47.9			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	21.9	25.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	92	89	97	1.4	4.5	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	132	139	146	3.7	3.0	1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.7	35.3	37.9	4.4	2.4	1.5
as % of GDP	10.7	11.3	13.8	14.6	16.4	16.8	16.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								France: EUCO27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	57	60	61	63	64	66	67	0.7	0.5	0.4	
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4	
Gross Inland Consumption (ktoe)	257565	276646	267546	255764	249163	236605	226684	0.4	-0.7	-0.9	
Solids	15048	14303	12076	8763	8525	5892	5025	-2.2	-3.4	-5.1	
Oil	88937	93185	82668	79806	75305	70418	65534	-0.7	-0.9	-1.4	
Natural gas	35766	41025	42540	38807	36050	33384	29631	1.7	-1.6	-1.9	
Nuclear	107093	116474	110539	109294	97019	94378	94378	0.3	-1.3	-0.3	
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3	
Renewable energy forms	16695	16847	22365	24473	37959	38220	37660	3.0	5.4	-0.1	
Energy Branch Consumption	10822	9989	9635	8309	7426	6687	6284	-1.2	-2.6	-1.7	
Non-Energy Uses	16851	16704	14290	14232	14666	14772	14824	-1.6	0.3	0.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	136027	133412	132750	0.4	0.1	-0.2	
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0	
Oil	2023	1604	1542	1217	1122	958	904	-2.7	-3.1	-2.1	
Natural gas	1505	909	646	304	294	284	274	-8.1	-7.6	-0.7	
Nuclear	107093	116474	110539	109294	97019	94378	94378	0.3	-1.3	-0.3	
Renewable energy sources	16688	16902	22206	24212	37591	37792	37194	2.9	5.4	-0.1	
Hydro	5771	4442	5364	5476	5753	5515	5516	-0.7	0.7	-0.4	
Biomass & Waste	10763	12159	15690	15780	23690	21749	18841	3.8	4.2	-2.3	
Wind	7	83	855	1850	4741	5620	7295	62.6	18.7	4.4	
Solar and others	21	26	118	870	3081	4522	5100	18.7	38.6	5.2	
Geothermal	126	192	180	236	325	386	442	3.6	6.1	3.1	
Net Imports (ktoe)	134082	144103	132149	123217	115888	106058	96901	-0.1	-1.3	-1.8	
Solids	13005	13511	12192	8620	8525	5892	5025	-0.6	-3.5	-5.1	
Oil	91265	95114	82886	81211	76880	72200	67258	-1.0	-0.7	-1.3	
Crude oil and Feedstocks	85329	85302	65254	46552	45803	44253	42504	-2.6	-3.5	-0.7	
Oil products	5936	9813	17632	34659	31078	27947	24755	11.5	5.8	-2.2	
Natural gas	35779	40720	39553	38504	35810	33226	29696	1.0	-1.0	-1.9	
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3	
Import Dependency (%)	51.5	51.6	49.0	47.7	46.0	44.3	42.2				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584203	597543	600260	611191	0.5	0.6	0.2	
Nuclear energy	415162	451529	428521	444338	396167	385196	385062	0.3	-0.8	-0.3	
Solids	27004	27515	23359	8820	9109	413	59	-1.4	-9.0	-39.6	
Oil (including refinery gas)	7165	7925	5565	516	0	337	331	-2.5	-100.0	0.0	
Gas (including derived gases)	15365	26254	26385	25753	23739	19313	7933	5.6	-1.1	-10.4	
Biomass-waste	3559	5016	6675	10512	14131	19796	19015	6.5	7.8	3.0	
Hydro (pumping excluded)	67121	51658	62388	63671	66898	64124	64139	-0.7	0.7	-0.4	
Wind	77	964	9942	21517	55129	65350	84827	62.6	18.7	4.4	
Solar	5	10	620	8601	31589	44533	47817	63.1	48.2	4.2	
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148953	154972	162390	0.7	1.9	0.9	
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3	
Renewable energy	23570	24601	32099	40333	66684	77564	85853	3.1	7.6	2.6	
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	23635	0.2	-0.1	0.0	
Wind	57	777	7050	10358	22130	25130	31212	61.9	12.1	3.5	
Solar	7	13	1030	6100	20535	28228	30093	64.7	34.9	3.9	
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1	
Thermal power	26680	25361	27256	23974	20942	17915	17043	0.2	-2.6	-2.0	
of which cogeneration units	7013	5779	4606	10620	5929	4313	3716	-4.1	2.6	-4.6	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2	
Gas fired	4116	6055	9334	9646	9181	8972	8289	8.5	-0.2	-1.0	
Oil fired	11328	9794	9643	7693	5008	1849	1701	-1.6	-6.3	-10.2	
Biomass-waste fired	684	876	1049	1249	2894	3258	3270	4.4	10.7	1.2	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	42.7	41.5				
Efficiency of gross thermal power generation (%)	34.9	33.3	30.8	39.7	38.8	36.6	32.6				
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.8	1.7	1.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.5	96.7	98.6				
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10425	9371	7217	3.0	-5.3	-3.6	
Solids	6559	6402	4717	2258	2323	94	12	-3.2	-6.8	-40.9	
Oil (including refinery gas)	1242	2160	1639	135	0	111	110	2.8	-79.3	268.0	
Gas (including derived gases)	4002	6298	8178	4941	3960	3691	1843	7.4	-7.0	-7.4	
Biomass & Waste	1476	2469	3352	2529	4127	5459	5237	8.5	2.1	2.4	
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	205144	211862	191250	166425	153165	148944	146708	-0.7	-2.2	-0.4	
Refineries	90823	88392	73306	49009	48091	46404	44552	-2.1	-4.1	-0.8	
Biofuels and hydrogen production	325	651	2397	2746	3127	2985	2970	22.1	2.7	-0.5	
District heating	312	448	608	546	574	580	477	6.9	-0.6	-1.8	
Derived gases, cokeries etc.	113684	122371	114938	114124	101373	98976	98710	0.1	-1.2	-0.3	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1211	1265	0.8	1.2	0.8
Public road transport	42	42	50	55	60	63	65	1.7	1.9	0.8
Private cars and motorcycles	754	801	811	850	901	917	942	0.7	1.1	0.4
Rail	81	90	101	107	119	131	144	2.1	1.7	2.0
Aviation ⁽³⁾	69	62	68	76	86	97	109	-0.1	2.3	2.4
Inland navigation	3	3	3	3	3	4	4	-0.8	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	518	575	-0.5	1.8	2.0
Heavy goods and light commercial vehicles	311	319	296	310	356	391	433	-0.5	1.9	2.0
Rail	58	41	30	37	42	50	60	-6.3	3.5	3.4
Inland navigation	43	49	66	66	71	77	83	4.4	0.8	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	50040	48014	46697	-0.2	0.1	-0.7
Public road transport	536	519	595	654	705	719	719	1.0	1.7	0.2
Private cars and motorcycles	31157	31368	31602	31615	29882	26811	24900	0.1	-0.6	-1.8
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10301	10715	11219	-1.5	0.9	0.9
Rail	1134	980	932	1017	1082	1157	1227	-1.9	1.5	1.3
Aviation	6088	6291	6294	6827	7535	8039	8021	0.3	1.8	0.6
Inland navigation	483	481	500	499	535	573	610	0.4	0.7	1.3
By transport activity										
Passenger transport	38753	38887	39197	39839	38895	36371	34462	0.1	-0.1	-1.2
Freight transport	11607	11307	10150	10316	11145	11643	12235	-1.3	0.9	0.9
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.3	2.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234497	221833	211859	0.5	-0.8	-1.0
Final Energy Demand	154639	160337	155397	155251	156628	146885	138428	0.0	0.1	-1.2
by sector										
Industry	36670	34356	28478	30330	31303	30033	29153	-2.5	1.0	-0.7
Energy intensive industries	20906	20576	16506	17590	18022	16976	16332	-2.3	0.9	-1.0
Other industrial sectors	15764	13780	11972	12740	13281	13057	12821	-2.7	1.0	-0.4
Residential	42153	45931	45463	44159	45108	40926	36788	0.8	-0.1	-2.0
Tertiary	25209	29569	31792	30270	29812	27520	25369	2.3	-0.6	-1.6
Transport ⁽⁵⁾	50607	50482	49664	50492	50405	48405	47117	-0.2	0.1	-0.7
by fuel										
Solids	5775	5218	4547	4076	4168	3598	2882	-2.4	-0.9	-3.6
Oil	72503	71421	64647	63583	59030	54287	49569	-1.1	-0.9	-1.7
Gas	30907	33744	32430	32675	31028	29090	27382	0.5	-0.4	-1.2
Electricity	33096	36352	38185	37788	38993	39461	40523	1.4	0.2	0.4
Heat (from CHP and District Heating)	3236	4163	3525	3658	3385	3301	3139	0.9	-0.4	-0.8
Renewable energy forms	9123	9439	12064	13458	19978	16997	14659	2.8	5.2	-3.0
Other	0	0	0	12	46	151	273	0.0	0.0	19.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	141	132	122	110	98	87	-0.7	-1.8	-2.3
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	70	65	-2.5	-0.1	-1.7
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	68	57	-0.9	-1.3	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	92	79	67	1.0	-1.8	-3.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	24	21	-0.7	-1.6	-2.4
Freight transport (toe/Mtkm)	28	28	26	25	24	22	21	-0.9	-0.9	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	585.3	552.1	512.0	482.2	444.8	406.1	365.8	-1.3	-1.4	-1.9
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	131.8	125.5	111.5	97.7		-1.6	-2.5	
of which ESD sectors (2013 scope) GHG emissions	378.8	364.7	350.4	319.3	294.6	268.1		-1.3	-1.7	
CO2 Emissions (energy related)	388.3	394.4	360.0	332.5	308.1	276.5	249.1	-0.8	-1.5	-2.1
Power generation/District heating	46.7	53.6	48.1	26.7	22.5	14.5	9.8	0.3	-7.3	-8.0
Energy Branch	19.9	16.3	15.0	13.7	11.6	10.3	9.4	-2.7	-2.6	-2.0
Industry	74.6	67.0	54.1	59.8	57.7	50.9	45.2	-3.2	0.6	-2.4
Residential	59.3	64.8	57.2	51.5	43.6	39.7	34.0	-0.4	-2.7	-2.5
Tertiary	39.8	44.4	44.7	38.9	33.3	29.0	24.6	1.1	-2.9	-3.0
Transport	148.0	148.1	140.9	141.9	139.5	132.2	126.1	-0.5	-0.1	-1.0
CO2 Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	26.6	24.8	20.1	-1.2	0.4	-2.8
Non-CO2 GHG emissions	168.1	129.2	126.3	124.1	110.1	104.8	96.6	-2.8	-1.4	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.4	72.5	65.3	-1.3	-1.4	-1.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.08	0.09	0.08	0.04	0.04	0.02	0.02	-0.3	-7.8	-8.1
Final energy demand (t of CO2/toe)	2.08	2.02	1.91	1.88	1.75	1.71	1.66	-0.8	-0.9	-0.5
Industry	2.03	1.95	1.90	1.97	1.84	1.69	1.55	-0.7	-0.3	-1.7
Residential	1.41	1.41	1.26	1.17	0.97	0.97	0.93	-1.1	-2.6	-0.4
Tertiary	1.58	1.50	1.41	1.29	1.12	1.05	0.97	-1.2	-2.3	-1.4
Transport	2.92	2.93	2.84	2.81	2.77	2.73	2.68	-0.3	-0.2	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	25.2	26.5			
RES-H&C share	12.4	12.3	15.8	19.4	30.0	30.4	30.4			
RES-E share	14.7	13.7	14.9	19.8	31.5	36.3	39.6			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	12.7	16.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	82	72	-0.7	5.1	-2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	147	152	0.0	2.9	0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	274.0	283.8	292.9	2.4	3.4	0.7
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.7	11.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Germany: EU027			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1	
GDP (in 000 ME13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9	
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	308985	290077	264410	-0.3	-0.7	-1.5	
Solids	84802	81952	78824	78036	77896	74793	59744	-0.7	-0.1	-2.6	
Oil	130980	121460	111798	111688	102755	93384	83977	-1.6	-0.8	-2.0	
Natural gas	71878	77782	75905	74011	68585	67917	65888	0.5	-1.0	-0.4	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Renewable energy forms	10665	19054	31477	39195	50717	52599	53480	11.4	4.9	0.5	
Energy Branch Consumption	14566	14384	13378	13631	12248	11492	10157	-0.8	-0.9	-1.9	
Non-Energy Uses	25064	24662	22582	24685	25861	26513	26458	-1.0	1.4	0.2	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	135549	137356	129648	120921	109978	99102	88051	-0.4	-1.6	-2.2	
Solids	60629	56484	45906	42340	37289	35535	26366	-2.7	-2.1	-3.4	
Oil	4680	5782	4754	4964	3809	2920	2236	0.2	-2.2	-5.2	
Natural gas	15825	14334	11113	10749	9889	8247	6194	-3.5	-1.2	-4.6	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Renewable energy sources	10665	18695	31618	39044	50516	52400	53254	11.5	4.8	0.5	
Hydro	1869	1689	1802	1925	1936	2024	2070	-0.4	0.7	0.7	
Biomass & Waste	7876	14249	24988	27662	32638	32050	29955	12.2	2.7	-0.9	
Wind	804	2341	3250	5689	9411	10065	11163	15.0	11.2	1.7	
Solar and others	116	371	1493	3575	5505	7184	8572	29.1	13.9	4.5	
Geothermal	0	46	86	192	1026	1077	1495	0.0	28.1	3.8	
Net Imports (ktoe)	204709	208118	201696	204465	202003	194047	179554	-0.1	0.0	-1.2	
Solids	21663	25972	31644	35695	40607	39257	33378	3.9	2.5	-1.9	
Oil	125918	120239	109834	109501	101883	93403	84688	-1.4	-0.7	-1.8	
Crude oil and Feedstocks	101441	111039	91612	87783	82418	76393	70587	-1.0	-1.1	-1.5	
Oil products	24477	9200	18222	21718	19465	17010	14101	-2.9	0.7	-3.2	
Natural gas	56865	61940	61645	63262	58755	59804	59941	0.8	-0.5	0.2	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Import Dependency (%)	59.4	60.4	60.1	62.8	64.7	66.2	67.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645695	598249	622666	608580	0.9	-0.5	0.2	
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0	
Solids	296687	288142	262896	272894	273970	269618	211413	-1.2	0.4	-2.6	
Oil (including refinery gas)	4785	11997	8741	1079	940	2108	1905	6.2	-20.0	7.3	
Gas (including derived gases)	59970	83608	100912	92808	72400	101267	106879	5.3	-3.3	4.0	
Biomass-waste	10121	20849	42975	58715	35101	44915	57762	15.6	-2.0	5.1	
Hydro (pumping excluded)	21732	19638	20953	22382	22506	23539	24065	-0.4	0.7	0.7	
Wind	9352	27229	37793	66153	109427	117039	129800	15.0	11.2	1.7	
Solar	60	1283	11727	34612	48465	63211	75785	69.3	15.2	4.6	
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207116	207563	220353	3.1	3.0	0.6	
Nuclear energy	21644	20656	20656	12188	6907	0	0	-0.5	-10.4	-100.0	
Renewable energy	11040	25641	50141	90293	120216	132933	152238	16.3	9.1	2.4	
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5802	5906	1.1	0.3	0.5	
Wind	6095	18375	27180	44946	61821	60536	68118	16.1	8.6	1.0	
Solar	114	2056	17554	39757	52803	66595	78215	65.5	11.6	4.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	81689	77676	83806	86551	79993	74630	68115	0.3	-0.5	-1.6	
of which cogeneration units	14369	20840	24554	17074	6203	11337	12531	5.5	-12.9	7.3	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	50924	48087	47789	52819	49170	44016	36711	-0.6	0.3	-2.9	
Gas fired	21336	21671	26890	25178	21891	21904	23087	2.3	-2.0	0.5	
Oil fired	8066	5686	5688	5028	1674	1457	1247	-3.4	-11.5	-2.9	
Biomass-waste fired	1363	2232	3432	3501	7087	7082	6899	9.7	7.5	-0.3	
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0	
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.2	32.5	30.2				
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	39.3	42.2				
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.1	11.2	13.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	41.9	40.1	47.4				
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	87621	91712	77302	0.7	-0.3	-1.2	
Solids	67101	65740	59687	61356	60916	59255	45894	-1.2	0.2	-2.8	
Oil (including refinery gas)	1411	1427	855	236	311	682	594	-4.9	-9.6	6.7	
Gas (including derived gases)	12891	17808	19955	16546	12500	17399	17684	4.5	-4.6	3.5	
Biomass & Waste	3158	5100	10066	12030	13061	13543	12297	12.3	2.6	-0.6	
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	180304	187908	163048	142875	120424	103375	96191	-1.0	-3.0	-2.2	
Refineries	119420	125092	103238	98875	92861	86061	79395	-1.4	-1.1	-1.6	
Biofuels and hydrogen production	237	1859	2884	3011	2837	2680	2771	28.4	-0.2	-0.2	
District heating	1198	3942	4754	4043	3515	3040	2970	14.8	-3.0	-1.7	
Derived gases, cokeries etc.	59450	57015	52171	36947	21211	11594	11054	-1.3	-8.6	-6.3	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
Annual % Change										
TRANSPORT										
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1208	1236	1265	0.6	0.7	0.5
Public road transport	69	67	62	63	67	67	68	-1.1	0.8	0.3
Private cars and motorcycles	850	876	905	942	949	957	971	0.6	0.5	0.2
Rail	90	92	100	111	115	129	138	1.1	1.4	1.8
Aviation ⁽³⁾	55	62	61	69	75	80	85	1.1	2.0	1.3
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.5
Freight transport activity (Gtkm)	493	545	592	619	682	720	761	1.9	1.4	1.1
Heavy goods and light commercial vehicles	342	385	422	439	486	510	538	2.1	1.4	1.0
Rail	83	95	107	116	126	135	144	2.6	1.6	1.4
Inland navigation	68	65	63	65	70	74	79	-0.7	1.0	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56162	52111	49260	-1.1	-0.3	-1.3
Public road transport	1047	897	803	815	836	823	801	-2.6	0.4	-0.4
Private cars and motorcycles	42176	37675	35607	35814	31246	27272	24942	-1.7	-1.3	-2.2
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12375	12172	12195	-0.8	0.9	-0.1
Rail	1947	1580	1414	1496	1455	1522	1526	-3.2	0.3	0.5
Aviation	7345	8265	8719	9601	9944	9999	9457	1.7	1.3	-0.5
Inland navigation	283	323	278	285	307	324	340	-0.2	1.0	1.0
By transport activity										
Passenger transport	51841	47805	45951	47113	42838	38948	36040	-1.2	-0.7	-1.7
Freight transport	13261	11992	12194	12678	13324	13163	13220	-0.8	0.9	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.3	2.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	5.9	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	317273	317254	310393	297925	283124	263564	237952	-0.2	-0.9	-1.7
Final Energy Demand	219989	218456	219721	217308	213400	199431	186426	0.0	-0.3	-1.3
by sector										
Industry	57570	59093	60563	62096	65087	62327	58374	0.5	0.7	-1.1
Energy intensive industries	39345	40705	42170	43510	45859	43676	40146	0.7	0.8	-1.3
Other industrial sectors	18225	18389	18393	18586	19228	18651	18229	0.1	0.4	-0.5
Residential	63072	63498	62442	58726	57392	53083	49747	-0.1	-0.8	-1.4
Tertiary	34239	35302	38222	36396	34478	31643	28792	1.1	-1.0	-1.8
Transport ⁽⁵⁾	65109	60563	58494	60090	56442	52378	49512	-1.1	-0.4	-1.3
by fuel										
Solids	10958	8238	9379	9284	9903	9590	7848	-1.5	0.5	-2.3
Oil	99738	90309	83168	82419	73232	63554	54911	-1.8	-1.3	-2.8
Gas	56064	55136	56501	56368	55549	49723	47707	0.1	-0.2	-1.5
Electricity	41570	44907	45781	44880	45877	48677	47811	1.0	0.0	0.4
Heat (from CHP and District Heating)	6831	10751	11268	9856	9778	9644	9750	5.1	-1.4	0.0
Renewable energy forms	4828	9116	13625	14468	18967	17845	17764	10.9	3.4	-0.7
Other	0	0	0	32	94	396	636	0.0	0.0	21.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	144	140	128	116	104	93	81	-1.2	-2.0	-2.4
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	83	75	-0.7	-0.3	-1.7
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	66	59	-0.6	-2.2	-2.5
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	67	58	-0.2	-2.4	-2.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	25	22	-2.2	-1.7	-2.5
Freight transport (toe/Mtkm)	27	22	21	20	20	18	17	-2.6	-0.5	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	1076.8	1015.8	957.1	943.5	891.9	834.2	719.2	-1.2	-0.7	-2.1
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	495.2	483.0	483.0	405.9		-0.2	-2.0
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	396.7	351.2	313.3			-1.3	-2.3
CO2 Emissions (energy related)	852.1	825.2	787.8	777.7	733.0	685.5	589.8	-0.8	-0.7	-2.2
Power generation/District heating	330.6	344.9	324.5	317.5	303.7	307.8	252.8	-0.2	-0.7	-1.8
Energy Branch	28.1	26.2	23.5	25.9	22.0	19.8	17.7	-1.8	-0.7	-2.1
Industry	130.2	115.3	115.3	112.7	114.3	99.5	85.9	-1.2	-0.1	-2.8
Residential	119.4	110.8	104.3	98.0	87.9	76.6	70.4	-1.3	-1.7	-2.2
Tertiary	58.5	55.9	56.3	55.4	47.9	38.2	30.1	-0.4	-1.6	-4.5
Transport	185.3	172.2	163.8	168.2	157.2	143.6	132.8	-1.2	-0.4	-1.7
CO2 Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.4	57.0	49.8	-1.4	0.5	-1.6
Non-CO2 GHG emissions	161.0	128.9	113.7	109.1	100.4	91.6	79.6	-3.4	-1.2	-2.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	70.8	66.2	57.1	-1.2	-0.7	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.50	0.46	0.42	0.41	0.42	0.41	0.35	-1.7	-0.1	-1.9
Final energy demand (t of CO2/toe)	2.24	2.08	2.00	2.00	1.91	1.79	1.71	-1.1	-0.5	-1.1
Industry	2.26	1.95	1.90	1.81	1.76	1.60	1.47	-1.7	-0.8	-1.8
Residential	1.89	1.74	1.67	1.67	1.53	1.44	1.42	-1.2	-0.9	-0.8
Tertiary	1.71	1.58	1.47	1.52	1.39	1.21	1.05	-1.5	-0.6	-2.8
Transport	2.85	2.84	2.80	2.80	2.79	2.74	2.68	-0.2	-0.1	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	21.1	23.4			
RES-H&C share	4.2	6.7	9.6	10.6	17.5	19.3	19.5			
RES-E share	6.1	10.5	18.1	29.5	34.9	38.1	45.3			
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	15.0	20.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	106	104	105	3.7	5.6	-0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	169	177	180	2.2	0.3	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	344.1	364.0	382.0	3.0	1.3	1.0
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.6	11.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Greece: EU027			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.6	
GDP (in 000 ME13)	190	231	232	200	207	213	225	2.0	-1.1	0.8	
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25201	22201	19514	0.2	-1.3	-2.5	
Solids	9038	8944	7863	6765	5650	3576	1982	-1.4	-3.3	-9.9	
Oil	16085	18119	14974	12997	12146	10669	9063	-0.7	-2.1	-2.9	
Natural gas	1705	2354	3235	2979	3779	3391	3152	6.6	1.6	-1.8	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5	
Renewable energy forms	1466	1668	2163	2714	3225	4320	5134	4.0	4.1	4.8	
Energy Branch Consumption	1634	1820	1839	1906	1780	1562	1369	1.2	-0.3	-2.6	
Non-Energy Uses	719	761	1108	824	847	836	835	4.4	-2.7	-0.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	10012	10326	9461	9027	8365	7471	6796	-0.6	-1.2	-2.1	
Solids	8222	8538	7315	6430	5352	3351	1847	-1.2	-3.1	-10.1	
Oil	282	101	132	75	73	70	68	-7.3	-5.7	-0.7	
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	1466	1668	2006	2521	2940	4050	4881	3.2	3.9	5.2	
Hydro	318	431	641	506	508	477	480	7.3	-2.3	-0.6	
Biomass & Waste	1009	1015	919	1157	1348	1450	1465	-0.9	3.9	0.8	
Wind	39	109	233	330	448	1126	1603	19.7	6.7	13.6	
Solar and others	99	101	197	514	621	979	1314	7.1	12.2	7.8	
Geothermal	2	12	16	16	15	17	19	25.9	-0.4	2.3	
Net Imports (ktoe)	22151	23498	21712	20057	19820	17658	15680	-0.2	-0.9	-2.3	
Solids	769	364	401	335	298	225	135	-6.3	-2.9	-7.6	
Oil	19695	20476	17433	15950	15023	13455	11770	-1.2	-1.5	-2.4	
Crude oil and Feedstocks	20596	19488	20633	24349	23257	21674	20051	0.0	1.2	-1.5	
Oil products	-900	988	-3200	-8399	-8234	-8219	-8282	13.5	9.9	0.1	
Natural gas	1689	2332	3231	2979	3814	3463	3339	6.7	1.7	-1.3	
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5	
Import Dependency (%)	69.5	68.6	69.1	69.0	70.3	70.3	69.8				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58269	56619	55008	0.7	0.2	-0.6	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	34313	35543	30797	26751	23101	14813	7854	-1.1	-2.8	-10.2	
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	129	-3.7	-1.7	-30.8	
Gas (including derived gases)	5920	8171	9830	8817	13840	11444	9754	5.2	3.5	-3.4	
Biomass-waste	163	222	319	195	382	907	896	6.9	1.8	8.9	
Hydro (pumping excluded)	3693	5017	7460	5880	5901	5552	5577	7.3	-2.3	-0.6	
Wind	451	1266	2714	3834	5207	13095	18637	19.7	6.7	13.6	
Solar	0	1	158	3757	4715	8423	12161	0.0	40.4	9.9	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19727	23761	26804	3.5	2.2	3.1	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	3298	3598	4715	8146	9363	14297	18207	3.6	7.1	6.9	
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0	
Wind	226	491	1298	2152	2637	5265	6996	19.1	7.3	10.3	
Solar	0	1	202	2605	3147	5454	7632	0.0	31.6	9.3	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7914	9610	11174	11062	10365	9464	8598	3.5	-0.7	-1.9	
of which cogeneration units	195	3051	588	284	309	315	394	11.7	-6.2	2.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4454	4754	4312	3923	3054	3124	2869	-0.3	-3.4	-0.6	
Gas fired	1157	2203	4189	5062	5306	5273	4738	13.7	2.4	-1.1	
Oil fired	2302	2625	2618	2022	1824	834	733	1.3	-3.6	-8.7	
Biomass-waste fired	1	28	55	55	180	233	258	50.5	12.6	3.7	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.5	26.0	22.9				
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	42.9	43.9				
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.4	3.0	2.9				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.8	49.4	67.8				
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8820	5921	3654	-0.6	-2.0	-8.4	
Solids	8170	8694	7567	6558	5457	3415	1882	-0.8	-3.2	-10.1	
Oil (including refinery gas)	1978	1992	1278	1005	1071	504	43	-4.3	-1.8	-27.6	
Gas (including derived gases)	1280	1605	1863	1435	2209	1813	1546	3.8	1.7	-3.5	
Biomass & Waste	64	52	79	43	83	190	183	2.2	0.4	8.2	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	22570	21629	22585	24150	24055	22530	20981	0.0	0.6	-1.4	
Refineries	22508	21536	22462	23941	23769	22236	20669	0.0	0.6	-1.4	
Biofuels and hydrogen production	0	0	124	207	279	278	289	0.0	8.5	0.3	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	62	93	0	2	7	16	23	-95.7	1750.9	13.2	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	129	153	161	164	172	176	183	2.2	0.7	0.6
Public road transport	22	22	21	21	22	23	23	-0.3	0.6	0.4
Private cars and motorcycles	67	90	105	106	108	107	108	4.7	0.2	0.1
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.8
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.3
Inland navigation	7	7	7	7	7	8	8	-0.1	0.2	0.6
Freight transport activity (Gtkm)	38	34	37	37	39	41	42	-0.1	0.5	0.7
Heavy goods and light commercial vehicles	28	24	30	30	32	33	34	0.8	0.5	0.7
Rail	0	1	1	1	1	1	1	3.7	0.8	1.1
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7252	6868	6521	1.1	-1.2	-1.1
Public road transport	423	438	403	403	408	402	389	-0.5	0.1	-0.5
Private cars and motorcycles	3327	4435	4483	4018	3695	3268	2898	3.0	-1.9	-2.4
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1487	1454	1414	-0.4	-0.7	-0.5
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.3
Aviation	1325	1181	919	936	1016	1085	1148	-3.6	1.0	1.2
Inland navigation	495	648	717	612	622	635	649	3.8	-1.4	0.4
By transport activity										
Passenger transport	5530	6460	6297	5784	5550	5193	4878	1.3	-1.3	-1.3
Freight transport	1756	1714	1850	1688	1702	1675	1643	0.5	-0.8	-0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.5	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.3	4.7			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24353	21365	18679	0.0	-1.2	-2.6
Final Energy Demand	18676	20958	19197	17486	17115	16167	15026	0.3	-1.1	-1.3
by sector										
Industry	4450	4161	3672	3224	3306	3198	2907	-1.9	-1.0	-1.3
Energy intensive industries	2737	2588	2427	2157	2193	2091	1808	-1.2	-1.0	-1.9
Other industrial sectors	1714	1573	1245	1067	1113	1106	1098	-3.1	-1.1	-0.1
Residential	4502	5510	4615	4351	4280	3997	3647	0.2	-0.8	-1.6
Tertiary	2426	3100	2752	2426	2264	2090	1937	1.3	-1.9	-1.5
Transport ⁽⁵⁾	7297	8188	8158	7484	7265	6882	6536	1.1	-1.2	-1.1
by fuel										
Solids	891	458	302	208	193	161	99	-10.3	-4.4	-6.4
Oil	12744	14413	12110	10307	9463	8652	7639	-0.5	-2.4	-2.1
Gas	257	586	982	1018	1030	1041	1049	14.3	0.5	0.2
Electricity	3710	4377	4568	4397	4597	4450	4349	2.1	0.1	-0.6
Heat (from CHP and District Heating)	28	49	46	44	50	58	64	5.2	0.8	2.5
Renewable energy forms	1046	1076	1191	1510	1774	1785	1792	1.3	4.1	0.1
Other	0	0	0	2	7	19	33	0.0	0.0	16.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	149	136	124	130	122	104	87	-1.8	-0.2	-3.3
Industry (Energy on Value added, index 2000=100)	100	88	101	99	98	92	80	0.1	-0.4	-1.9
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	81	71	-2.2	1.0	-2.1
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	79	71	62	-1.5	-0.9	-2.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.0
Freight transport (toe/Mtkm)	46	51	50	45	43	41	39	0.7	-1.4	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	133.3	139.6	121.4	105.7	96.7	78.7	62.4	-0.9	-2.2	-4.3
of which ETS sectors (2013 scope) GHG emissions	77.2	64.9	57.3	53.1	53.1	39.3	28.1		-2.0	-6.2
of which ESD sectors (2013 scope) GHG emissions	62.4	56.5	48.4	43.6	43.6	39.4	34.3		-2.6	-2.4
CO2 Emissions (energy related)	98.4	106.4	92.1	79.6	73.1	56.9	43.0	-0.7	-2.3	-5.2
Power generation/District heating	52.1	55.6	47.9	40.9	37.2	23.7	13.6	-0.8	-2.5	-9.6
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	2.9	1.6	-0.1	-1.8
Industry	10.4	8.9	7.2	6.2	5.9	5.2	4.1	-3.7	-1.9	-3.5
Residential	7.6	9.9	6.7	5.0	4.3	3.9	3.1	-1.3	-4.2	-3.5
Tertiary	3.4	4.3	2.8	1.8	1.2	1.0	0.8	-2.1	-8.0	-4.4
Transport	21.8	24.4	24.0	21.7	20.9	19.7	18.5	1.0	-1.4	-1.2
CO2 Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	6.6	-2.9	0.1	-0.1
Non-CO2 GHG emissions	26.1	23.6	22.6	19.3	16.9	14.9	12.8	-1.4	-2.9	-2.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.0	73.3	58.1	-0.9	-2.2	-4.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.97	0.93	0.83	0.75	0.63	0.41	0.24	-1.6	-2.7	-9.1
Final energy demand (t of CO2/toe)	2.32	2.26	2.12	1.99	1.89	1.85	1.76	-0.9	-1.1	-0.7
Industry	2.35	2.13	1.96	1.91	1.79	1.63	1.42	-1.8	-0.9	-2.3
Residential	1.69	1.79	1.45	1.16	1.01	0.98	0.84	-1.5	-3.5	-1.9
Tertiary	1.41	1.38	1.01	0.76	0.53	0.47	0.40	-3.3	-6.2	-2.9
Transport	2.99	2.98	2.94	2.90	2.87	2.86	2.83	-0.2	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.5	26.0	33.8			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.2	39.0			
RES-E share	7.2	8.2	12.3	22.4	25.8	47.1	65.5			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.1	16.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	97	103	102	1.9	3.0	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	137	150	160	3.8	2.4	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	15.2	20.2	26.7	26.6	31.4	33.1	34.8	5.8	1.6	1.0
as % of GDP	8.0	8.7	11.5	13.3	15.1	15.6	15.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Hungary: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1
GDP (in 000 ME13)	83	102	101	107	117	131	145	1.9	1.5	2.2
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24257	24810	25422	0.2	-0.6	0.5
Solids	3850	3031	2730	2635	2124	1420	692	-3.4	-2.5	-10.6
Oil	6964	7115	6699	6271	6317	6401	6396	-0.4	-0.6	0.1
Natural gas	9657	12094	9816	7786	8576	7088	6572	0.2	-1.3	-2.6
Nuclear	3672	3585	4078	3666	3677	6045	7861	1.1	-1.0	7.9
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Renewable energy forms	859	1251	2042	1931	2700	3030	3211	9.0	2.8	1.7
Energy Branch Consumption	1164	1062	1095	1029	949	930	923	-0.6	-1.4	-0.3
Non-Energy Uses	1587	2169	1974	2275	2502	2820	3081	2.2	2.4	2.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	9900	10857	12238	-0.5	-1.1	2.1
Solids	2893	1748	1593	1794	1367	662	165	-5.8	-1.5	-19.0
Oil	1699	1457	1150	795	619	278	194	-3.8	-6.0	-11.0
Natural gas	2475	2331	2235	1857	1199	522	493	-1.0	-6.0	-8.5
Nuclear	3672	3585	4078	3666	3677	6045	7861	1.1	-1.0	7.9
Renewable energy sources	859	1251	2010	2132	3038	3350	3526	8.9	4.2	1.5
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0
Biomass & Waste	758	1145	1844	1905	2660	2620	2522	9.3	3.7	-0.5
Wind	0	1	46	50	77	77	77	0.0	5.3	0.0
Solar and others	0	2	6	9	45	209	229	0.0	23.5	17.6
Geothermal	86	87	99	148	237	425	678	1.4	9.1	11.1
Net Imports (ktoe)	13956	17421	14988	13249	14357	13953	13184	0.7	-0.4	-0.8
Solids	1087	1299	1143	841	757	757	527	0.5	-4.0	-3.6
Oil	5291	5780	5637	5476	5698	6123	6202	0.6	0.1	0.9
Crude oil and Feedstocks	5887	5988	5806	5273	5503	5934	6039	-0.1	-0.5	0.9
Oil products	-596	-208	-169	203	195	189	163	-11.9	0.0	-1.8
Natural gas	7283	9808	7726	5929	7378	6566	6079	0.6	-0.5	-1.9
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Import Dependency (%)	55.2	63.1	58.1	56.4	59.2	56.2	51.9			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33193	36298	38567	0.6	-1.2	1.5
Nuclear energy	14180	13834	15761	15087	15024	24706	32131	1.1	-0.5	7.9
Solids	9590	7023	6234	6436	5075	2290	540	-4.2	-2.0	-20.1
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0
Gas (including derived gases)	6719	12502	11714	3383	9569	4118	829	5.7	-2.0	-21.7
Biomass-waste	120	1730	2449	2015	2241	2343	2007	35.2	-0.9	-1.1
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0
Wind	0	10	534	585	890	890	890	0.0	5.2	0.0
Solar	0	0	1	32	97	1656	1873	0.0	55.6	34.5
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7095	9262	10433	-0.4	-1.5	3.9
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6
Renewable energy	48	66	348	431	640	2098	2300	21.9	6.3	13.7
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0
Wind	0	17	293	329	477	477	477	0.0	5.0	0.0
Solar	0	0	2	45	106	1564	1766	0.0	48.7	32.5
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	6621	6311	6024	5103	4495	3944	3651	-0.9	-2.9	-2.1
of which cogeneration units	1464	2047	1862	1144	1575	1133	1024	2.4	-1.7	-4.2
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1747	1380	1155	1137	692	425	414	-4.1	-5.0	-5.0
Gas fired	4160	4622	4605	3496	3385	3098	2822	1.0	-3.0	-1.8
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3
Biomass-waste fired	112	133	173	349	356	358	358	4.4	7.5	0.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.4	42.4	40.0			
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	40.5	37.3	27.6			
% of gross electricity from CHP	13.5	19.1	19.6	14.4	13.8	9.1	6.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.9	82.3	96.5			
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3597	2031	1073	-1.3	-3.7	-11.4
Solids	2755	1924	1646	1611	1289	593	145	-5.0	-2.4	-19.6
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0
Gas (including derived gases)	2140	3079	2704	657	1600	708	271	2.4	-5.1	-16.3
Biomass & Waste	61	534	777	436	653	674	601	28.9	-1.7	-0.8
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12946	13165	14441	12781	12808	15177	16983	1.1	-1.2	2.9
Refineries	7638	8118	8427	6997	7089	7183	7179	1.0	-1.7	0.1
Biofuels and hydrogen production	0	3	175	182	348	325	328	0.0	7.1	-0.6
District heating	471	627	474	648	634	625	879	0.1	3.0	3.3
Derived gases, cokeries etc.	4837	4417	5365	4954	4737	7044	8598	1.0	-1.2	6.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Hungary: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	80	84	84	86	95	103	110	0.5	1.3	1.5
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	64	68	1.4	1.1	1.2
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.3
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	42	46	2.3	1.1	1.9
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.7	1.6
Rail	9	9	9	10	11	12	14	0.0	2.1	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	1.0	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4120	4132	4211	2.8	-0.5	0.2
Public road transport	339	361	335	346	353	352	347	-0.1	0.5	-0.2
Private cars and motorcycles	1805	2191	2208	2035	2072	1997	1961	2.0	-0.6	-0.5
Heavy goods and light commercial vehicles	763	1341	1418	1214	1277	1287	1330	6.4	-1.0	0.4
Rail	171	154	150	152	172	193	208	-1.3	1.3	1.9
Aviation	230	261	230	207	243	300	360	0.0	0.6	4.0
Inland navigation	1	1	1	4	4	4	5	3.1	14.6	1.7
By transport activity										
Passenger transport	2449	2877	2826	2642	2731	2720	2743	1.4	-0.3	0.0
Freight transport	860	1431	1515	1316	1389	1413	1467	5.8	-0.9	0.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.5	8.5			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21754	21991	22342			
Final Energy Demand	16139	18218	16596	15895	16146	15686	15219	0.1	-0.9	0.3
by sector								0.3	-0.3	-0.6
Industry	3513	3369	2890	3081	3001	3114	3093	-1.9	0.4	0.3
Energy intensive industries	2517	2267	1854	1941	1850	1875	1768	-3.0	0.0	-0.5
Other industrial sectors	996	1102	1036	1141	1151	1239	1324	0.4	1.1	1.4
Residential	5603	6464	5740	5253	5260	4962	4765	0.2	-0.9	-1.0
Tertiary	3712	4072	3625	3566	3726	3443	3117	-0.2	0.3	-1.8
Transport ⁽⁵⁾	3311	4313	4341	3995	4159	4167	4244	2.7	-0.4	0.2
by fuel										
Solids	665	690	481	501	370	381	166	-3.2	-2.6	-7.7
Oil	4218	4904	4638	4261	4179	4031	3877	1.0	-1.0	-0.7
Gas	6503	7852	6261	5868	5788	5384	5201	-0.4	-0.8	-1.1
Electricity	2531	2780	2941	2977	3096	3278	3388	1.5	0.5	0.9
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	910	957	-2.8	-0.8	-0.5
Renewable energy forms	774	683	1184	1301	1701	1688	1611	4.3	3.7	-0.5
Other	0	0	0	1	5	13	18	0.0	0.0	14.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	305	271	257	219	207	190	175	-1.7	-2.1	-1.7
Industry (Energy on Value added, index 2000=100)	100	74	64	63	56	52	47	-4.4	-1.2	-1.8
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	60	52	-1.4	-2.0	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	59	48	-2.0	-1.3	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	25	23	0.8	-1.7	-1.5
Freight transport (toe/Mtkm)	32	41	45	38	37	34	32	3.5	-2.0	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	79.8	76.9	67.7	59.4	55.7	48.1	41.7	-1.6	-1.9	-2.9
of which ETS sectors (2013 scope) GHG emissions		30.6	25.6	19.6	19.5	14.1	10.1		-2.7	-6.3
of which ESD sectors (2013 scope) GHG emissions		46.3	42.1	39.8	36.2	34.0	31.5		-1.5	-1.4
CO2 Emissions (energy related)	55.0	56.4	49.0	41.5	40.5	33.6	28.7	-1.1	-1.9	-3.4
Power generation/District heating	22.1	18.3	16.0	10.5	10.9	5.6	2.7	-3.2	-3.8	-13.0
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.4
Industry	6.8	6.7	5.3	5.8	4.9	4.6	3.7	-2.4	-0.8	-2.8
Residential	8.8	10.7	8.6	7.3	7.0	6.6	6.3	-0.2	-2.1	-1.1
Tertiary	6.1	6.7	5.2	5.2	5.2	4.3	3.6	-1.6	-0.1	-3.5
Transport	9.7	12.7	12.3	11.2	11.2	11.1	11.2	2.4	-1.0	0.0
CO2 Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.0	4.8	-1.9	2.5	0.1
Non-CO2 GHG emissions	20.3	15.6	15.0	13.5	10.4	9.5	8.2	-3.0	-3.6	-2.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	58.8	50.8	44.0	-1.6	-1.9	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.41	0.34	0.31	0.26	0.23	0.11	0.05	-2.7	-2.7	-13.9
Final energy demand (t of CO2/toe)	1.94	2.02	1.90	1.85	1.75	1.70	1.63	-0.2	-0.8	-0.7
Industry	1.92	2.00	1.84	1.87	1.64	1.49	1.20	-0.4	-1.1	-3.1
Residential	1.57	1.66	1.50	1.39	1.33	1.33	1.31	-0.4	-1.2	-0.1
Tertiary	1.65	1.65	1.44	1.45	1.39	1.25	1.17	-1.4	-0.3	-1.8
Transport	2.92	2.94	2.83	2.81	2.69	2.67	2.63	-0.3	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.2	14.7	15.4			
RES-H&C share	7.6	6.0	11.1	13.4	17.1	19.0	21.0			
RES-E share	0.6	4.4	7.1	6.7	7.9	11.1	10.6			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	10.0	10.3	10.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	71	79	84	3.5	0.5	1.7
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	130	140	154	5.4	-0.2	1.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.2	25.2	27.9	6.1	0.9	2.3
as % of GDP	13.5	15.9	20.2	16.7	18.9	19.2	19.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Ireland: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0		
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6		
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14452	14157	13573	0.5	-0.5	-0.6		
Solids	2601	2664	1979	2028	1844	1496	1108	-2.7	-0.7	-5.0		
Oil	8145	8589	7818	6926	6749	6532	6278	-0.4	-1.5	-0.7		
Natural gas	3436	3470	4683	4016	4013	4061	3688	3.1	-1.5	-0.8		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1		
Renewable energy forms	235	366	671	1152	1983	2216	2623	11.1	11.4	2.8		
Energy Branch Consumption	254	300	243	250	206	197	176	-0.4	-1.7	-1.6		
Non-Energy Uses	675	516	341	360	405	425	440	-6.6	1.7	0.8		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1944	2148	2532	-1.6	0.5	2.7		
Solids	965	820	981	740	0	1	1	0.2	-56.5	13.3		
Oil	0	0	0	44	0	0	0	0.0	0.0	13.3		
Natural gas	958	461	233	231	233	233	231	-13.2	0.0	-0.1		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	235	366	628	1016	1710	1914	2300	10.3	10.5	3.0		
Hydro	73	54	52	62	66	65	65	-3.4	2.6	-0.2		
Biomass & Waste	141	216	327	420	651	812	876	8.8	7.1	3.0		
Wind	21	96	242	520	935	947	1234	27.7	14.5	2.8		
Solar and others	0	1	8	13	58	89	121	54.0	22.6	7.7		
Geothermal	0	0	0	0	0	1	3	0.0	0.0	21.6		
Net Imports (ktoe)	12370	13765	13215	12285	12617	12124	11163	0.7	-0.5	-1.2		
Solids	1681	1886	945	1288	1844	1495	1107	-5.6	6.9	-5.0		
Oil	8203	8694	7706	6991	6866	6645	6385	-0.6	-1.2	-0.7		
Crude oil and Feedstocks	3016	3166	2987	2873	2875	2715	2551	-0.1	-0.4	-1.2		
Oil products	5186	5527	4718	4118	3982	3930	3834	-0.9	-1.7	-0.4		
Natural gas	2478	3010	4480	3784	3781	3830	3472	6.1	-1.7	-0.8		
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1		
Import Dependency (%)	84.9	89.6	86.5	85.8	86.6	84.9	81.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31139	31960	32607	1.8	0.9	0.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	8587	8839	6384	6793	6070	4906	3557	-2.9	-0.5	-5.2		
Oil (including refinery gas)	4638	3340	605	15	3	15	6	-18.4	-41.0	7.3		
Gas (including derived gases)	9263	11574	17705	12617	12728	14368	12800	6.7	-3.2	0.1		
Biomass-waste	95	130	317	660	682	886	1115	12.8	8.0	5.0		
Hydro (pumping excluded)	846	631	599	721	771	760	760	-3.4	2.6	-0.2		
Wind	244	1112	2815	6049	10869	11009	14353	27.7	14.5	2.8		
Solar	0	0	0	1	16	16	16	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9685	9138	9698	6.2	1.8	0.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	355	751	1611	2724	4222	4264	5318	16.3	10.1	2.3		
Hydro (pumping excluded)	236	234	237	237	258	258	258	0.0	0.8	0.0		
Wind	119	517	1374	2486	3945	3987	5042	27.7	11.1	2.5		
Solar	0	0	0	1	19	19	19	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	4097	5179	6480	6366	5464	4874	4380	4.7	-1.7	-2.2		
of which cogeneration units	77	240	285	264	63	303	304	14.0	-14.0	17.0		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0		
Gas fired	1872	2625	4081	3969	3624	3509	3160	8.1	-1.2	-1.4		
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2		
Biomass-waste fired	14	43	43	69	197	198	204	11.4	16.6	0.3		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	35.6	38.8	37.6					
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.8	47.6	47.6					
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.8	16.3	17.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	39.6	39.6	49.8					
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3517	3644	3160	-0.4	-2.6	-1.1		
Solids	1930	1920	1358	1448	1344	1089	798	-3.5	-0.1	-5.1		
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4		
Gas (including derived gases)	1825	2040	3039	2066	2020	2340	2095	5.2	-4.0	0.4		
Biomass & Waste	24	30	75	143	153	211	266	12.2	7.5	5.7		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	3341	3204	3033	3024	3135	2988	2836	-1.0	0.3	-1.0		
Refineries	3341	3203	2940	2933	2928	2762	2596	-1.3	0.0	-1.2		
Biofuels and hydrogen production	0	1	93	89	200	195	197	0.0	7.9	-0.1		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	2	8	31	43	0.0	2205.1	18.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.7
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.8
Rail	1	2	2	2	2	2	2	2.7	1.0	1.1
Aviation ⁽³⁾	6	10	10	11	14	16	17	5.2	3.1	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	0.8
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.5
Heavy goods and light commercial vehicles	11	17	10	11	13	15	17	-0.5	2.4	2.5
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.5
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4766	4782	4865	1.5	0.1	0.2
Public road transport	96	101	110	111	112	113	114	1.4	0.2	0.2
Private cars and motorcycles	2206	2577	2807	2583	2528	2446	2376	2.4	-1.0	-0.6
Heavy goods and light commercial vehicles	1086	1482	967	1019	1136	1231	1348	-1.2	1.6	1.7
Rail	40	42	44	44	47	49	50	0.8	0.7	0.6
Aviation	629	857	767	809	921	920	953	2.0	1.8	0.3
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.8
<i>By transport activity</i>										
Passenger transport	2958	3559	3724	3544	3604	3525	3490	2.3	-0.3	-0.3
Freight transport	1124	1519	990	1042	1162	1257	1375	-1.3	1.6	1.7
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.7	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.8	4.9			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14047	13732	13134	0.8	-0.6	-0.7
Final Energy Demand	10779	12597	11957	11423	11768	11418	11126	1.0	-0.2	-0.6
<i>by sector</i>										
Industry	2498	2582	2146	2453	2563	2410	2291	-1.5	1.8	-1.1
Energy intensive industries	1245	1341	1023	1166	1182	1024	909	-1.9	1.5	-2.6
Other industrial sectors	1252	1241	1123	1287	1381	1386	1382	-1.1	2.1	0.0
Residential	2513	2954	3296	2823	2857	2779	2623	2.7	-1.4	-0.8
Tertiary	1684	1979	1799	1556	1577	1441	1341	0.7	-1.3	-1.6
Transport ⁽⁵⁾	4085	5082	4715	4590	4771	4787	4870	1.4	0.1	0.2
<i>by fuel</i>										
Solids	671	751	604	567	501	407	311	-1.0	-1.9	-4.7
Oil	7045	8204	7270	6439	6234	6002	5748	0.3	-1.5	-0.8
Gas	1200	1364	1593	1883	1929	1658	1539	2.9	1.9	-2.2
Electricity	1745	2094	2186	2107	2262	2324	2410	2.3	0.3	0.6
Heat (from CHP and District Heating)	0	0	0	1	14	36	63	0.0	0.0	16.0
Renewable energy forms	118	184	304	424	820	959	1011	10.0	10.4	2.1
Other	0	0	0	2	8	31	45	0.0	1734.5	19.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	93	92	78	70	63	56	-1.9	-2.7	-2.2
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	64	56	-2.8	-0.3	-2.6
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	64	53	-0.2	-2.7	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	48	41	-1.9	-3.6	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	34	31	-1.2	-1.7	-2.0
Freight transport (toe/Mtkm)	96	88	92	89	86	81	80	-0.3	-0.7	-0.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	71.8	73.1	65.0	63.1	61.3	59.0	55.0	-1.0	-0.6	-1.1
of which ETS sectors (2013 scope) GHG emissions	25.4	20.0	18.5	17.6	16.6	14.2		-1.2	-2.2	
of which ESD sectors (2013 scope) GHG emissions	47.8	45.0	44.6	43.7	42.4	40.8		-0.3	-0.7	
CO₂ Emissions (energy related)	43.2	47.3	42.0	37.8	36.2	34.1	30.9	-0.3	-1.5	-1.6
Power generation/District heating	15.6	15.3	13.3	11.0	10.3	10.0	8.2	-1.6	-2.5	-2.2
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-1.5
Industry	5.3	5.6	3.6	3.8	3.4	2.6	2.0	-3.9	-0.4	-5.0
Residential	6.4	7.2	7.8	6.5	6.1	5.5	4.8	2.1	-2.5	-2.3
Tertiary	3.4	3.5	3.1	2.5	2.4	2.0	1.7	-0.7	-2.8	-3.3
Transport	12.3	15.3	13.9	13.6	13.8	13.7	13.9	1.3	-0.1	0.1
CO₂ Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	1.9	1.8	1.5	-7.0	3.1	-2.4
Non-CO₂ GHG emissions	25.6	23.1	21.5	23.5	23.2	23.1	22.6	-1.7	0.8	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.0	102.1	95.1	-1.0	-0.6	-1.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.66	0.60	0.47	0.41	0.33	0.31	0.25	-3.4	-3.5	-2.8
Final energy demand (t of CO ₂ /toe)	2.53	2.51	2.38	2.32	2.18	2.09	2.02	-0.6	-0.9	-0.8
Industry	2.13	2.16	1.66	1.56	1.33	1.09	0.89	-2.5	-2.2	-3.9
Residential	2.53	2.44	2.37	2.30	2.13	1.99	1.84	-0.7	-1.1	-1.4
Tertiary	1.99	1.77	1.74	1.63	1.50	1.39	1.26	-1.3	-1.5	-1.7
Transport	3.00	3.01	2.96	2.96	2.89	2.87	2.84	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.4	17.8	21.9			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	17.0	20.9			
RES-E share	4.8	7.2	14.5	26.5	41.7	41.8	52.1			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	11.9	15.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	92	97	96	5.9	2.1	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	178	183	184	3.0	1.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.8	13.9	15.5	15.6	18.8	20.8	22.2	4.7	1.9	1.6
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.3	9.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Italy: EUCo27
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3	
GDP (in 000 ME13)	1564	1643	1622	1565	1675	1776	1885	0.4	0.3	1.2	
Gross Inland Consumption (ktoe)	174219	187471	174761	159035	161288	151219	143730	0.0	-0.8	-1.1	
Solids	12550	16461	14170	16106	18594	11521	8287	1.2	2.8	-7.8	
Oil	89540	83963	69558	61171	56724	51231	46572	-2.5	-2.0	-2.0	
Natural gas	57945	70651	68057	56177	59839	57812	56283	1.6	-1.3	-0.6	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Renewable energy forms	10371	12170	19180	21628	23553	27891	29835	6.3	2.1	2.4	
Energy Branch Consumption	7704	10052	9539	8520	8167	7215	6606	2.2	-1.5	-2.1	
Non-Energy Uses	9019	8607	9560	7050	7322	7366	7340	0.6	-2.6	0.0	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	28400	27839	29560	30751	31737	34716	36228	0.4	0.7	1.3	
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0	
Oil	4915	6376	5687	5142	5667	5613	5619	1.5	0.0	-0.1	
Natural gas	13627	9886	6885	6760	5763	4592	4008	-6.6	-1.8	-3.6	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	9856	11516	16924	18793	20308	24511	26601	5.6	1.8	2.7	
Hydro	3800	3101	4395	4138	4087	4212	4251	1.5	-0.7	0.4	
Biomass & Waste	1736	3392	6670	10105	11371	12786	13119	14.4	5.5	1.4	
Wind	48	202	785	1258	1260	2149	2844	32.1	4.8	8.5	
Solar and others	12	30	298	2199	2500	4200	5136	37.4	23.7	7.5	
Geothermal	4259	4791	4776	1092	1089	1164	1251	1.2	-13.7	1.4	
Net Imports (ktoe)	152069	160241	149804	131764	133132	120226	111346	-0.1	-1.2	-1.8	
Solids	13133	16367	14301	16050	18594	11521	8287	0.9	2.7	-7.8	
Oil	87599	79154	67826	59509	54582	49212	44449	-2.5	-2.1	-2.0	
Crude oil and Feedstocks	89451	94307	84882	68525	61717	55037	49186	-0.5	-3.1	-2.2	
Oil products	-1852	-15153	-17056	-9016	-7135	-5825	-4737	24.9	-8.3	-4.0	
Natural gas	47008	59840	61600	49416	54133	53349	52624	2.7	-1.3	-0.3	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Import Dependency (%)	86.5	84.5	84.3	81.1	80.8	77.6	75.5				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288968	317890	312699	318893	1.0	0.6	0.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	26272	43606	39734	58856	67163	41209	30497	4.2	5.4	-7.6	
Oil (including refinery gas)	85878	47124	21714	8782	7794	4695	6751	-12.8	-9.7	-1.4	
Gas (including derived gases)	106398	156191	158215	110293	127551	111433	108522	4.0	-2.1	-1.6	
Biomass-waste	1908	6153	11586	18671	21446	31730	32327	19.8	6.4	4.2	
Hydro (pumping excluded)	44199	36067	51116	48119	47527	48981	49436	1.5	-0.7	0.4	
Wind	563	2344	9126	14628	14646	24983	33067	32.1	4.8	8.5	
Solar	17	31	1906	23409	25552	43458	52082	59.9	29.6	7.4	
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122843	126947	127092	3.9	1.6	0.3	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	16770	18701	26470	46375	47826	62485	71712	4.7	6.1	4.1	
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	18885	0.7	0.7	0.0	
Wind	363	1635	5794	8958	8963	12305	15715	31.9	4.5	5.8	
Solar	17	30	3113	18905	20057	31375	37111	68.3	20.5	6.3	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	55126	64249	78450	81079	75017	64462	55381	3.6	-0.4	-3.0	
of which cogeneration units	6476	5888	7351	17228	17158	17099	13981	1.3	8.8	-2.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4	
Gas fired	22819	36431	51677	52045	51357	47090	41707	8.5	-0.1	-2.1	
Oil fired	21763	17998	14748	13928	8629	5984	2170	-3.8	-5.2	-12.9	
Biomass-waste fired	436	870	1774	4810	5388	5499	5620	15.1	11.7	0.4	
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0	
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.3	27.2	27.8				
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.6	46.0	46.2				
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.4	11.5	11.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	36.3	49.7	54.3				
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43372	36518	34278	0.9	-2.2	-2.3	
Solids	6045	10399	9484	12963	14694	8342	6098	4.6	4.5	-8.4	
Oil (including refinery gas)	18954	12079	7365	1905	1674	1130	1489	-9.0	-13.8	-1.2	
Gas (including derived gases)	19668	29585	28966	18745	21733	19554	18762	3.9	-2.8	-1.5	
Biomass & Waste	438	2270	3527	3795	4330	6552	6988	23.2	2.1	4.9	
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	101609	106909	97409	78677	74334	67320	60864	-0.4	-2.7	-2.0	
Refineries	95900	101959	91472	74873	68938	62388	56552	-0.5	-2.8	-2.0	
Biofuels and hydrogen production	0	177	1419	1593	2212	2010	1891	0.0	4.5	-1.6	
District heating	0	0	110	121	122	122	119	0.0	1.1	-0.3	
Derived gases, cokeries etc.	5709	4773	4408	2090	3061	2800	2303	-2.6	-3.6	-2.8	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EUCO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	943	931	952	967	1020	1052	1087	0.1	0.7	0.6
Public road transport	93	101	102	105	107	109	110	0.9	0.5	0.3
Private cars and motorcycles	756	727	740	746	781	798	821	-0.2	0.5	0.5
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.0
Aviation ⁽³⁾	34	43	51	56	63	70	74	4.3	2.2	1.6
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.1
Freight transport activity (Gtkm)	253	303	268	271	290	306	323	0.6	0.8	1.1
Heavy goods and light commercial vehicles	192	226	202	203	217	228	240	0.5	0.7	1.0
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	54	58	2.4	0.5	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	39008	37217	36052	-0.2	-0.5	-0.8
Public road transport	1061	1231	1245	1278	1309	1303	1283	1.6	0.5	-0.2
Private cars and motorcycles	27882	27505	25835	24747	23404	21390	20181	-0.8	-1.0	-1.5
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8433	8457	8498	0.9	-0.3	0.1
Rail	526	492	463	487	522	560	585	-1.3	1.2	1.1
Aviation	3491	3700	3863	4073	4275	4379	4326	1.0	1.0	0.1
Inland navigation	1269	1387	1128	1012	1065	1128	1178	-1.2	-0.6	1.0
By transport activity										
Passenger transport	33399	32865	31375	30531	29445	27563	26304	-0.6	-0.6	-1.1
Freight transport	8775	11512	9844	9324	9563	9654	9749	1.2	-0.3	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.6	5.5			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	153965	143853	136390	0.0	-0.7	-1.2
Final Energy Demand	125579	134544	124781	122385	122441	117441	111975	-0.1	-0.2	-0.9
by sector										
Industry	40502	39858	30905	27952	28605	26931	25031	-2.7	-0.8	-1.3
Energy intensive industries	25289	25477	19382	16985	17604	16641	15172	-2.6	-1.0	-1.5
Other industrial sectors	15214	14382	11523	10966	11001	10290	9859	-2.7	-0.5	-1.1
Residential	27656	31313	31959	34859	34812	33925	32405	1.5	0.9	-0.7
Tertiary	14901	18537	20182	19017	19273	18607	17712	3.1	-0.5	-0.8
Transport ⁽⁵⁾	42519	44836	41734	40557	39751	37977	36827	-0.2	-0.5	-0.8
by fuel										
Solids	3586	3980	2910	2094	2643	2140	1210	-2.1	-1.0	-7.5
Oil	57249	59005	48733	45659	41857	37588	33141	-1.6	-1.5	-2.3
Gas	38022	40609	38499	36390	37251	37406	36722	0.1	-0.3	-0.1
Electricity	23472	25871	25736	25288	26267	26250	26802	0.9	0.2	0.2
Heat (from CHP and District Heating)	1449	3082	3332	3592	3777	3848	3825	8.7	1.3	0.1
Renewable energy forms	1802	1997	5570	9356	10629	10146	10149	11.9	6.7	-0.5
Other	0	0	0	6	17	63	125	0.0	0.0	21.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	114	108	102	96	85	76	-0.3	-1.1	-2.3
Industry (Energy on Value added, index 2000=100)	100	100	83	79	77	70	63	-1.8	-0.7	-2.0
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	104	93	0.9	0.4	-2.0
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	103	92	2.3	-1.0	-2.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	22	-1.0	-1.5	-1.9
Freight transport (toe/Mtkm)	35	38	37	34	33	32	30	0.6	-1.1	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	558.5	592.5	509.9	457.0	458.6	400.8	359.7	-0.9	-1.1	-2.4
of which ETS sectors (2013 scope) GHG emissions		261.5	213.8	172.1	188.2	149.4	131.1		-1.3	-3.6
of which ESD sectors (2013 scope) GHG emissions		331.0	296.1	284.8	270.4	251.4	228.6		-0.9	-1.7
CO ₂ Emissions (energy related)	432.5	470.4	404.2	354.7	361.4	310.6	279.6	-0.7	-1.1	-2.5
Power generation/District heating	137.1	158.5	135.9	106.9	122.0	87.9	77.4	-0.1	-1.1	-4.4
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.2	10.1	0.4	-2.4	-2.4
Industry	78.0	72.5	49.5	42.3	42.6	37.1	30.2	-4.5	-1.5	-3.4
Residential	53.4	59.9	53.6	51.4	49.7	48.2	43.6	0.0	-0.8	-1.3
Tertiary	24.4	29.3	30.2	26.0	25.5	23.7	20.9	2.2	-1.7	-2.0
Transport	123.7	131.8	118.6	114.0	108.7	102.6	97.5	-0.4	-0.9	-1.1
CO ₂ Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	21.8	21.6	19.2	-1.7	-1.0	-1.3
Non-CO ₂ GHG emissions	97.3	91.3	81.6	81.2	75.5	68.6	60.9	-1.7	-0.8	-2.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.3	76.3	68.5	-0.9	-1.1	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.47	0.45	0.38	0.31	0.32	0.23	0.20	-2.0	-1.7	-4.4
Final energy demand (t of CO ₂ /toe)	2.23	2.18	2.02	1.91	1.85	1.80	1.72	-1.0	-0.9	-0.8
Industry	1.93	1.82	1.60	1.51	1.49	1.38	1.21	-1.8	-0.7	-2.1
Residential	1.93	1.91	1.68	1.48	1.43	1.42	1.34	-1.4	-1.6	-0.6
Tertiary	1.64	1.58	1.50	1.37	1.32	1.28	1.18	-0.9	-1.2	-1.1
Transport	2.91	2.94	2.84	2.81	2.74	2.70	2.65	-0.2	-0.4	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.9	23.9	28.4			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	24.7	31.4			
RES-E share	15.7	16.3	20.1	33.6	32.5	44.5	48.8			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.6	13.1	16.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	66	77	90	86	93	100	101	3.2	0.4	0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	157	168	175	0.9	0.3	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.1	203.3	218.3	2.0	1.4	1.4
as % of GDP	8.6	9.2	10.2	10.9	11.3	11.4	11.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Latvia: EU027	
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual %	Change		
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4	
GDP (in 000 ME13)	13	20	19	23	27	29	31	3.6	3.5	1.7	
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4530	4674	4462	1.8	-0.2	-0.2	
Solids	132	82	109	84	72	46	31	-1.9	-4.1	-8.0	
Oil	1295	1487	1521	1464	1433	1400	1292	1.6	-0.6	-1.0	
Natural gas	1092	1358	1462	867	923	1150	917	3.0	-4.5	-0.1	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6	
Renewable energy forms	1191	1481	1463	1758	1958	2002	2053	2.1	3.0	0.5	
Energy Branch Consumption	39	42	48	33	36	41	33	2.1	-2.9	-0.7	
Non-Energy Uses	75	97	73	105	127	143	148	-0.3	5.7	1.5	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	1411	1868	1979	2228	2485	2514	2566	3.4	2.3	0.3	
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0	
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0	
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	1393	1858	1975	2228	2485	2514	2566	3.6	2.3	0.3	
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0	
Biomass & Waste	1150	1568	1668	1972	2158	2185	2183	3.8	2.6	0.1	
Wind	0	4	4	8	54	55	107	30.2	29.1	7.1	
Solar and others	0	0	0	0	1	2	3	0.0	0.0	8.2	
Geothermal	0	0	0	0	0	0	0	0.0	0.0	14.4	
Net Imports (ktoe)	2361	3097	2220	2456	2406	2529	2273	-0.6	0.8	-0.6	
Solids	61	77	112	84	72	46	31	6.3	-4.4	-8.0	
Oil	1235	1783	1671	1807	1788	1757	1640	3.1	0.7	-0.9	
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0	
Oil products	1148	1779	1669	1807	1788	1757	1640	3.8	0.7	-0.9	
Natural gas	1113	1434	903	867	929	1162	947	-2.1	0.3	0.2	
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6	
Import Dependency (%)	61.0	63.9	45.5	52.4	49.2	50.1	47.0				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6682	8174	7652	4.8	0.1	1.4	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	78	0	2	78	108	88	88	-30.7	49.0	-2.0	
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0	
Gas (including derived gases)	1128	1486	2988	2023	2122	3486	2236	10.2	-3.4	0.5	
Biomass-waste	0	41	66	511	662	798	918	0.0	25.9	3.3	
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0	
Wind	4	47	49	95	628	640	1247	28.5	29.1	7.1	
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3104	3402	2.0	2.0	0.9	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	1515	1562	1606	1652	1872	1873	2148	0.6	1.5	1.4	
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0	
Wind	2	26	30	62	281	283	557	31.1	25.1	7.1	
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	574	600	940	1185	1229	1231	1254	5.1	2.7	0.2	
of which cogeneration units	254	586	870	1026	1028	1039	1102	13.1	1.7	0.7	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0	
Gas fired	522	572	893	1098	1098	1089	1089	5.5	2.1	-0.1	
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0	
Biomass-waste fired	2	10	10	50	95	105	128	17.8	24.9	3.1	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.1	28.3	24.4				
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.6	46.2	40.1				
% of gross electricity from CHP	31.4	30.7	45.0	38.6	33.9	46.2	35.0				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.6	56.3	69.6				
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	546	815	696	4.1	-3.9	2.5	
Solids	53	1	9	13	17	14	14	-15.9	6.4	-2.2	
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0	
Gas (including derived gases)	408	562	767	360	384	604	445	6.5	-6.7	1.5	
Biomass & Waste	0	22	29	117	144	197	236	0.0	17.4	5.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	570	479	383	344	425	409	387	-3.9	1.1	-0.9	
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biofuels and hydrogen production	0	3	27	37	89	74	68	0.0	12.6	-2.7	
District heating	569	476	356	307	336	333	316	-4.6	-0.6	-0.6	
Derived gases, cokeries etc.	1	0	0	0	0	2	3	-95.3	1788.3	26.6	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EUQ2027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.2
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.4
Private cars and motorcycles	12	12	13	13	14	14	15	0.8	0.7	0.6
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.0
Aviation ⁽³⁾	0	1	2	2	2	3	3	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	6	5.8	2.2	1.6
Rail	13	20	17	20	21	24	27	2.6	2.2	2.5
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1195	1150	4.9	-0.1	-0.4
Public road transport	51	67	68	65	66	67	68	2.9	-0.3	0.2
Private cars and motorcycles	502	603	673	613	590	539	478	3.0	-1.3	-2.1
Heavy goods and light commercial vehicles	89	242	260	255	292	314	315	11.2	1.2	0.8
Rail	76	94	76	87	91	101	110	0.1	1.8	1.9
Aviation	27	59	118	132	148	166	171	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.2
By transport activity										
Passenger transport	582	729	861	811	805	773	719	4.0	-0.7	-1.1
Freight transport	163	335	340	347	389	422	432	7.6	1.4	1.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.5	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4403	4531	4314	1.9	-0.3	-0.2
Final Energy Demand	3254	4018	4120	4104	4249	4225	4031	2.4	0.3	-0.5
by sector										
Industry	576	699	774	912	991	1015	979	3.0	2.5	-0.1
Energy intensive industries	229	282	305	277	305	303	269	2.9	0.0	-1.3
Other industrial sectors	348	417	469	635	686	713	710	3.0	3.9	0.3
Residential	1327	1504	1389	1286	1299	1265	1192	0.5	-0.7	-0.9
Tertiary	602	749	756	744	761	745	705	2.3	0.1	-0.8
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1198	1154	4.8	0.0	-0.4
by fuel										
Solids	62	74	94	70	54	32	17	4.2	-5.4	-10.8
Oil	1056	1323	1446	1355	1307	1257	1145	3.2	-1.0	-1.3
Gas	329	508	498	391	437	461	447	4.2	-1.3	0.2
Electricity	385	493	534	568	621	664	706	3.3	1.5	1.3
Heat (from CHP and District Heating)	598	603	575	524	569	564	541	-0.4	-0.1	-0.5
Renewable energy forms	824	1018	973	1194	1260	1245	1170	1.7	2.6	-0.7
Other	0	0	0	0	0	2	6	0.0	0.0	32.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	293	235	246	189	171	159	142	-1.8	-3.6	-1.8
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	87	79	0.2	-1.0	-1.6
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	39	35	-4.0	-3.9	-2.6
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	52	46	-2.0	-3.2	-2.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	33	29	1.7	-1.8	-2.6
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.5	11.3	12.3	10.6	10.1	10.3	9.1	1.6	-1.9	-1.1
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	3.0	2.3		-3.7	-0.6
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.3	6.7		-1.3	-1.2
CO2 Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.7	5.8	2.0	-2.6	-1.1
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.7	1.2	-0.9	-6.6	-0.4
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.6	0.0	-2.9	-3.1
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.4	6.5	-2.2	-2.1
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.6	2.1	-1.8	-2.4
Transport	2.2	3.2	3.5	3.4	3.3	3.3	3.1	4.9	-0.6	-0.5
CO2 Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.6	10.4	2.8	-1.1
Non-CO2 GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.7	-0.1	-1.3	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.6	34.2	1.6	-1.9	-1.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.21	0.17	0.16	0.09	0.09	0.11	0.08	-2.2	-6.4	-0.7
Final energy demand (t of CO2/toe)	1.29	1.37	1.45	1.30	1.23	1.19	1.14	1.1	-1.6	-0.7
Industry	1.80	1.55	1.34	0.85	0.78	0.71	0.58	-2.9	-5.3	-3.0
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.30	6.0	-1.5	-1.3
Tertiary	1.14	1.10	1.12	0.98	0.92	0.83	0.78	-0.2	-1.9	-1.6
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.71	0.0	-0.6	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.3	41.9	45.5			
RES-H&C share	40.1	43.0	40.9	51.2	51.7	55.4	60.0			
RES-E share	52.7	43.0	42.1	46.2	53.3	50.8	55.5			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.1	15.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	107	86	93	77	85	92	109	-1.4	-0.9	2.5
Average Price of Electricity in Final demand sectors (€133/MWh)	57	66	107	102	115	125	134	6.5	0.7	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.8	6.6	10.0	0.1	2.5
as % of GDP	14.8	17.3	27.0	19.0	19.4	19.9	21.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8
GDP (in 000 M€13)	19	27	29	35	40	42	43	4.4	3.3	0.7
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6562	6426	7097	-0.4	-0.3	0.8
Solids	91	185	213	254	197	139	90	8.8	-0.8	-7.6
Oil	2125	2710	2502	2432	2368	2265	2020	1.6	-0.5	-1.6
Natural gas	2064	2477	2492	2122	2082	2251	1747	1.9	-1.8	-1.7
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Renewable energy forms	675	881	1065	1249	1347	1378	1344	4.7	2.4	0.0
Energy Branch Consumption	610	853	743	680	612	595	574	2.0	-1.9	-0.6
Non-Energy Uses	662	804	714	717	793	784	758	0.8	1.1	-0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3269	3900	1318	1358	1478	1501	3475	-8.7	1.2	8.9
Solids	12	20	9	19	7	8	8	-3.0	-2.1	1.3
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.1
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Renewable energy sources	682	900	1185	1262	1394	1420	1389	5.7	1.6	0.0
Hydro	29	39	46	38	38	38	38	4.7	-2.0	0.0
Biomass & Waste	653	858	1114	1158	1276	1196	1143	5.5	1.4	-1.1
Wind	0	0	19	60	66	164	164	0.0	13.1	9.5
Solar and others	0	0	0	5	8	7	8	0.0	0.0	0.4
Geothermal	0	3	5	1	6	15	35	0.0	3.1	19.2
Net Imports (ktoe)	4247	5026	5668	5454	5248	5095	3792	2.9	-0.8	-3.2
Solids	80	174	196	235	190	132	82	9.4	-0.3	-8.1
Oil	2223	2622	2607	2516	2452	2354	2109	1.6	-0.6	-1.5
Crude oil and Feedstocks	4760	9029	9339	9639	9125	8594	7955	7.0	-0.2	-1.4
Oil products	-2537	-6408	-6732	-7123	-6672	-6240	-5846	10.3	-0.1	-1.3
Natural gas	2065	2493	2485	2122	2085	2258	1760	1.9	-1.7	-1.7
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Import Dependency (%)	59.4	56.8	81.8	80.1	78.0	77.2	52.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	5985	8120	14035	-7.7	1.8	8.9
Nuclear energy	8419	10337	0	0	0	0	9377	-100.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0
Gas (including derived gases)	1707	3217	3436	3028	3988	4916	1568	7.2	1.5	-8.9
Biomass-waste	0	7	147	657	725	794	679	0.0	17.3	-0.7
Hydro (pumping excluded)	340	451	540	440	440	440	440	4.7	-2.0	0.0
Wind	0	2	224	695	767	1906	1906	0.0	13.1	9.5
Solar	0	0	0	64	64	64	64	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2446	2901	3801	-6.3	-1.6	4.5
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0
Renewable energy	103	118	249	614	638	1225	1225	9.2	9.9	6.7
Hydro (pumping excluded)	103	117	116	116	116	116	116	1.2	0.0	0.0
Wind	0	1	133	424	448	1035	1035	0.0	12.9	8.7
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2556	2577	2629	2829	1808	1676	1459	0.3	-3.7	-2.1
of which cogeneration units	650	1038	1100	1799	576	1094	896	5.4	-6.3	4.5
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	3	3	0	0	0	0	0	-100.0	0.0	0.0
Gas fired	1736	1781	1822	1992	1519	1519	1348	0.5	-1.8	-1.2
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4
Biomass-waste fired	0	0	37	67	90	110	111	0.0	9.3	2.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.1	30.3	40.0			
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	46.9	45.1	27.6			
% of gross electricity from CHP	15.5	15.5	34.6	45.5	51.0	43.9	11.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	33.4	39.5	88.8			
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	865	1089	699	3.3	-3.9	-2.1
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0
Gas (including derived gases)	723	1057	1117	725	702	865	486	4.4	-4.5	-3.6
Biomass & Waste	1	5	65	135	163	224	213	59.7	9.7	2.7
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	7911	12651	9987	10232	9878	9365	10654	2.4	-0.1	0.8
Refineries	5032	9415	9446	9704	9277	8814	8172	6.5	-0.2	-1.3
Biofuels and hydrogen production	0	3	45	59	113	102	93	0.0	9.7	-1.9
District heating	656	520	496	468	488	449	378	-2.7	-0.2	-2.5
Derived gases, cokeries etc.	2223	2713	0	0	0	1	2011	0.0	0.0	154.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Lithuania: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.7
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.6
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.4
Inland navigation	0	0	0	0	0	0	0	0.4	1.4	0.8
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.5
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6
Inland navigation	0	0	0	0	0	0	0	0.4	1.7	0.7
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1631	1587	1489	3.7	0.7	-0.9
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4
Private cars and motorcycles	705	845	919	881	871	814	737	2.7	-0.5	-1.7
Heavy goods and light commercial vehicles	204	387	443	517	555	560	548	8.1	2.3	-0.1
Rail	76	79	65	67	78	80	80	-1.5	1.8	0.3
Aviation	27	46	49	69	79	85	78	6.1	4.9	-0.1
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5
By transport activity										
Passenger transport	777	947	1013	998	998	947	861	2.7	-0.2	-1.5
Freight transport	277	466	508	584	633	640	628	6.2	2.2	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.5	6.5			
ENERGY EFFICIENCY										
Primary energy consumption	6401	7907	6073	5934	5769	5642	6339	-0.5	-0.5	0.9
Final Energy Demand	3767	4601	4763	4996	5034	4823	4400	2.4	0.6	-1.3
by sector										
Industry	780	987	898	1172	1184	1196	1100	1.4	2.8	-0.7
Energy intensive industries	363	436	486	689	694	696	639	3.0	3.6	-0.8
Other industrial sectors	416	551	412	483	490	500	461	-0.1	1.8	-0.6
Residential	1368	1509	1599	1498	1436	1331	1181	1.6	-1.1	-1.9
Tertiary	563	672	720	718	756	685	607	2.5	0.5	-2.2
Transport ⁽⁵⁾	1057	1433	1546	1608	1657	1612	1512	3.9	0.7	-0.9
by fuel										
Solids	82	177	208	238	180	121	71	9.8	-1.4	-8.8
Oil	1356	1616	1613	1664	1694	1608	1444	1.7	0.5	-1.6
Gas	363	519	567	649	599	610	547	4.6	0.6	-0.9
Electricity	533	686	717	832	894	887	867	3.0	2.2	-0.3
Heat (from CHP and District Heating)	827	905	922	870	910	905	800	1.1	-0.1	-1.3
Renewable energy forms	605	698	738	743	757	692	669	2.0	0.3	-1.2
Other	0	0	0	0	0	1	2	0.0	0.0	28.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	374	317	234	191	164	152	166	-4.6	-3.5	0.1
Industry (Energy on Value added, index 2000=100)	100	80	66	74	69	67	61	-4.1	0.4	-1.2
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	50	43	38	-2.7	-4.2	-2.7
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	55	48	-1.3	-2.9	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	19	0.3	-1.2	-2.2
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	18.6	15.8	1.5	-1.7	-2.1
of which ETS sectors (2013 scope) GHG emissions		11.7	9.4	7.8	7.0	7.2	5.3		-2.9	-2.8
of which ESD sectors (2013 scope) GHG emissions		13.2	13.6	13.4	12.5	11.4	10.5		-0.8	-1.7
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.5	8.5	1.8	-1.4	-2.3
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.5	1.4	-0.8	-5.5	-3.6
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.2
Industry	1.1	1.3	1.2	1.5	1.4	1.4	1.0	0.7	2.2	-3.1
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.4	3.7	-2.6	-4.1
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.3	2.2	-0.6	-5.6
Transport	3.1	4.2	4.5	4.6	4.6	4.4	4.1	3.7	0.2	-1.0
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.3	1.8	6.0	-1.4	-2.8
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	5.8	5.6	0.0	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.4	38.6	32.8	1.5	-1.7	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.13	0.06	2.3	-5.6	-6.5
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.40	1.34	0.6	-0.3	-0.6
Industry	1.38	1.35	1.29	1.31	1.21	1.19	0.95	-0.7	-0.6	-2.4
Residential	0.40	0.43	0.50	0.51	0.42	0.33	0.34	2.1	-1.6	-2.2
Tertiary	0.88	0.84	0.86	0.82	0.77	0.64	0.54	-0.3	-1.1	-3.5
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.73	-0.2	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.3	25.5	26.9			
RES-H&C share	26.1	30.4	33.2	36.7	38.3	37.3	41.5			
RES-E share	4.0	3.8	7.4	15.6	16.0	25.6	24.6			
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.3	10.9	11.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	110	110	114	8.7	-4.5	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	120	137	161	5.7	0.7	3.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	7.9	8.3	7.6	2.5	1.6
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.6	19.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Luxembourg: EUC027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2
GDP (in 000 M€13)	32	38	41	45	52	60	68	2.6	2.3	2.8
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4730	4820	4854	2.4	0.2	0.3
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4
Oil	2320	3160	2869	2908	2866	2828	2898	2.2	0.0	0.1
Natural gas	671	1176	1197	1031	1044	1153	1065	6.0	-1.4	0.2
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Renewable energy forms	64	106	160	245	391	420	453	9.6	9.4	1.5
Energy Branch Consumption	26	30	50	51	55	61	66	6.9	0.9	1.8
Non-Energy Uses	55	29	33	39	42	45	47	-5.1	2.5	1.1
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	64	111	122	148	265	295	322	6.7	8.1	2.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	64	111	122	148	265	295	322	6.7	8.1	2.0
Hydro	11	8	9	9	9	10	10	-1.4	0.2	0.3
Biomass & Waste	51	97	105	119	186	205	196	7.5	5.9	0.6
Wind	2	5	5	7	43	43	48	7.4	24.8	1.1
Solar and others	0	2	3	13	27	37	68	0.0	25.2	9.8
Geothermal	0	0	0	0	0	0	0	0.0	0.0	14.3
Net Imports (ktoe)	3639	4671	4503	4468	4465	4525	4531	2.2	-0.1	0.1
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4
Oil	2368	3141	2852	2908	2866	2828	2898	1.9	0.0	0.1
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil products	2368	3141	2852	2908	2866	2828	2898	1.9	0.0	0.1
Natural gas	671	1176	1197	1031	1044	1153	1065	6.0	-1.4	0.2
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.9	93.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3275	3945	4360	22.6	0.1	2.9
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0
Gas (including derived gases)	215	3107	2916	2304	2364	2998	3147	29.8	-2.1	2.9
Biomass-waste	56	76	129	158	175	210	217	8.7	3.1	2.2
Hydro (pumping excluded)	124	94	108	110	110	114	114	-1.4	0.2	0.3
Wind	27	52	55	78	501	500	560	7.4	24.7	1.1
Solar	0	17	21	112	121	121	320	0.0	19.2	10.2
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	163	574	597	702	971	955	1438	13.8	5.0	4.0
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	47	93	107	212	467	460	718	8.6	15.9	4.4
Hydro (pumping excluded)	33	34	34	34	34	35	35	0.3	0.0	0.3
Wind	14	35	44	58	302	294	323	12.1	21.2	0.7
Solar	0	24	29	120	131	131	360	0.0	16.2	10.7
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	116	481	490	490	504	496	721	15.5	0.3	3.6
of which cogeneration units	63	101	121	229	182	126	202	6.7	4.1	1.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	103	468	469	469	469	457	682	16.4	0.0	3.8
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0
Biomass-waste fired	9	9	17	20	34	37	37	7.1	7.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	37.9	46.5	34.1			
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.4	53.7			
% of gross electricity from CHP	17.7	10.1	9.6	23.3	16.0	7.8	8.9			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.7	23.9	27.8			
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	437	570	539	19.1	-2.3	2.1
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0
Gas (including derived gases)	66	544	520	383	392	513	481	22.8	-2.8	2.1
Biomass & Waste	29	32	33	36	46	57	57	1.5	3.2	2.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1	3	46	113	153	154	169	57.2	12.8	1.0
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	1	42	108	147	148	163	0.0	13.4	1.0
District heating	1	2	4	5	5	5	5	23.1	2.3	-0.1
Derived gases, cokeries etc.	0	0	0	0	0	1	1	0.0	0.0	14.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Luxembourg: EUQ27				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
											Annual % Change
TRANSPORT											
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.1	
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.4	
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.1	
Rail	0	0	0	0	0	1	1	0.4	3.1	2.9	
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.8	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	3	3	3	3	4	5	5	0.8	3.6	1.9	
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.7	
Rail	1	0	0	0	0	0	1	-6.5	2.0	3.2	
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.7	
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2763	2760	2876	3.1	0.6	0.4	
Public road transport	60	92	106	115	122	124	129	5.9	1.4	0.5	
Private cars and motorcycles	1153	1521	1341	1311	1219	1157	1219	1.5	-0.9	0.0	
Heavy goods and light commercial vehicles	364	721	709	818	958	977	989	6.9	3.1	0.3	
Rail	12	11	13	14	16	18	20	0.8	1.9	2.2	
Aviation	321	432	431	435	445	481	517	3.0	0.3	1.5	
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.5	
By transport activity											
Passenger transport	1535	2046	1880	1863	1788	1764	1866	2.0	-0.5	0.4	
Freight transport	379	735	724	834	975	997	1010	6.7	3.0	0.4	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	0.8				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.4	5.4				
ENERGY EFFICIENCY											
Primary energy consumption	3599	4771	4609	4576	4688	4775	4807	2.5	0.2	0.3	
Final Energy Demand	3505	4477	4327	4382	4473	4480	4545	2.1	0.3	0.2	
by sector											
Industry	714	754	739	585	590	560	497	0.4	-2.2	-1.7	
Energy intensive industries	583	598	601	438	432	397	333	0.3	-3.2	-2.6	
Other industrial sectors	130	156	139	148	158	163	164	0.6	1.3	0.4	
Residential	468	525	508	498	521	548	549	0.8	0.3	0.5	
Tertiary	409	418	477	601	599	612	622	1.5	2.3	0.4	
Transport ⁽⁵⁾	1914	2781	2604	2697	2763	2760	2876	3.1	0.6	0.4	
by fuel											
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4	
Oil	2261	3106	2835	2869	2824	2783	2851	2.3	0.0	0.1	
Gas	605	631	675	645	652	640	584	1.1	-0.4	-1.1	
Electricity	497	529	568	557	599	652	704	1.4	0.5	1.6	
Heat (from CHP and District Heating)	13	75	74	80	75	78	75	19.2	0.2	-0.1	
Renewable energy forms	22	59	108	181	278	293	304	17.2	9.9	0.9	
Other	0	0	0	0	1	3	10	0.0	0.0	32.5	
Energy intensity indicators											
Gross Int. Cons./GDP (toe/M€13)	115	126	113	103	92	81	71	-0.1	-2.1	-2.5	
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	63	2.9	-3.7	-3.7	
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	76	66	-0.7	-1.1	-2.2	
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	74	65	-1.5	-0.1	-2.5	
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	162	142	136	0.3	-2.5	-1.8	
Freight transport (toe/Mtkm)	139	268	247	245	235	218	202	5.9	-0.5	-1.5	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	10.7	14.1	13.3	12.9	12.8	12.8	12.6	2.2	-0.4	-0.2	
of which ETS sectors (2013 scope) GHG emissions	4.2	3.8	3.5	3.4	3.7	3.4	3.4		-1.0	0.1	
of which ESD sectors (2013 scope) GHG emissions	9.9	9.5	9.5	9.5	9.4	9.2	9.2		-0.2	-0.2	
CO2 Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	11.4	11.3	2.9	-0.4	0.0	
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.2	1.1	22.6	-2.8	2.1	
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.5	-2.0	-2.8	-4.7	
Residential	1.1	1.2	1.1	1.1	1.0	1.0	1.0	0.5	-1.1	-0.2	
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.5	-0.6	0.7	-2.0	
Transport	5.8	8.4	7.8	7.9	8.0	7.9	8.2	3.1	0.2	0.3	
CO2 Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.4	-2.1	-1.1	-2.9	
Non-CO2 GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	0.9	-0.9	0.1	-0.9	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.4	96.6	94.8	2.2	-0.4	-0.2	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.28	0.30	0.30	0.25	0.22	0.25	0.22	0.7	-2.9	-0.3	
Final energy demand (t of CO2/toe)	2.49	2.52	2.43	2.40	2.32	2.27	2.24	-0.2	-0.5	-0.3	
Industry	1.71	1.47	1.36	1.39	1.28	1.14	0.93	-2.3	-0.6	-3.1	
Residential	2.29	2.28	2.22	2.14	1.93	1.85	1.79	-0.3	-1.4	-0.7	
Tertiary	1.59	1.25	1.28	1.23	1.08	0.98	0.85	-2.1	-1.6	-2.4	
Transport	3.01	3.04	2.99	2.92	2.88	2.86	2.85	-0.1	-0.4	-0.1	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	8.8	9.7				
RES-H&C share	1.4	3.6	4.8	6.4	12.3	14.7	17.2				
RES-E share	2.1	3.2	3.8	6.1	12.0	11.4	13.6				
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.8	11.4				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	96	95	102	-1.1	2.1	0.7	
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	122	132	140	0.1	1.1	1.4	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.5	7.4	4.3	2.5	2.3	
as % of GDP	9.5	11.5	11.2	10.4	11.4	10.9	10.8				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Malta: EUCO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	0	0	0	0	0	0	0	0.9	0.6	0.4		
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9		
Gross Inland Consumption (ktoe)	802	972	908	675	744	733	723	1.3	-2.0	-0.3		
Solids	0	0	0	0	0	0	0	0.0	0.0	-10.5		
Oil	802	972	903	579	342	337	318	1.2	-9.3	-0.7		
Natural gas	0	0	0	0	338	323	329	0.0	0.0	-0.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Renewable energy forms	0	1	5	21	49	56	59	0.0	25.7	1.8		
Energy Branch Consumption	10	2	10	6	5	4	4	0.5	-7.2	-2.0		
Non-Energy Uses	0	20	9	11	12	13	12	0.0	3.4	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	0	1	4	16	38	45	50	0.0	24.3	2.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	0	1	4	16	38	45	50	0.0	24.3	2.9		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	0	0	1	3	1	2	2	0.0	9.5	4.0		
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solar and others	0	1	4	13	36	43	48	0.0	25.6	2.9		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	3.1		
Net Imports (ktoe)	1458	1630	2362	2099	2095	2111	2146	4.9	-1.2	0.2		
Solids	0	0	0	0	0	0	0	0.0	0.0	-10.5		
Oil	1458	1630	2361	2019	1719	1735	1675	4.9	-3.1	-0.3		
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil products	1458	1630	2361	2019	1719	1735	1675	4.9	-3.1	-0.3		
Natural gas	0	0	0	0	349	349	446	0.0	0.0	2.5		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.9	97.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2477	2659	2748	1.0	1.6	1.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	1917	2240	2113	1293	0	0	0	1.0	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	2143	2283	2365	0.0	0.0	1.0		
Biomass-waste	0	0	0	6	8	11	13	0.0	0.0	4.9		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solar	0	0	0	103	326	365	369	0.0	0.0	1.3		
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	577	577	579	541	786	945	1078	0.0	3.1	3.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	2	60	185	212	214	0.0	57.2	1.5		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solar	0	0	2	60	185	212	214	0.0	57.2	1.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	577	577	577	481	601	733	865	0.0	0.4	3.7		
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-4.8		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	238	478	718	0.0	0.0	11.7		
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8		
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	2.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.1	31.6	28.6					
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.6	60.9	62.1					
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.5	14.1	13.9					
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	339	324	330	2.1	-5.1	-0.3		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	337	323	328	0.0	0.0	-0.3		
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	-0.1		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	0	0	1	3	7	7	6	0.0	23.4	-2.5		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	1	3	7	7	6	0.0	23.3	-2.6		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	20.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.2	1.2
Public road transport	0	0	1	1	1	1	1	0.8	0.5	0.4
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0.3	1.3	1.6
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0.3	1.3	1.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	270	264	-0.5	0.6	-0.2
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.7
Private cars and motorcycles	97	105	110	109	102	92	84	1.2	-0.7	-2.0
Heavy goods and light commercial vehicles	36	37	31	31	34	35	37	-1.5	0.7	0.9
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	122	87	102	105	122	131	133	-1.8	1.8	0.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	232	205	224	225	236	234	227	-0.4	0.5	-0.4
Freight transport	36	37	31	31	34	35	37	-1.5	0.7	0.9
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.2			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	732	720	711	1.2	-2.0	-0.3
Final Energy Demand	483	478	476	501	546	560	552	-0.1	1.4	0.1
by sector										
Industry	83	74	48	51	51	52	54	-5.4	0.7	0.4
Energy intensive industries	13	19	8	8	8	8	8	-4.8	-0.1	0.1
Other industrial sectors	70	55	40	44	43	44	46	-5.5	0.9	0.5
Residential	76	77	80	85	101	107	104	0.5	2.4	0.3
Tertiary	55	85	94	108	124	131	131	5.4	2.8	0.5
Transport ⁽⁵⁾	268	242	255	256	270	270	264	-0.5	0.6	-0.2
by fuel										
Solids	0	0	0	0	0	0	0	0.0	0.0	-10.5
Oil	348	309	316	323	329	325	306	-1.0	0.4	-0.7
Gas	0	0	0	0	0	0	0	0.0	0.0	9.7
Electricity	135	168	155	166	196	211	219	1.4	2.4	1.1
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-0.2
Renewable energy forms	0	1	5	11	20	23	26	0.0	14.2	2.7
Other	0	0	0	0	0	0	0	0.0	0.0	32.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	162	134	89	89	80	72	-0.6	-4.0	-2.2
Industry (Energy on Value added, index 2000=100)	100	116	74	73	67	62	60	-2.9	-1.1	-1.1
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	92	80	-1.1	0.9	-1.9
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	130	124	111	2.1	0.5	-1.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.6
Freight transport (toe/Mtkm)	139	135	116	113	110	107	102	-1.7	-0.6	-0.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	2.8	3.3	3.1	2.1	2.1	1.9	1.9	1.0	-3.9	-1.1
of which ETS sectors (2013 scope) GHG emissions	2.4	2.1	2.1	1.1	1.2	1.2	1.2		-6.0	0.1
of which ESD sectors (2013 scope) GHG emissions	1.0	1.0	1.0	1.0	0.9	0.8	0.7		-0.4	-2.8
CO ₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.7	1.7	0.9	-4.4	-0.5
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.8	0.8	2.1	-8.1	-0.3
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.2	-4.1
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-1.2	2.4	-2.8
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.1	6.2	-0.7	-1.9
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.2
CO ₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO2 GHG emissions	0.3	0.3	0.3	0.3	0.3	0.2	0.2	1.6	-0.5	-5.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	94.6	88.2	84.6	1.0	-3.9	-1.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.28	0.28	1.1	-9.6	-1.3
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.74	1.66	-0.9	-1.0	-0.8
Industry	1.55	1.43	0.97	1.00	0.92	0.81	0.59	-4.6	-0.5	-4.5
Residential	1.02	0.80	0.86	0.91	0.86	0.78	0.63	-1.7	0.0	-3.1
Tertiary	0.67	0.40	0.72	0.73	0.51	0.45	0.40	0.7	-3.4	-2.4
Transport	3.00	3.00	2.99	2.96	2.92	2.92	2.91	0.0	-0.2	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.7	13.0	14.1			
RES-H&C share	0.0	1.0	7.0	17.5	24.0	28.5	37.3			
RES-E share	0.0	0.0	0.1	4.8	12.5	13.2	13.0			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.5	9.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	78	111	173	117	90	96	108	8.4	-6.3	1.8
Average Price of Electricity in Final demand sectors (€133/MWh)	75	84	201	177	170	165	164	10.4	-1.7	-0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.3	8.2	2.3	2.0
as % of GDP	6.8	8.9	12.5	11.2	12.7	13.1	12.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Netherlands: EUO27				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2		
GDP (in 000 ME13)	537	573	613	620	668	706	738	1.3	0.9	1.0		
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83480	80915	76725	1.4	-0.4	-0.8		
Solids	7852	8195	7596	9274	7937	7571	6232	-0.3	0.4	-2.4		
Oil	28245	32464	34649	34892	34345	33377	32037	2.1	-0.1	-0.7		
Natural gas	35009	35334	39309	33859	30933	30848	28895	1.2	-2.4	-0.7		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Renewable energy forms	1827	2872	3796	3906	9232	8777	9150	7.6	9.3	-0.1		
Energy Branch Consumption	5353	6336	5088	5605	5437	4988	4703	-0.5	0.7	-1.4		
Non-Energy Uses	10491	13013	17582	13895	14823	15314	15372	5.3	-1.7	0.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	57555	62220	70219	51471	52974	45573	38084	2.0	-2.8	-3.2		
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0		
Oil	2405	2328	1985	1381	1414	957	739	-1.9	-3.3	-6.3		
Natural gas	52203	56276	63534	44126	40615	33904	26163	2.0	-4.4	-4.3		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Renewable energy sources	1926	2577	3671	5009	9989	9722	10192	6.7	10.5	0.2		
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1		
Biomass & Waste	1831	2371	3282	4236	7000	6619	6902	6.0	7.9	-0.1		
Wind	71	178	343	618	2394	2394	2394	17.0	21.4	0.0		
Solar and others	11	21	29	123	546	623	799	9.8	34.1	3.9		
Geothermal	0	0	8	24	41	77	88	0.0	18.2	8.1		
Net imports (ktoe)	33759	37076	30549	47678	45884	51410	55807	-1.0	4.2	2.0		
Solids	7998	8312	9228	9274	7937	7571	6232	1.4	-1.5	-2.4		
Oil	41425	47836	45167	48901	48029	47895	47042	0.9	0.6	-0.2		
Crude oil and Feedstocks	61018	61724	60676	53468	50696	48165	45705	-0.1	-1.8	-1.0		
Oil products	-19594	-13888	-15508	-4567	-2666	-271	1337	-2.3	-16.1	0.0		
Natural gas	-17191	-20941	-24211	-10267	-9402	-2463	4155	3.5	-9.0	0.0		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Import Dependency (%)	38.0	37.7	30.4	48.1	46.4	53.0	59.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107572	123350	134388	134832	2.8	0.4	0.9		
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4		
Solids	24276	23500	22588	29437	23817	24222	21112	-0.7	0.5	-1.2		
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0		
Gas (including derived gases)	54606	61588	77566	56686	46785	60830	62670	3.6	-4.9	3.0		
Biomass-waste	3203	6683	8606	8344	15896	12286	13699	10.4	6.3	-1.5		
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1		
Wind	829	2067	3993	7185	27838	27838	27838	17.0	21.4	0.0		
Solar	8	34	60	1113	5003	5003	5304	22.2	55.5	0.6		
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	21048	21728	25072	30866	38388	37388	35109	1.8	4.4	-0.9		
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0		
Renewable energy	497	1312	2362	4706	15780	15780	16127	16.9	20.9	0.2		
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0		
Wind	447	1224	2237	3431	10157	10157	10157	17.5	16.3	0.0		
Solar	13	51	88	1238	5586	5586	5933	21.1	51.4	0.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	20066	19931	22225	25674	22123	21123	18497	1.0	0.0	-1.8		
of which cogeneration units	7372	7162	9300	8514	2416	5679	7635	2.4	-12.6	12.2		
of which CCS units	0	0	0	0	0	250	650	0.0	0.0	0.0		
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9		
Gas fired	14667	14529	16575	17356	14404	13735	11746	1.2	-1.4	-2.0		
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6		
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	35.4	39.6	42.2					
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.6	44.5	46.2					
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.9	26.0	36.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.4	3.5					
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	42.8	36.7	37.8					
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17047	18825	18139	1.9	-2.2	0.6		
Solids	4998	4958	4669	6490	4857	4947	4262	-0.7	0.4	-1.3		
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4		
Gas (including derived gases)	10671	11953	13773	9489	7743	10246	10411	2.6	-5.6	3.0		
Biomass & Waste	1213	2052	2460	1892	4446	3612	3446	7.3	6.1	-2.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	86454	91417	68924	63771	61741	59393	56757	-2.2	-1.1	-0.8		
Refineries	82233	86869	64188	58847	56695	55005	52725	-2.4	-1.2	-0.7		
Biofuels and hydrogen production	0	0	230	579	484	476	505	0.0	7.7	0.4		
District heating	398	436	499	366	338	321	273	2.3	-3.8	-2.1		
Derived gases, cokeries etc.	3824	4113	4007	3979	4224	3592	3254	0.5	0.5	-2.6		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Netherlands: EUQ27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	184	195	183	191	200	210	218	-0.1	0.9	0.9
Public road transport	11	12	12	13	13	14	14	0.8	0.9	0.6
Private cars and motorcycles	143	152	138	141	146	152	157	-0.4	0.6	0.7
Rail	16	17	17	19	21	23	24	0.5	2.1	1.6
Aviation ⁽³⁾	13	14	15	17	18	21	22	1.1	2.4	1.9
Inland navigation	1	1	1	1	1	1	1	0.1	1.1	1.3
Freight transport activity (Gtkm)	94	100	106	111	121	129	135	1.3	1.3	1.1
Heavy goods and light commercial vehicles	48	51	54	55	61	64	66	1.2	1.3	0.8
Rail	5	6	6	6	7	8	8	2.7	1.5	1.7
Inland navigation	41	42	47	50	53	57	61	1.2	1.3	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14216	13546	12949	0.5	-0.5	-0.9
Public road transport	212	224	260	267	271	268	262	2.1	0.4	-0.3
Private cars and motorcycles	8007	8288	8206	7708	6911	6239	5843	0.2	-1.7	-1.7
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2743	2745	2715	2.2	0.1	-0.1
Rail	184	172	182	189	204	216	224	-0.1	1.1	0.9
Aviation	3382	3712	3463	3821	3833	3806	3618	0.2	1.0	-0.6
Inland navigation	328	207	159	239	253	271	287	-7.0	4.8	1.3
By transport activity										
Passenger transport	11703	12265	11985	11861	11085	10388	9802	0.2	-0.8	-1.2
Freight transport	2594	2933	3001	2957	3131	3158	3147	1.5	0.4	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	0.8	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.0	4.3			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68657	65601	61353			
Final Energy Demand	50505	51654	51835	50854	50378	47232	44376	0.6	-0.1	-1.1
by sector								0.3	-0.3	-1.3
Industry	14804	14814	12208	12815	13621	12304	11779	-1.9	1.1	-1.4
Energy intensive industries	10277	10532	8224	8734	9340	8501	8217	-2.2	1.3	-1.3
Other industrial sectors	4527	4281	3984	4082	4281	3803	3562	-1.3	0.7	-1.8
Residential	10299	10143	11518	10892	10520	10316	9597	1.1	-0.9	-0.9
Tertiary	11104	11499	13124	12329	12022	11066	10051	1.7	-0.9	-1.8
Transport ⁽⁵⁾	14297	15198	14985	14817	14216	13546	12949	0.5	-0.5	-0.9
by fuel										
Solids	1330	1515	1270	1402	1592	1524	967	-0.5	2.3	-4.9
Oil	16505	17382	16113	15746	14878	13720	12658	-0.2	-0.8	-1.6
Gas	21011	20346	22378	21405	20331	17758	15861	0.6	-1.0	-2.5
Electricity	8408	8986	9189	9034	9566	9740	9778	0.9	0.4	0.2
Heat (from CHP and District Heating)	2893	2981	2106	2038	2151	2275	2371	-3.1	0.2	1.0
Renewable energy forms	358	444	780	1223	1832	2131	2595	8.1	8.9	3.5
Other	0	0	0	8	27	84	146	-100.0	0.0	18.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	141	142	141	135	125	115	104	0.0	-1.2	-1.8
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	63	58	-2.9	-0.1	-2.4
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	79	69	0.6	-1.9	-2.2
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	74	64	0.1	-1.7	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	28	25	-0.4	-2.4	-2.6
Freight transport (toe/Mtkm)	28	29	28	27	26	25	23	0.2	-0.9	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	222.8	221.6	216.9	209.7	193.0	183.6	163.5	-0.3	-1.2	-1.6
of which ETS sectors (2013 scope) GHG emissions	103.3	95.6	95.8	85.1	84.0	73.4		-1.2	-1.5	
of which ESD sectors (2013 scope) GHG emissions	118.2	121.4	113.9	108.0	99.6	90.2		-1.2	-1.8	
CO ₂ Emissions (energy related)	168.5	175.7	175.0	171.3	155.9	147.3	130.0	0.4	-1.2	-1.8
Power generation/District heating	51.9	55.5	57.7	54.3	43.6	47.3	41.2	1.1	-2.8	-0.6
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.6	7.7	-2.3	1.2	-2.5
Industry	26.6	26.5	22.9	26.6	27.7	22.3	17.9	-1.5	1.9	-4.3
Residential	18.9	17.9	20.6	19.1	17.5	16.6	14.8	0.9	-1.6	-1.7
Tertiary	17.5	18.3	21.1	18.7	16.6	14.2	12.3	1.9	-2.4	-3.0
Transport	42.4	45.3	43.9	42.3	40.6	38.4	36.1	0.4	-0.8	-1.2
CO ₂ Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.8	8.9	8.7	2.0	0.3	-0.1
Non-CO ₂ GHG emissions	47.3	37.0	33.3	29.9	28.3	27.4	24.8	-3.4	-1.6	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	85.8	81.6	72.7	-0.3	-1.2	-1.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.40	0.38	0.37	0.38	0.28	0.28	0.24	-0.6	-3.0	-1.4
Final energy demand (t of CO ₂ /toe)	2.09	2.09	2.09	2.10	2.03	1.94	1.83	0.0	-0.3	-1.1
Industry	1.80	1.79	1.87	2.07	2.03	1.81	1.52	0.4	0.8	-2.9
Residential	1.84	1.77	1.79	1.75	1.66	1.60	1.54	-0.2	-0.8	-0.8
Tertiary	1.58	1.59	1.61	1.51	1.38	1.28	1.22	0.2	-1.5	-1.2
Transport	2.97	2.98	2.93	2.86	2.86	2.83	2.79	-0.1	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	13.1	13.9	15.8			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.5	11.9			
RES-E share	2.6	6.3	9.7	12.9	38.1	34.4	35.4			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.8	12.8	15.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	84	91	98	2.7	2.5	1.5
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	137	145	157	0.9	0.6	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	77.8	83.7	88.6	3.5	1.5	1.3
as % of GDP	8.9	10.6	11.0	10.5	11.7	11.9	12.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Poland: EU027					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2			
GDP (in 000 ME13)	253	294	371	425	492	559	623	3.9	2.9	2.4			
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	105501	104452	101523	1.3	0.5	-0.4			
Solids	56291	54612	54808	53011	50232	45925	39118	-0.3	-0.8	-2.5			
Oil	19037	21696	25747	25895	26624	25489	24531	3.1	0.3	-0.8			
Natural gas	9964	12237	12807	13159	16191	17748	20862	2.5	2.4	2.6			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	-548	-962	-116	6	63	167	81	-14.4	0.0	2.5			
Renewable energy forms	3905	4643	7684	9863	12391	15124	16932	7.0	4.9	3.2			
Energy Branch Consumption	6664	6104	6095	6243	6142	5438	5092	-0.9	0.1	-1.9			
Non-Energy Uses	4357	4573	4961	5545	6359	6934	7389	1.3	2.5	1.5			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	79590	78592	67394	70900	70318	66104	62225	-1.6	0.4	-1.2			
Solids	71299	68857	55381	55586	51980	44600	35784	-2.5	-0.6	-3.7			
Oil	1062	1143	1063	1539	1582	1536	1492	0.0	4.1	-0.6			
Natural gas	3317	3887	3696	3947	4586	4924	8071	1.1	2.2	5.8			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	3912	4705	7254	9829	12170	15043	16878	6.4	5.3	3.3			
Hydro	181	189	251	206	209	217	239	3.3	-1.8	1.4			
Biomass & Waste	3728	4493	6838	8749	10859	12541	13415	6.3	4.7	2.1			
Wind	0	12	143	832	984	2034	2632	80.0	21.3	10.3			
Solar and others	0	0	8	22	82	203	261	0.0	25.5	12.3			
Geothermal	3	11	13	21	38	49	330	16.1	11.0	24.1			
Net Imports (ktoe)	8773	15932	31567	31285	35474	38668	39641	13.7	1.2	1.1			
Solids	-16353	-13039	-2814	-2575	-1748	1325	3333	-16.1	-4.6	0.0			
Oil	19067	21466	25187	24607	25330	24263	23358	2.8	0.1	-0.8			
Crude oil and Feedstocks	17616	17893	22965	24633	24837	23426	22110	2.7	0.8	-1.2			
Oil products	1451	3573	2222	-26	494	838	1248	4.4	-14.0	9.7			
Natural gas	6607	8531	8874	9213	11609	12833	12815	3.0	2.7	1.0			
Electricity	-548	-962	-116	6	63	167	81	-14.4	0.0	2.5			
Import Dependency (%)	9.9	17.2	31.3	30.6	33.5	36.9	38.9						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	177237	188264	201998	0.9	1.2	1.3			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	135888	142161	136592	137628	142076	132094	119291	0.1	0.4	-1.7			
Oil (including refinery gas)	1916	2757	2892	9	0	470	471	4.2	-100.0	0.0			
Gas (including derived gases)	2961	6573	6689	2968	9780	16868	30825	8.5	3.9	12.2			
Biomass-waste	298	1532	6332	9667	11449	12592	17937	35.7	6.1	4.6			
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2523	2783	3.3	-1.8	1.4			
Wind	5	135	1664	9669	11437	23650	30608	78.7	21.3	10.3			
Solar	0	0	0	29	67	67	84	0.0	0.0	2.3			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	30310	31721	33411	38260	33682	38171	42676	1.0	0.1	2.4			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	821	1036	2044	6084	6756	12321	15355	9.6	12.7	8.6			
Hydro (pumping excluded)	817	915	936	949	949	981	1044	1.4	0.1	1.0			
Wind	4	121	1108	5100	5728	11261	14212	75.5	17.9	9.5			
Solar	0	0	0	35	79	79	99	0.0	0.0	2.3			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	29489	30685	31367	32176	26926	25850	27321	0.6	-1.5	0.1			
of which cogeneration units	9354	8313	8693	6564	6348	7477	8109	-0.7	-3.1	2.5			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	28214	28608	29158	28543	23065	20780	19353	0.3	-2.3	-1.7			
Gas fired	764	1548	1592	1659	1710	2833	5627	7.6	0.7	12.6			
Oil fired	396	396	396	398	171	162	155	0.0	-8.1	-0.9			
Biomass-waste fired	115	133	221	1574	1980	2074	2186	6.8	24.5	1.0			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.2	52.2	50.6						
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.4	37.2	39.2						
% of gross electricity from CHP	16.1	16.8	17.6	18.2	20.7	18.8	17.9						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	14.3	20.6	25.5						
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	37548	37434	36969	0.5	-0.2	-0.2			
Solids	35247	36349	34345	33735	33127	31264	28297	-0.3	-0.4	-1.6			
Oil (including refinery gas)	245	184	171	2	0	154	154	-3.5	-74.4	286.7			
Gas (including derived gases)	1032	1805	2179	913	1961	3074	4971	7.8	-1.0	9.7			
Biomass & Waste	102	434	1645	2046	2460	2942	3548	32.1	4.1	3.7			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	32964	31279	38702	40301	40608	37792	34384	1.6	0.5	-1.6			
Refineries	18969	18975	24192	27120	27451	26036	24697	2.5	1.3	-1.1			
Biofuels and hydrogen production	0	49	887	1100	1397	1396	1325	0.0	4.7	-0.5			
District heating	4179	3465	3716	3183	3579	3280	3302	-1.2	-0.4	-0.8			
Derived gases, cokeries etc.	9816	8789	9908	8898	8182	7080	5061	0.1	-1.9	-4.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	225	233	268	302	344	374	407	1.7	2.6	1.7
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.6
Private cars and motorcycles	134	156	194	223	254	272	291	3.8	2.7	1.4
Rail	29	23	22	24	31	38	46	-2.5	3.2	4.2
Aviation ⁽³⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.0
Freight transport activity (Gtkm)	114	140	170	201	228	258	287	4.0	3.0	2.3
Heavy goods and light commercial vehicles	59	90	121	150	167	188	208	7.4	3.3	2.3
Rail	54	50	49	51	61	70	78	-1.0	2.2	2.6
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.1
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19800	19510	19479	5.9	1.3	-0.2
Public road transport	654	581	610	632	669	680	675	-0.7	0.9	0.1
Private cars and motorcycles	6314	7213	9660	10120	10624	9885	9568	4.3	1.0	-1.0
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7384	7699	7829	11.9	1.6	0.6
Rail	541	469	372	366	426	470	520	-3.7	1.4	2.0
Aviation	274	319	508	613	693	772	882	6.4	3.1	2.4
Inland navigation	6	5	3	3	4	4	4	-7.4	2.3	2.3
By transport activity										
Passenger transport	7317	8170	10823	11407	12039	11403	11203	4.0	1.1	-0.7
Freight transport	2514	4095	6636	7283	7760	8107	8276	10.2	1.6	0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99142	97519	94134	1.3	0.3	-0.5
Final Energy Demand	55260	58986	67070	68144	71664	70777	69506	2.0	0.7	-0.3
by sector										
Industry	18504	16147	14193	16600	17434	18081	17820	-2.6	2.1	0.2
Energy intensive industries	13031	10951	9372	10814	11123	11099	10434	-3.2	1.7	-0.6
Other industrial sectors	5473	5196	4821	5786	6311	6983	7387	-1.3	2.7	1.6
Residential	17193	19454	22501	20556	21377	20547	19905	2.7	-0.5	-0.7
Tertiary	9644	10846	12664	12057	12781	12364	12016	2.8	0.1	-0.6
Transport ⁽⁵⁾	9919	12539	17712	18930	20073	19785	19764	6.0	1.3	-0.2
by fuel										
Solids	13215	12285	14494	13387	11198	9635	6944	0.9	-2.5	-4.7
Oil	15500	17844	20727	21289	21524	20137	19100	2.9	0.4	-1.2
Gas	7574	8780	9468	9673	11131	11294	12065	2.3	1.6	0.8
Electricity	8482	9064	10238	11011	12275	13428	14465	1.9	1.8	1.7
Heat (from CHP and District Heating)	6886	7056	6547	6063	6918	6649	7344	-0.5	0.6	0.6
Renewable energy forms	3602	3957	5596	6721	8617	9623	9547	4.5	4.4	1.0
Other	0	0	0	1	1	11	41	0.0	0.0	41.4
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	350	313	272	240	214	187	163	-2.5	-2.4	-2.7
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	29	25	-9.7	-1.3	-2.4
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	55	48	-0.8	-3.4	-3.2
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	76	65	57	0.0	-2.7	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	29	26	2.0	-1.5	-2.5
Freight transport (toe/Mtkm)	22	29	39	36	34	31	29	5.9	-1.4	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	400.5	403.1	411.9	407.8	399.8	376.4	346.5	0.3	-0.3	-1.4
of which ETS sectors (2013 scope) GHG emissions	222.2	210.3	208.8	206.0	195.7	179.4		-0.2	-1.4	
of which ESD sectors (2013 scope) GHG emissions	180.9	201.6	199.0	193.8	180.7	167.0		-0.4	-1.5	
CO2 Emissions (energy related)	303.3	307.5	320.7	311.8	306.9	287.6	263.0	0.6	-0.4	-1.5
Power generation/District heating	167.4	171.0	165.6	157.9	158.3	152.1	140.9	-0.1	-0.4	-1.2
Energy Branch	10.2	7.7	8.5	9.7	9.1	7.8	7.3	-1.8	0.7	-2.3
Industry	51.9	36.9	30.4	34.9	31.8	28.4	23.4	-5.2	0.4	-3.0
Residential	27.4	35.5	44.9	37.8	34.7	30.7	25.6	5.1	-2.6	-3.0
Tertiary	18.4	20.7	21.9	19.1	18.1	14.8	12.5	1.7	-1.9	-3.7
Transport	28.0	35.8	49.3	52.4	54.9	53.8	53.2	5.8	1.1	-0.3
CO2 Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.4	26.1	25.8	-1.0	2.3	0.1
Non-CO2 GHG emissions	75.0	74.7	71.0	73.2	67.5	62.7	57.8	-0.5	-0.5	-1.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	84.3	79.3	73.0	0.3	-0.3	-1.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.71	0.69	0.67	0.65	0.59	0.55	0.47	-0.6	-1.2	-2.2
Final energy demand (t of CO2/toe)	2.27	2.18	2.19	2.12	1.95	1.80	1.65	-0.4	-1.2	-1.6
Industry	2.81	2.28	2.14	2.10	1.83	1.57	1.32	-2.6	-1.6	-3.2
Residential	1.59	1.83	2.00	1.84	1.62	1.50	1.29	2.3	-2.1	-2.3
Tertiary	1.91	1.91	1.73	1.59	1.42	1.20	1.04	-1.0	-2.0	-3.1
Transport	2.82	2.85	2.79	2.77	2.73	2.72	2.69	-0.1	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.1	18.3	20.2			
RES-H&C share	9.6	10.2	11.6	13.8	19.1	22.5	24.3			
RES-E share	1.6	2.7	6.6	13.4	14.3	20.4	25.4			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.8	11.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	73	83	96	2.6	4.1	2.8
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	132	143	157	5.2	0.3	1.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	92.9	108.0	119.7	6.9	3.5	2.6
as % of GDP	13.4	15.7	17.8	16.7	18.9	19.3	19.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Portugal: EUCO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual % Change	
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4		
GDP (in 000 ME13)	169	176	181	174	187	204	217	0.7	0.4	1.5		
Gross Inland Consumption (ktoe)	25285	27475	24205	22984	21357	20974	19222	-0.4	-1.2	-1.0		
Solids	3805	3349	1658	3347	809	9	3	-8.0	-6.9	-42.3		
Oil	15475	16174	12215	10669	10387	10063	9379	-2.3	-1.6	-1.0		
Natural gas	2078	3751	4489	3446	3422	3589	2017	8.0	-2.7	-5.1		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Renewable energy forms	3846	3615	5618	5328	6288	6812	7385	3.9	1.1	1.6		
Energy Branch Consumption	1028	1235	1195	1417	1209	1229	1156	1.5	0.1	-0.4		
Non-Energy Uses	2393	2587	1728	1470	1485	1517	1505	-3.2	-1.5	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5217	6157	6687	7249	4.1	0.6	1.6		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3846	3615	5800	5217	6157	6687	7249	4.2	0.6	1.6		
Hydro	974	407	1389	820	1596	1563	1623	3.6	1.4	0.2		
Biomass & Waste	2770	2967	3375	3181	3275	3580	3254	2.0	-0.3	-0.1		
Wind	14	153	790	1004	1012	1013	1676	49.2	2.5	5.2		
Solar and others	19	23	66	136	199	455	617	13.6	11.6	12.0		
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4		
Net Imports (ktoe)	22072	24845	18588	16330	15753	14825	12496	-1.7	-1.6	-2.3		
Solids	3914	3225	1629	3347	809	9	3	-8.4	-6.8	-42.3		
Oil	16039	17140	12436	11231	10935	10589	9871	-2.5	-1.3	-1.0		
Crude oil and Feedstocks	12316	13795	11875	14608	14073	13482	12624	-0.4	1.7	-1.1		
Oil products	3723	3345	561	-3376	-3138	-2893	-2754	-17.2	0.0	-1.3		
Natural gas	2039	3893	4505	3446	3428	3602	2050	8.2	-2.7	-5.0		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Import Dependency (%)	85.1	88.6	75.1	77.8	71.9	68.9	63.3					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50197	48527	47877	48325	2.2	-1.0	0.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	14595	15226	7100	14862	3502	0	0	-7.0	-6.8	-100.0		
Oil (including refinery gas)	8421	8791	3008	769	1967	1252	610	-9.8	-4.2	-11.0		
Gas (including derived gases)	7231	13606	14900	9528	8667	8888	865	7.5	-5.3	-20.6		
Biomass-waste	1553	1987	2942	2936	3074	3993	3293	6.6	0.4	0.7		
Hydro (pumping excluded)	11323	4731	16148	9537	18553	18170	18870	3.6	1.4	0.2		
Wind	168	1773	9182	11676	11767	11781	19492	49.2	2.5	5.2		
Solar	1	3	212	680	789	3585	4988	68.3	14.1	20.2		
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21849	21969	25508	5.6	1.4	1.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	4619	6083	9036	12611	14827	16446	20075	6.9	5.1	3.1		
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8		
Wind	83	1064	3796	5079	5113	5113	7522	46.6	3.0	3.9		
Solar	1	2	134	467	531	1924	2582	63.2	14.8	17.1		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6370	7378	9885	8484	7022	5523	5433	4.5	-3.4	-2.5		
of which cogeneration units	1676	1079	1310	1491	1783	1388	1240	-2.4	3.1	-3.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0		
Gas fired	1542	2477	4799	5062	4989	4134	4059	12.0	0.4	-2.0		
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6		
Biomass-waste fired	221	244	343	521	643	666	676	4.5	6.5	0.5		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	24.9	24.5	21.4					
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.6	40.4	29.0					
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.6	13.9	9.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.9	78.8	96.9					
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3433	3053	1478	-1.2	-5.1	-8.1		
Solids	3198	3319	1597	3329	794	0	0	-6.7	-6.8	-100.0		
Oil (including refinery gas)	1683	1793	574	185	466	296	144	-10.2	-2.1	-11.1		
Gas (including derived gases)	1215	2309	2775	1560	1433	1635	251	8.6	-6.4	-16.0		
Biomass & Waste	356	428	662	621	664	1047	1008	6.4	0.0	4.3		
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	13004	13953	12457	15231	14690	14086	13186	-0.4	1.7	-1.1		
Refineries	12555	13953	12148	14807	14263	13662	12782	-0.3	1.6	-1.1		
Biofuels and hydrogen production	0	0	309	422	423	403	379	0.0	3.2	-1.1		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	449	0	0	1	4	21	25	0.0	0.0	20.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	105	115	116	121	125	136	144	1.0	0.8	1.5
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.1
Private cars and motorcycles	73	87	86	86	86	93	98	1.7	0.1	1.3
Rail	5	5	5	5	6	7	8	1.4	1.7	2.3
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	2.0
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.3
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.4
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.3
Rail	2	2	2	2	3	3	3	0.6	1.5	2.4
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6640	6538	6393	0.9	-0.8	-0.4
Public road transport	237	135	129	129	128	133	142	-5.9	0.0	1.0
Private cars and motorcycles	4590	5056	5149	4730	4388	4112	3907	1.2	-1.6	-1.2
Heavy goods and light commercial vehicles	891	1026	835	797	845	879	879	-0.6	0.1	0.4
Rail	89	67	57	50	56	57	62	-4.3	-0.3	1.1
Aviation	784	888	1012	1124	1185	1315	1361	2.6	1.6	1.4
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.1
<i>By transport activity</i>										
Passenger transport	5689	6109	6318	6007	5728	5586	5438	1.1	-1.0	-0.5
Freight transport	947	1079	908	860	912	951	956	-0.4	0.0	0.5
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.6	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21514	19872	19457	17717	-0.2	-1.2	-1.1
Final Energy Demand	17919	19009	18022	16789	16811	16457	15718	0.1	-0.7	-0.7
<i>by sector</i>										
Industry	6323	5796	5453	5066	5139	4937	4645	-1.5	-0.6	-1.0
Energy intensive industries	4179	3889	3634	3613	3666	3518	3257	-1.4	0.1	-1.2
Other industrial sectors	2144	1907	1819	1452	1474	1419	1388	-1.6	-2.1	-0.6
Residential	2804	3224	2976	2632	2764	2759	2612	0.6	-0.7	-0.6
Tertiary	2157	2801	2368	2224	2267	2222	2067	0.9	-0.4	-0.9
Transport ⁽⁵⁾	6636	7188	7226	6867	6640	6538	6393	0.9	-0.8	-0.4
<i>by fuel</i>										
Solids	466	17	50	17	15	9	3	-20.0	-11.4	-14.0
Oil	10713	10812	9199	8142	7706	7471	6996	-1.5	-1.8	-1.0
Gas	873	1307	1564	1691	1801	1776	1603	6.0	1.4	-1.2
Electricity	3300	3983	4290	3865	4052	4094	4099	2.7	-0.6	0.1
Heat (from CHP and District Heating)	134	328	338	325	363	300	437	9.7	0.7	1.9
Renewable energy forms	2434	2563	2581	2748	2870	2785	2549	0.6	1.1	-1.2
Other	0	0	0	1	4	22	30	0.0	0.0	22.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	156	134	132	114	103	88	-1.1	-1.6	-2.5
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	74	67	-1.2	-0.8	-1.9
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	86	78	69	-0.6	-0.9	-2.1
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	77	67	-0.6	-0.9	-2.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	33	30	-0.3	-2.2	-2.2
Freight transport (toe/Mtkm)	36	33	33	31	31	29	28	-0.9	-0.8	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.9	90.7	73.4	73.2	59.6	54.5	45.7	-1.7	-2.1	-2.6
of which ETS sectors (2013 scope) GHG emissions	40.6	27.7	32.3	32.0	22.0	19.1	14.2		-2.3	-4.3
of which ESD sectors (2013 scope) GHG emissions	50.1	45.7	40.9	37.7	35.4	31.5	31.5		-1.9	-1.8
CO₂ Emissions (energy related)	61.0	64.6	49.6	50.1	38.7	34.7	28.9	-2.1	-2.4	-2.9
Power generation/District heating	21.7	24.9	14.9	18.0	8.1	4.8	1.1	-3.6	-5.9	-18.5
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.8	2.6	-0.2	0.6	-0.1
Industry	11.6	8.2	6.3	5.7	5.5	5.1	4.2	-5.9	-1.4	-2.7
Residential	2.0	2.3	2.6	2.0	2.0	2.1	1.9	2.5	-2.4	-0.8
Tertiary	3.4	4.4	2.4	2.0	1.7	1.6	1.3	-3.2	-3.3	-3.0
Transport	19.9	21.7	20.9	19.5	18.8	18.4	17.9	0.5	-1.1	-0.5
CO₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.0	6.2	5.4	-2.0	1.1	-1.1
Non-CO₂ GHG emissions	19.3	19.1	18.4	16.9	14.8	13.6	11.4	-0.4	-2.1	-2.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	95.9	87.7	73.5	-1.7	-2.1	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.15	0.09	0.02	-6.3	-5.1	-18.5
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.65	1.60	-1.4	-0.7	-0.4
Industry	1.83	1.42	1.15	1.12	1.06	1.04	0.90	-4.5	-0.8	-1.7
Residential	0.71	0.72	0.86	0.75	0.73	0.74	0.71	1.9	-1.7	-0.2
Tertiary	1.55	1.56	1.02	0.88	0.76	0.70	0.61	-4.1	-2.9	-2.1
Transport	3.00	3.01	2.89	2.84	2.83	2.82	2.80	-0.4	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.4	36.1	41.8			
RES-H&C share	30.4	32.1	33.9	36.8	38.7	40.0	41.1			
RES-E share	28.3	27.7	40.7	47.4	63.7	70.1	87.8			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	13.2	17.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	113	117	104	1.6	3.7	-0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	140	145	146	-1.3	3.0	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.8	22.3	24.4	23.5	28.6	31.2	33.5	3.8	1.6	1.6
as % of GDP	10.0	12.7	13.5	13.5	15.3	15.3	15.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Romania: EUCo27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4	
GDP (in 000 ME13)	87	114	130	145	163	181	195	4.1	2.3	1.8	
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	35005	35495	33449	-0.2	-0.2	-0.5	
Solids	7493	8788	7008	6207	6463	4881	2939	-0.7	-0.8	-7.6	
Oil	9992	10286	9310	8775	8538	8423	7986	-0.7	-0.9	-0.7	
Natural gas	13680	13923	10788	9688	10767	10084	9315	-2.3	0.0	-1.4	
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3	
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1	
Renewable energy forms	4137	5026	5891	6299	6970	7253	8409	3.6	1.7	1.9	
Energy Branch Consumption	3675	4105	2839	2480	2446	2310	2074	-2.5	-1.5	-1.6	
Non-Energy Uses	1883	2467	1473	1754	2001	2175	2331	-2.4	3.1	1.5	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	28465	28224	27824	26642	28353	30142	29710	-0.2	0.2	0.5	
Solids	5604	5795	5904	5042	5112	3712	2161	0.5	-1.4	-8.2	
Oil	6355	6226	4565	3643	3647	3658	3657	-3.3	-2.2	0.0	
Natural gas	10968	9701	8619	8848	9964	9940	9907	-2.4	1.5	-0.1	
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3	
Renewable energy sources	4131	5070	5739	6271	6785	7083	8236	3.3	1.7	2.0	
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0	
Biomass & Waste	2854	3314	3980	4135	4559	4595	4740	3.4	1.4	0.4	
Wind	0	0	26	557	560	725	1467	0.0	35.8	10.1	
Solar and others	0	0	0	163	183	250	423	0.0	111.9	8.7	
Geothermal	7	18	23	30	45	71	164	13.1	7.1	13.7	
Net Imports (ktoe)	8009	10867	7827	6473	6663	5390	3781	-0.2	-1.6	-5.5	
Solids	1920	2939	1234	1165	1351	1168	778	-4.3	0.9	-5.4	
Oil	3437	3988	4838	5156	4922	4801	4369	3.5	0.2	-1.2	
Crude oil and Feedstocks	4801	8857	6233	5504	4999	4639	4114	2.6	-2.2	-1.9	
Oil products	-1364	-4870	-1395	-348	-77	161	255	0.2	-25.1	0.0	
Natural gas	2712	4190	1816	839	803	146	-589	-3.9	-7.8	0.0	
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1	
Import Dependency (%)	21.8	27.7	21.9	19.5	19.1	15.2	11.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67528	70639	75411	76320	1.6	1.5	0.8	
Nuclear energy	5456	5555	11623	11890	11922	23792	23606	7.9	0.3	7.1	
Solids	18926	21916	20681	21982	22416	15762	8012	0.9	0.8	-9.8	
Oil (including refinery gas)	3399	1894	692	626	405	231	209	-14.7	-5.2	-6.4	
Gas (including derived gases)	9001	9834	7323	8032	9948	6995	5066	-2.0	3.1	-6.5	
Biomass-waste	0	7	111	522	763	974	1544	0.0	21.3	7.3	
Hydro (pumping excluded)	14778	20207	19883	16112	16723	16778	16778	3.0	-1.7	0.0	
Wind	0	0	306	6473	6512	8427	17053	0.0	35.8	10.1	
Solar	0	0	0	1891	1950	2452	4051	0.0	0.0	7.6	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	20197	19153	20120	24896	23886	23504	25806	0.0	1.7	0.8	
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2	
Renewable energy	6242	6289	6863	11413	11457	12575	16325	1.0	5.3	3.6	
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0	
Wind	0	0	389	2976	2989	3857	6552	0.0	22.6	8.2	
Solar	0	0	0	1792	1824	2074	3129	0.0	0.0	5.5	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	13283	12192	11913	12070	11015	8101	6653	-1.1	-0.8	-4.9	
of which cogeneration units	3431	5246	4582	4234	4098	2747	2709	2.9	-1.1	-4.1	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2	
Gas fired	3728	3439	3488	4173	4118	4067	3856	-0.7	1.7	-0.7	
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0	
Biomass-waste fired	147	5	23	96	139	169	212	-16.9	19.7	4.3	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.2	34.3	32.3				
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	38.9	38.6	37.2				
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.4	10.1	8.5				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.6	69.5	82.6				
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7405	5343	3430	-2.2	-1.6	-7.4	
Solids	5462	6085	5929	5216	5337	3848	2090	0.8	-1.0	-9.0	
Oil (including refinery gas)	1736	799	327	176	130	74	67	-15.4	-8.8	-6.4	
Gas (including derived gases)	3579	3437	2399	1331	1769	1201	913	-3.9	-3.0	-6.4	
Biomass & Waste	12	9	21	113	169	219	361	6.1	23.3	7.9	
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	16275	19666	15568	13664	13418	15860	15261	-0.4	-1.5	1.3	
Refineries	11250	15219	11480	9680	9164	8791	8261	0.2	-2.2	-1.0	
Biofuels and hydrogen production	0	0	115	273	559	529	505	0.0	17.1	-1.0	
District heating	1738	825	749	702	679	620	581	-8.1	-1.0	-1.5	
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5920	5914	-0.2	-0.7	7.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	85	93	110	118	130	145	159	2.6	1.7	2.1
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.7
Private cars and motorcycles	54	63	78	85	92	103	113	3.9	1.7	2.0
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.6
Freight transport activity (Gtkm)	27	56	43	51	61	70	77	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.6
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5730	5925	5965	4.3	1.2	0.4
Public road transport	293	260	359	373	379	379	377	2.0	0.5	0.0
Private cars and motorcycles	2082	2416	3214	3381	3374	3342	3254	4.4	0.5	-0.4
Heavy goods and light commercial vehicles	363	1182	946	1142	1358	1487	1533	10.1	3.7	1.2
Rail	357	159	222	245	274	303	322	-4.6	2.1	1.6
Aviation	128	128	272	265	298	362	422	7.8	0.9	3.6
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.8
<i>By transport activity</i>										
Passenger transport	2648	2855	3921	4091	4133	4175	4149	4.0	0.5	0.0
Freight transport	689	1331	1152	1356	1597	1750	1816	5.3	3.3	1.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	8.8			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	33004	33321	31118	-0.1	-0.4	-0.6
Final Energy Demand	22772	24714	22591	23117	24611	24615	23864	-0.1	0.9	-0.3
<i>by sector</i>										
Industry	9296	10007	6876	7316	8151	8295	7974	-3.0	1.7	-0.2
Energy intensive industries	6510	7208	4759	4794	5397	5368	5000	-3.1	1.3	-0.8
Other industrial sectors	2787	2799	2117	2522	2754	2927	2974	-2.7	2.7	0.8
Residential	8409	7990	8102	7825	8138	7806	7475	-0.4	0.0	-0.8
Tertiary	1606	2441	2489	2468	2529	2522	2380	4.5	0.2	-0.6
Transport ⁽⁵⁾	3460	4276	5124	5507	5793	5992	6034	4.0	1.2	0.4
<i>by fuel</i>										
Solids	1046	1611	939	815	940	848	670	-1.1	0.0	-3.3
Oil	5526	6628	6184	6765	6604	6590	6203	1.1	0.7	-0.6
Gas	6910	7754	6189	6337	6836	6761	6382	-1.1	1.0	-0.7
Electricity	2918	3341	3553	3683	4077	4279	4484	2.0	1.4	1.0
Heat (from CHP and District Heating)	3570	2136	1650	1493	1622	1691	1704	-7.4	-0.2	0.5
Renewable energy forms	2802	3244	4077	4023	4532	4442	4411	3.8	1.1	-0.3
Other	0	0	0	0	1	4	10	-100.0	0.0	26.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	423	343	275	229	215	197	171	-4.2	-2.5	-2.2
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	32	-7.8	-1.0	-2.1
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	34	30	-6.9	-2.1	-2.7
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	83	71	1.4	-2.1	-2.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	26	1.3	-1.2	-2.0
Freight transport (toe/Mtkm)	25	24	27	27	26	25	24	0.5	-0.2	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.5	107.3	92.8	-1.5	-0.6	-2.4
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	48.8	39.7	28.9		-1.3	-5.1	
of which ESD sectors (2013 scope) GHG emissions		76.5	69.6	71.8	69.7	67.6	63.8		0.0	-0.9
CO₂ Emissions (energy related)	88.8	95.8	77.4	71.5	73.8	64.8	53.1	-1.4	-0.5	-3.2
Power generation/District heating	42.0	39.0	33.6	27.2	28.6	20.4	11.8	-2.2	-1.6	-8.4
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.4	-2.8	-2.9	-1.2
Industry	21.6	25.2	14.4	14.7	15.7	14.6	12.6	-4.0	0.9	-2.1
Residential	6.6	7.3	5.8	6.5	6.9	6.9	6.5	-1.2	1.7	-0.5
Tertiary	1.9	4.2	3.6	3.5	3.3	2.8	6.7	-0.4	-2.2	
Transport	9.9	12.4	14.8	15.5	15.4	16.0	16.0	4.1	0.4	0.4
CO₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.6	6.8	-6.1	0.8	-1.3
Non-CO₂ GHG emissions	43.8	46.7	40.9	39.8	36.9	34.8	32.8	-0.7	-1.0	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.6	42.2	36.5	-1.5	-0.6	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.20	0.12	-0.6	-2.5	-9.0
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.66	1.59	-0.3	-0.1	-0.6
Industry	2.33	2.52	2.09	2.01	1.92	1.77	1.58	-1.1	-0.8	-1.9
Residential	0.79	0.92	0.72	0.83	0.85	0.88	0.87	-0.8	1.6	0.3
Tertiary	1.17	1.70	1.44	1.42	1.37	1.31	1.17	2.2	-0.5	-1.6
Transport	2.86	2.90	2.89	2.81	2.67	2.68	2.65	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.2	27.5	32.8			
RES-H&C share	16.1	17.9	27.4	25.9	26.4	27.7	30.9			
RES-E share	30.2	28.8	30.4	42.3	40.7	44.1	60.5			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.8	14.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	75	76	77	5.0	0.7	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	109	120	130	5.7	1.9	1.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.5	37.0	41.3	8.8	3.5	2.4
as % of GDP	11.5	16.8	17.7	18.4	19.9	20.5	21.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EUO27					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	5	5	5	5	5	5	5	0.0	0.0	-0.2			
GDP (in 000 ME13)	43	55	69	76	89	102	117	4.8	2.6	2.7			
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18301	18680	18799	-0.2	0.2	0.3			
Solids	4278	4231	3897	3247	3092	2768	2011	-0.9	-2.3	-4.2			
Oil	3415	3711	3692	3346	3440	3426	3478	0.8	-0.7	0.1			
Natural gas	5777	5884	5007	4939	4983	5239	4618	-1.4	0.0	-0.8			
Nuclear	4255	4626	3819	3569	4953	5375	6837	-1.1	2.6	3.3			
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6			
Renewable energy forms	810	859	1360	1551	2038	2101	2093	5.3	4.1	0.3			
Energy Branch Consumption	623	1297	963	942	935	852	815	4.5	-0.3	-1.4			
Non-Energy Uses	1365	1279	1053	1597	1738	1870	2019	-2.6	5.1	1.5			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	6389	6684	6345	6192	7957	8060	9268	-0.1	2.3	1.5			
Solids	1018	637	613	593	512	431	191	-4.9	-1.8	-9.4			
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0			
Natural gas	133	126	88	120	107	75	76	-4.0	1.9	-3.3			
Nuclear	4255	4626	3819	3569	4953	5375	6837	-1.1	2.6	3.3			
Renewable energy sources	818	912	1438	1613	2122	2178	2164	5.8	4.0	0.2			
Hydro	397	399	452	407	468	432	431	1.3	0.4	-0.8			
Biomass & Waste	421	505	972	1148	1575	1646	1598	8.7	4.9	0.1			
Wind	0	1	1	1	2	2	2	0.0	16.2	0.0			
Solar and others	0	0	6	51	63	70	79	0.0	26.8	2.4			
Geothermal	0	8	8	6	14	28	53	0.0	5.4	14.3			
Net Imports (ktoe)	11997	12428	11230	10675	10344	10620	9531	-0.7	-0.8	-0.8			
Solids	3432	3739	2951	2654	2580	2336	1820	-1.5	-1.3	-3.4			
Oil	3090	3274	3266	3048	3176	3426	3478	0.6	-0.3	0.9			
Crude oil and Feedstocks	5720	5429	5282	5716	5604	5640	5466	-0.8	0.6	-0.2			
Oil products	-2630	-2155	-2015	-2667	-2428	-2214	-1989	-2.6	1.9	-2.0			
Natural gas	5707	5735	5003	4819	4876	5164	4542	-1.3	-0.3	-0.7			
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6			
Import Dependency (%)	65.5	65.3	62.9	63.3	56.5	56.9	50.7						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34015	36526	38107	-1.1	2.2	1.1			
Nuclear energy	16494	17727	14574	14662	20320	22049	29180	-1.2	3.4	3.7			
Solids	5584	5535	3570	4120	4615	3614	1623	-4.4	2.6	-9.9			
Oil (including refinery gas)	202	741	600	164	8	91	91	11.5	-34.7	26.8			
Gas (including derived gases)	3871	2629	2716	1730	914	3385	271	-3.5	-10.3	-11.4			
Biomass-waste	32	76	726	1129	2151	1807	1280	36.6	11.5	-5.1			
Hydro (pumping excluded)	4615	4638	5255	4738	5448	5021	5017	1.3	0.4	-0.8			
Wind	0	6	6	6	26	26	26	0.0	15.8	0.0			
Solar	0	0	17	520	532	532	619	0.0	40.8	1.5			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7733	7659	8438	-0.3	1.4	0.9			
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6			
Renewable energy	1685	1601	1624	2220	2357	2357	2417	-0.4	3.8	0.3			
Hydro (pumping excluded)	1685	1596	1600	1607	1719	1719	1719	-0.5	0.7	0.0			
Wind	0	5	5	5	19	19	19	0.0	14.3	0.0			
Solar	0	0	19	608	620	620	680	0.0	41.7	0.9			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	2526	2795	3246	3337	2556	2482	2001	2.5	-2.4	-2.4			
of which cogeneration units	618	5411	2821	1020	873	915	816	16.4	-11.1	-0.7			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4			
Gas fired	821	1067	1674	1738	1326	1328	1103	7.4	-2.3	-1.8			
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0			
Biomass-waste fired	7	30	177	241	353	358	359	38.2	7.1	0.2			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	47.3	51.5	49.0						
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	37.0	37.4	28.1						
% of gross electricity from CHP	18.4	15.3	15.9	25.6	21.9	19.6	8.6						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	83.7	80.6	94.8						
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1789	2048	999	-0.4	-3.5	-5.7			
Solids	1619	1677	1205	1089	1132	981	463	-2.9	-0.6	-8.5			
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.8			
Gas (including derived gases)	1002	847	793	314	170	597	144	-2.3	-14.3	-1.6			
Biomass & Waste	4	40	264	255	484	440	362	51.0	6.2	-2.9			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	12901	13989	12558	12416	13507	13514	14645	-0.3	0.7	0.8			
Refineries	5959	6398	6011	6450	6335	6138	5993	0.1	0.5	-0.6			
Biofuels and hydrogen production	0	11	98	118	176	173	177	0.0	6.0	0.1			
District heating	674	718	497	367	376	381	360	-3.0	-2.8	-0.4			
Derived gases, cokeries etc.	6268	6862	5952	5481	6620	6822	8116	-0.5	1.1	2.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovakia: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	37	39	36	38	45	51	57	-0.2	2.2	2.5
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	2.2
Private cars and motorcycles	24	26	27	28	34	38	43	1.2	2.1	2.3
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.2
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	18	6.0	1.9	1.6
Rail	11	9	8	8	10	11	13	-3.2	1.8	3.0
Inland navigation	1	1	1	1	1	1	2	-1.5	1.0	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2349	2350	2408	4.4	0.5	0.2
Public road transport	193	185	132	141	154	165	175	-3.7	1.5	1.3
Private cars and motorcycles	830	992	1194	1155	1209	1171	1191	3.7	0.1	-0.2
Heavy goods and light commercial vehicles	308	527	821	814	873	886	897	10.3	0.6	0.3
Rail	83	42	40	41	48	54	61	-7.1	1.8	2.6
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.4
<i>By transport activity</i>										
Passenger transport	1064	1223	1374	1346	1424	1406	1446	2.6	0.4	0.2
Freight transport	390	570	867	859	925	944	962	8.3	0.7	0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	7.9	8.0			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16563	16810	16780	-0.1	-0.1	0.1
Final Energy Demand	10980	11561	11546	11225	11660	11566	11254	0.5	0.1	-0.4
<i>by sector</i>										
Industry	4532	4713	4361	4420	4553	4557	4471	-0.4	0.4	-0.2
Energy intensive industries	3678	3887	3637	3655	3721	3686	3561	-0.1	0.2	-0.4
Other industrial sectors	854	826	723	765	831	872	910	-1.7	1.4	0.9
Residential	2586	2540	2312	2176	2215	2196	2057	-1.1	-0.4	-0.7
Tertiary	2407	1916	2240	2038	2159	2076	1956	-0.7	-0.4	-1.0
Transport ⁽⁵⁾	1455	2392	2633	2591	2733	2738	2770	6.1	0.4	0.1
<i>by fuel</i>										
Solids	1747	1572	1637	1294	1228	1165	985	-0.6	-2.8	-2.2
Oil	1703	2184	2301	2230	2289	2231	2219	3.1	-0.1	-0.3
Gas	4698	4540	4119	4011	4086	3836	3561	-1.3	-0.1	-1.4
Electricity	1893	1965	2075	2219	2346	2524	2660	0.9	1.2	1.3
Heat (from CHP and District Heating)	619	951	851	726	813	823	758	3.2	-0.5	-0.7
Renewable energy forms	320	349	562	745	896	979	1059	5.8	4.8	1.7
Other	0	0	0	0	2	8	12	0.0	0.0	22.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	424	347	259	221	206	183	161	-4.8	-2.3	-2.4
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	30	26	-8.9	-1.5	-2.5
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	38	30	-5.1	-2.9	-3.7
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	41	33	-3.8	-3.2	-3.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	27	25	2.7	-1.8	-2.3
Freight transport (toe/Mtkm)	20	27	40	37	36	33	30	7.2	-1.1	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	54.1	54.7	50.8	45.0	42.2	39.9	34.0	-0.6	-1.8	-2.1
of which ETS sectors (2013 scope) GHG emissions	29.2	24.7	20.4	18.7	17.7	13.2		-2.7	-3.4	
of which ESD sectors (2013 scope) GHG emissions	25.5	26.1	24.6	23.4	22.2	20.7		-1.1	-1.2	
CO₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.2	30.3	25.1	0.0	-1.8	-2.5
Power generation/District heating	11.1	11.2	9.2	6.3	5.7	6.4	3.1	-1.8	-4.7	-5.9
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.7	1.6	4.4	-2.0	-2.4
Industry	13.3	14.1	12.8	12.0	11.3	9.7	8.5	-0.4	-1.3	-2.8
Residential	4.1	3.6	3.4	2.8	2.7	2.6	2.4	-2.0	-2.2	-1.2
Tertiary	4.5	2.7	3.5	3.1	3.1	2.6	2.1	-2.5	-1.0	-3.7
Transport	4.1	6.6	7.3	7.1	7.3	7.3	7.3	5.9	0.1	0.0
CO₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.3	-7.0	0.9	-0.6
Non-CO₂ GHG emissions	8.7	9.1	8.9	7.8	6.4	6.1	5.5	0.2	-3.2	-1.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	55.8	52.8	44.9	-0.6	-1.8	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.13	0.06	-1.4	-6.0	-6.5
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.10	1.92	1.81	-0.2	-1.1	-1.4
Industry	2.94	2.99	2.94	2.72	2.47	2.13	1.90	0.0	-1.7	-2.6
Residential	1.60	1.40	1.47	1.30	1.22	1.17	1.16	-0.9	-1.8	-0.5
Tertiary	1.85	1.43	1.55	1.54	1.45	1.26	1.10	-1.8	-0.7	-2.7
Transport	2.82	2.77	2.77	2.74	2.69	2.67	2.65	-0.2	-0.3	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.7	14.2	15.1	16.4			
RES-H&C share	1.2	4.9	7.8	10.3	12.3	15.3	18.6			
RES-E share	11.9	13.5	17.8	21.7	25.9	21.9	19.7			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	10.8	11.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	82	75	84	1.2	1.6	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	133	140	145	4.3	-0.7	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.7	15.6	17.3	4.9	1.8	2.4
as % of GDP	16.4	15.6	16.6	14.7	15.4	15.3	14.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EU027		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 ME13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6776	7002	6828	6722	1.1	-0.3	-0.4
Solids	1305	1539	1451	1268	1353	1095	1227	1.1	-0.7	-1.0
Oil	2419	2580	2579	2360	2276	2096	1880	0.6	-1.2	-1.9
Natural gas	826	929	863	681	689	755	745	0.4	-2.2	0.8
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Renewable energy forms	788	787	1054	1182	1394	1501	1584	3.0	2.8	1.3
Energy Branch Consumption	107	100	112	99	105	87	100	0.5	-0.6	-0.5
Non-Energy Uses	238	310	209	114	120	121	125	-1.3	-5.4	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3085	3492	3687	3441	3763	3664	3953	1.8	0.2	0.5
Solids	1062	1184	1196	1023	1127	863	1073	1.2	-0.6	-0.5
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	11	15	0.0	-3.9	14.2
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1259	1362	1436	2.7	2.1	1.3
Hydro	330	298	388	380	391	407	437	1.6	0.1	1.1
Biomass & Waste	458	489	601	632	723	745	765	2.7	1.9	0.6
Wind	0	0	0	0	24	26	31	0.0	0.0	2.4
Solar and others	0	0	9	36	54	127	151	0.0	19.2	10.8
Geothermal	0	0	27	45	86	56	52	0.0	9.4	-2.5
Net Imports (ktoe)	3415	3855	3581	3356	3260	3184	2790	0.5	-0.9	-1.5
Solids	244	323	279	245	226	231	154	1.4	-2.1	-3.8
Oil	2466	2634	2596	2380	2297	2116	1900	0.5	-1.2	-1.9
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2297	2116	1900	1.2	-1.2	-1.9
Natural gas	820	925	857	678	685	745	730	0.4	-2.2	0.6
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Import Dependency (%)	52.9	52.5	49.4	49.4	46.4	46.5	41.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15126	16438	16949	18593	1.8	0.1	1.2
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5182	4031	4465	1.4	-0.2	-1.5
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	111	496	602	6.5	-14.8	18.5
Biomass-waste	70	120	222	111	300	422	802	12.2	3.0	10.3
Hydro (pumping excluded)	3834	3461	4512	4423	4542	4735	5077	1.6	0.1	1.1
Wind	0	0	0	5	284	302	360	0.0	0.0	2.4
Solar	0	0	13	295	391	1163	1485	0.0	40.8	14.3
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3887	4421	4585	0.8	2.0	1.7
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2506	2925	2.6	5.0	5.1
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1300	2.5	1.3	0.6
Wind	0	0	0	4	200	212	251	0.0	0.0	2.3
Solar	0	0	12	262	352	1074	1373	0.0	40.2	14.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1414	1215	960	-0.1	0.1	-3.8
of which cogeneration units	648	336	333	228	213	251	249	-6.4	-4.4	1.5
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	469	396	178	3.0	2.3	-9.2
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	124	134	3.9	9.3	0.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.3	41.8	44.2			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.5	33.4	33.5			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.5	6.4	6.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.8	73.3	72.7			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1394	1276	1508	1.8	-1.1	0.8
Solids	1215	1412	1381	1217	1301	1052	1200	1.3	-0.6	-0.8
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	19	102	125	6.7	-16.1	20.4
Biomass & Waste	15	30	65	27	73	121	183	15.5	1.2	9.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1629	1627	0.6	0.1	0.3
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	142	146	0.0	12.3	0.0
District heating	80	89	57	61	62	57	50	-3.2	0.8	-2.1
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1430	1431	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovenia: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	25	27	30	31	34	35	37	2.0	1.0	0.9
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.3
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.7
Rail	1	1	1	1	1	1	2	1.4	4.1	3.8
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.8
Heavy goods and light commercial vehicles	4	8	8	8	10	12	13	7.9	3.1	2.1
Rail	3	3	3	4	5	6	7	1.8	3.6	4.2
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1908	1867	1789	3.8	0.6	-0.6
Public road transport	78	71	92	94	96	95	92	1.8	0.3	-0.3
Private cars and motorcycles	1025	1047	1304	1319	1301	1207	1103	2.4	0.0	-1.6
Heavy goods and light commercial vehicles	98	323	355	370	444	489	510	13.8	2.3	1.4
Rail	24	28	26	27	33	38	43	1.0	2.2	2.7
Aviation	25	23	28	28	34	38	41	1.3	2.0	1.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	1132	1146	1430	1447	1438	1349	1246	2.4	0.1	-1.4
Freight transport	117	346	376	391	470	519	543	12.4	2.3	1.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.0	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.8	8.3			
ENERGY EFFICIENCY										
Primary energy consumption	6214	7016	7017	6662	6882	6706	6597	1.2	-0.2	-0.4
Final Energy Demand	4457	4897	4927	4954	5047	4913	4638	1.0	0.2	-0.8
by sector										
Industry	1424	1644	1273	1332	1411	1425	1333	-1.1	1.0	-0.6
Energy intensive industries	836	1028	788	890	943	940	842	-0.6	1.8	-1.1
Other industrial sectors	588	616	485	442	468	486	491	-1.9	-0.4	0.5
Residential	1077	1140	1191	1145	1100	1038	976	1.0	-0.8	-1.2
Tertiary	697	620	657	638	628	580	539	-0.6	-0.4	-1.5
Transport ⁽⁵⁾	1259	1493	1806	1839	1909	1869	1790	3.7	0.6	-0.6
by fuel										
Solids	90	80	47	51	52	42	26	-6.3	1.1	-6.6
Oil	2264	2409	2447	2239	2156	1976	1757	0.8	-1.3	-2.0
Gas	569	665	620	635	645	621	591	0.9	0.4	-0.9
Electricity	905	1096	1029	1098	1157	1256	1290	1.3	1.2	1.1
Heat (from CHP and District Heating)	195	196	192	197	205	205	199	-0.2	0.6	-0.3
Renewable energy forms	435	452	592	735	832	811	769	3.1	3.5	-0.8
Other	0	0	0	0	0	1	5	0.0	0.0	31.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	227	215	195	181	171	153	140	-1.5	-1.3	-2.0
Industry (Energy on Value added, index 2000=100)	100	93	70	74	71	65	57	-3.6	0.3	-2.3
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	65	57	-1.6	-1.1	-3.0
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	50	43	-3.5	-1.6	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	37	33	0.3	-1.0	-2.3
Freight transport (toe/Mtkm)	18	32	34	33	31	29	27	6.4	-1.0	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.0	20.2	19.2	17.5	17.4	15.7	15.3	0.1	-1.0	-1.3
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.5	6.5	6.8		-0.8	-1.0
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	9.2	8.5		-1.1	-1.5
CO2 Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	12.4	12.3	0.9	-1.0	-1.2
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	4.7	5.4	1.3	-1.1	-0.3
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.9	13.9
Industry	2.4	2.3	1.7	1.7	1.7	1.5	1.2	-3.0	-0.5	-3.6
Residential	1.3	1.5	1.2	0.9	0.8	0.7	0.6	-1.0	-4.0	-2.8
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.3	-3.0	-4.1	-5.0
Transport	3.7	4.4	5.3	5.2	5.3	5.1	4.8	3.8	0.0	-1.0
CO2 Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.6	-1.7	-1.1	-1.7
Non-CO2 GHG emissions	3.9	3.5	3.0	3.0	2.7	2.5	2.4	-2.6	-1.0	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.3	84.4	82.1	0.1	-1.0	-1.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.34	0.35	0.33	0.30	0.29	0.24	0.26	-0.3	-1.2	-1.3
Final energy demand (t of CO2/toe)	1.91	1.88	1.85	1.72	1.64	1.56	1.48	-0.4	-1.1	-1.1
Industry	1.66	1.41	1.37	1.29	1.18	1.02	0.86	-1.9	-1.5	-3.1
Residential	1.24	1.28	1.01	0.79	0.73	0.64	0.62	-2.0	-3.2	-1.6
Tertiary	1.68	1.63	1.32	1.03	0.91	0.77	0.64	-2.4	-3.6	-3.5
Transport	2.90	2.97	2.93	2.85	2.76	2.73	2.66	0.1	-0.6	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	27.8	30.3			
RES-H&C share	18.9	19.0	25.5	29.8	34.4	37.7	39.4			
RES-E share	30.9	28.7	32.2	33.0	35.8	40.6	45.8			
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.0	16.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	70	60	68	-0.7	4.5	-0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	108	115	121	0.2	-0.3	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.2	8.5	5.0	2.1	1.3
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.3	17.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Spain: EUCO27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3		
GDP (in 000 ME13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8		
Gross Inland Consumption (ktoe)	123642	144223	129868	124582	125174	115653	107723	0.5	-0.4	-1.5		
Solids	20938	20566	7906	15768	15759	10153	2019	-9.3	7.1	-18.6		
Oil	63967	70457	60436	53990	50092	47251	44102	-0.8	-1.9	-1.3		
Natural gas	15305	29886	31162	25155	25422	20091	20897	7.4	-2.0	-1.9		
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0		
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4		
Renewable energy forms	7005	8587	15090	15611	19348	23439	26166	8.0	2.5	3.1		
Energy Branch Consumption	6259	6666	7878	7994	7433	6499	5958	2.3	-0.6	-2.2		
Non-Energy Uses	9407	8362	7046	5744	6094	6266	6359	-2.8	-1.4	0.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33100	36688	38897	40817	0.8	0.7	1.1		
Solids	7966	6265	3296	2973	2892	1054	176	-8.4	-1.3	-24.4		
Oil	228	167	124	377	365	345	361	-5.9	11.4	-0.1		
Natural gas	234	185	78	42	47	53	62	-10.4	-4.9	2.7		
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0		
Renewable energy sources	7005	8587	14677	15536	19212	23272	26046	7.7	2.7	3.1		
Hydro	2430	1582	3638	2853	2862	2877	2882	4.1	-2.4	0.1		
Biomass & Waste	4131	5113	6183	6934	9587	9603	9494	4.1	4.5	-0.1		
Wind	406	1821	3807	4443	4844	5622	7242	25.1	2.4	4.1		
Solar and others	33	65	1035	1288	1895	5110	6356	41.3	6.2	12.9		
Geothermal	5	7	16	18	24	60	71	11.5	4.3	11.4		
Net Imports (ktoe)	99342	123832	106084	100729	97836	86088	76334	0.7	-0.8	-2.5		
Solids	12840	14418	6726	12795	12868	9099	1843	-6.3	6.7	-17.7		
Oil	70653	79281	68704	62860	58995	56057	52680	-0.3	-1.5	-1.1		
Crude oil and Feedstocks	59023	60650	56496	66666	63040	59830	56367	-0.4	1.1	-1.1		
Oil products	11631	18630	12208	-3806	-4045	-3773	-3687	0.5	0.0	-0.9		
Natural gas	15467	30248	30950	25113	25458	20219	21326	7.2	-1.9	-1.8		
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4		
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	68.9	65.2					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275292	284520	282246	287431	3.0	-0.5	0.1		
Nuclear energy	62206	57539	61990	58066	58066	57757	57521	0.0	-0.7	-0.1		
Solids	79094	84047	25493	57621	57933	34085	4141	-10.7	8.6	-23.2		
Oil (including refinery gas)	22578	24420	16562	4988	566	1702	1602	-3.1	-28.7	11.0		
Gas (including derived gases)	21942	80725	95840	53218	56378	29818	32728	15.9	-5.2	-5.3		
Biomass-waste	2100	3104	4674	4514	5972	7989	9527	8.3	2.5	4.8		
Hydro (pumping excluded)	28256	18393	42304	33174	33273	33455	33512	4.1	-2.4	0.1		
Wind	4727	21176	44271	51665	56322	65378	84213	25.1	2.4	4.1		
Solar	17	41	6423	12046	16011	52062	64186	80.6	9.6	14.9		
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104566	121934	127810	6.6	0.5	2.0		
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0		
Renewable energy	17760	25774	41432	46783	51047	72142	83473	8.8	2.1	5.0		
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0		
Wind	2206	9918	20693	23025	24977	27875	33763	25.1	1.9	3.1		
Solar	12	60	4653	7126	9275	27472	32915	81.5	7.1	13.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	26776	39924	49994	50333	46120	42393	36938	6.4	-0.8	-2.2		
of which cogeneration units	4570	6597	3382	3809	5535	3882	4299	-3.0	5.0	-2.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	11556	11359	10389	10316	9333	7378	3968	-1.1	-1.1	-8.2		
Gas fired	4713	17647	29569	31333	30271	29749	28105	20.2	0.2	-0.7		
Oil fired	10028	10043	8964	7496	4752	3422	2951	-1.1	-6.1	-4.7		
Biomass-waste fired	478	876	1072	1188	1764	1844	1915	8.4	5.1	0.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	29.9	25.7	25.2					
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.6	40.1	44.9					
% of gross electricity from CHP	9.2	4.0	7.4	9.7	17.2	10.3	14.5					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.6	76.8	86.6					
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24394	15778	9187	-0.5	-0.3	-9.3		
Solids	18245	17623	5561	13703	13694	8128	849	-11.2	9.4	-24.3		
Oil (including refinery gas)	4455	5249	3391	948	133	403	380	-2.7	-27.7	11.0		
Gas (including derived gases)	3075	11140	14839	8684	9267	5290	5802	17.0	-4.6	-4.6		
Biomass & Waste	697	1391	1435	994	1300	1958	2155	7.5	-1.0	5.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	79871	79435	78129	80766	79064	76167	72757	-0.2	0.1	-0.8		
Refineries	60685	61323	58480	63161	60993	58364	55215	-0.4	0.4	-1.0		
Biofuels and hydrogen production	70	256	1412	1419	2065	1935	1997	35.0	3.9	-0.3		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	19115	17857	18237	16187	16006	15868	15546	-0.5	-1.3	-0.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	476	535	542	561	609	661	713	1.3	1.2	1.6
Public road transport	50	53	51	52	53	55	56	0.1	0.5	0.5
Private cars and motorcycles	310	346	352	354	371	397	424	1.3	0.5	1.3
Rail	25	28	29	29	37	44	51	1.2	2.5	3.4
Aviation ⁽³⁾	89	106	109	124	145	164	179	2.1	2.9	2.1
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.5
Freight transport activity (Gtkm)	180	265	227	228	247	264	281	2.3	0.9	1.3
Heavy goods and light commercial vehicles	138	217	190	191	206	219	232	3.2	0.8	1.2
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.5
Inland navigation	31	36	28	28	30	32	34	-1.1	0.7	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34500	33588	33207	1.2	-0.7	-0.4
Public road transport	1354	1408	1319	1329	1327	1311	1287	-0.3	0.1	-0.3
Private cars and motorcycles	18655	20608	19876	18098	16551	15068	14499	0.6	-1.8	-1.3
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8379	8374	8577	2.9	-0.3	0.2
Rail	708	1029	899	772	874	976	1051	2.4	-0.3	1.9
Aviation	4486	5323	5389	6005	6612	7046	6932	1.9	2.1	0.5
Inland navigation	1395	1555	1057	707	757	813	861	-2.7	-3.3	1.3
By transport activity										
Passenger transport	25151	27727	26960	25730	24845	23834	23167	0.7	-0.8	-0.7
Freight transport	7933	12069	10220	9303	9655	9754	10040	2.6	-0.6	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	6.0	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119080	109387	101364	0.7	-0.3	-1.6
Final Energy Demand	79885	97754	89072	85314	86290	82400	79692	1.1	-0.3	-0.8
by sector										
Industry	25368	30967	21435	21275	22242	21462	20747	-1.7	0.4	-0.7
Energy intensive industries	17349	20338	13379	13268	14007	13267	12602	-2.6	0.5	-1.1
Other industrial sectors	8020	10628	8056	8008	8235	8194	8145	0.0	0.2	-0.1
Residential	12000	15132	16920	15550	15515	14568	13610	3.5	-0.9	-1.3
Tertiary	9287	11712	13526	13441	14017	12766	12110	3.8	0.4	-1.5
Transport ⁽⁵⁾	33230	39944	37192	35048	34516	33605	33225	1.1	-0.7	-0.4
by fuel										
Solids	1775	1712	1261	1123	1307	1294	493	-3.4	0.4	-9.3
Oil	46297	53449	46775	43129	40290	37496	34583	0.1	-1.5	-1.5
Gas	12141	17978	14645	14743	14328	13200	13535	1.9	-0.2	-0.6
Electricity	16205	20827	21049	20057	21312	21629	22117	2.7	0.1	0.4
Heat (from CHP and District Heating)	0	0	0	8	117	297	576	0.0	0.0	17.2
Renewable energy forms	3469	3788	5343	6252	8926	8437	8274	4.4	5.3	-0.8
Other	0	0	0	3	10	46	114	0.0	1431.5	27.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	139	138	119	114	104	87	74	-1.5	-1.4	-3.3
Industry (Energy on Value added, index 2000=100)	100	114	87	87	83	75	67	-1.4	-0.5	-2.2
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	94	80	68	1.4	-2.1	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	83	72	1.0	-0.9	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	30	27	-1.1	-2.2	-2.4
Freight transport (toe/Mtkm)	44	46	45	41	39	37	36	0.3	-1.4	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	398.8	447.7	364.3	356.5	341.7	288.7	236.9	-0.9	-0.6	-3.6
of which ETS sectors (2013 scope) GHG emissions	216.2	146.4	147.4	157.9	157.5	122.5	85.6	0.7	-5.9	
of which ESD sectors (2013 scope) GHG emissions	231.5	218.0	198.6	184.2	166.2	151.3		-1.7	-2.0	
CO ₂ Emissions (energy related)	291.6	347.3	272.6	271.0	259.0	214.4	172.7	-0.7	-0.5	-4.0
Power generation/District heating	98.8	117.7	70.3	81.2	79.8	48.9	20.1	-3.4	1.3	-12.9
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.5	11.6	1.9	-1.2	-2.1
Industry	50.4	59.2	42.3	39.8	39.5	35.5	29.9	-1.7	-0.7	-2.7
Residential	17.1	20.9	20.5	16.5	13.6	12.1	9.9	1.9	-4.0	-3.2
Tertiary	13.2	16.5	15.0	15.5	13.9	10.8	9.0	1.3	-0.7	-4.3
Transport	98.7	119.5	108.3	101.9	97.8	94.6	92.2	0.9	-1.0	-0.6
CO ₂ Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	18.8	18.6	15.8	-1.8	-1.5	-1.7
Non-CO ₂ GHG emissions	81.1	71.0	69.9	67.7	64.0	55.6	48.4	-1.5	-0.9	-2.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.3	97.4	79.9	-0.9	-0.6	-3.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.45	0.41	0.24	0.29	0.28	0.17	0.07	-6.2	1.7	-13.1
Final energy demand (t of CO ₂ /toe)	2.25	2.21	2.09	2.04	1.91	1.86	1.77	-0.7	-0.9	-0.8
Industry	1.99	1.91	1.97	1.87	1.77	1.65	1.44	-0.1	-1.1	-2.0
Residential	1.42	1.38	1.21	1.06	0.88	0.83	0.72	-1.6	-3.2	-1.9
Tertiary	1.43	1.41	1.11	1.15	0.99	0.84	0.74	-2.5	-1.1	-2.9
Transport	2.97	2.99	2.91	2.91	2.83	2.82	2.78	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	26.6	31.1			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	24.0	26.4			
RES-E share	16.6	19.1	29.8	36.9	38.5	55.0	65.7			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.2	12.6	17.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	98	91	83	2.5	2.7	-1.6
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	173	167	167	3.5	1.5	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.2	144.9	152.8	164.0	4.9	1.9	1.3
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.5	11.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EUCO27			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	9	9	9	10	10	11	11	0.5	0.9	0.8	
GDP (in 000 ME13)	296	337	366	404	448	497	552	2.2	2.1	2.1	
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45934	45293	44503	0.4	-1.0	-0.3	
Solids	2452	2629	2492	2263	1983	1737	1259	0.2	-2.3	-4.4	
Oil	15377	14136	14199	11663	10838	9750	8805	-0.8	-2.7	-2.1	
Natural gas	816	886	1484	679	3063	2473	2215	6.2	7.5	-3.2	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Renewable energy forms	15066	15308	17512	19146	19615	20854	21960	1.5	1.1	1.1	
Energy Branch Consumption	1141	1326	1469	1414	1366	1309	1301	2.6	-0.7	-0.5	
Non-Energy Uses	3143	2460	2113	2183	2281	2374	2424	-3.9	0.8	0.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30052	34233	32685	33372	31501	32674	33630	0.8	-0.4	0.7	
Solids	162	211	238	210	86	94	0	4.0	-9.7	-100.0	
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0	
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Renewable energy sources	15066	15308	17512	18801	19223	20389	21438	1.5	0.9	1.1	
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1	
Biomass & Waste	8264	8961	11490	11434	11785	11875	12275	3.4	0.3	0.4	
Wind	39	81	301	1147	1249	2374	2976	22.6	15.3	9.1	
Solar and others	5	6	11	17	31	54	103	7.4	10.9	12.8	
Geothermal	0	0	0	0	0	2	6	0.0	0.0	33.5	
Net Imports (ktoe)	20436	19460	19294	15820	16751	15047	13422	-0.6	-1.4	-2.2	
Solids	2409	2556	2548	2054	1897	1643	1259	0.6	-2.9	-4.0	
Oil	16849	16698	15102	13853	13108	12072	10975	-1.1	-1.4	-1.8	
Crude oil and Feedstocks	21606	19369	19139	15905	15022	13906	12856	-1.2	-2.4	-1.5	
Oil products	-4757	-2671	-4038	-2052	-1914	-1834	-1881	-1.6	-7.2	-0.2	
Natural gas	776	843	1466	679	3111	2581	2595	6.6	7.8	-1.8	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	31.5	28.5				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	173151	177853	185524	0.2	1.6	0.7	
Nuclear energy	57316	72377	57828	57851	49379	49379	49738	0.1	-1.6	0.1	
Solids	1706	1169	1770	1540	1118	733	642	0.4	-4.5	-5.4	
Oil (including refinery gas)	1533	1379	1774	249	326	193	123	1.5	-15.6	-9.3	
Gas (including derived gases)	1292	1342	3782	471	15535	11010	9376	11.3	15.2	-4.9	
Biomass-waste	4342	8357	13397	14846	20591	18120	20283	11.9	4.4	-0.2	
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1	
Wind	457	936	3502	13335	14526	27608	34600	22.6	15.3	9.1	
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37495	41804	44059	0.7	0.1	1.6	
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0	
Renewable energy	16718	16799	18654	22501	23533	27761	29946	1.1	2.4	2.4	
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0	
Wind	209	493	2019	6025	6507	10735	12920	25.5	12.4	7.1	
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7754	7256	8761	7643	7013	7094	7164	1.2	-2.2	0.2	
of which cogeneration units	4940	3488	5100	4504	6277	6233	6004	0.3	2.1	-0.4	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6	
Gas fired	547	469	1168	1168	3223	3251	3251	7.9	10.7	0.1	
Oil fired	4472	3974	3963	2958	836	836	836	-1.2	-14.4	0.0	
Biomass-waste fired	2398	2465	3274	3161	2818	2871	2949	3.2	-1.5	0.5	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.4	47.5	46.9				
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	36.7	36.9				
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.4	16.2	14.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.2	93.3	94.5				
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7872	7046	7086	6.2	1.9	-1.0	
Solids	462	508	597	566	266	188	156	2.6	-7.8	-5.2	
Oil (including refinery gas)	530	317	431	70	93	62	41	-2.0	-14.2	-7.7	
Gas (including derived gases)	508	591	998	225	2488	1826	1575	7.0	9.6	-4.5	
Biomass & Waste	2084	3158	4491	4886	5026	4970	5313	8.0	1.1	0.6	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	40980	42243	39786	34628	31703	30814	29811	-0.3	-2.2	-0.6	
Refineries	22901	20082	21039	16927	16160	15190	14232	-0.8	-2.6	-1.3	
Biofuels and hydrogen production	0	134	376	733	817	876	1061	0.0	8.1	2.6	
District heating	1564	1525	1735	1424	1349	1367	1281	1.0	-2.5	-0.5	
Derived gases, cokeries etc.	16516	20501	16636	15543	13376	13380	13237	0.1	-2.2	-0.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUQ27		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	142	148	151	160	167	175	186	0.7	1.0	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.2
Private cars and motorcycles	102	108	109	114	116	120	125	0.7	0.7	0.7
Rail	10	11	13	15	16	18	20	2.8	2.1	1.9
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.2	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.4
Freight transport activity (Gtkm)	70	78	81	81	90	98	105	1.5	1.1	1.6
Heavy goods and light commercial vehicles	43	47	45	46	49	52	54	0.4	1.1	1.0
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7898	7369	6987	0.5	-0.9	-1.2
Public road transport	189	179	184	187	193	204	211	-0.3	0.5	0.9
Private cars and motorcycles	4879	5236	5250	4890	4398	3788	3374	0.7	-1.8	-2.6
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1943	1908	1902	1.2	0.0	-0.2
Rail	299	246	208	232	264	286	310	-3.6	2.4	1.6
Aviation	928	846	840	945	1001	1077	1076	-1.0	1.8	0.7
Inland navigation	156	142	188	85	98	106	115	1.8	-6.3	1.6
By transport activity										
Passenger transport	6165	6361	6387	6089	5670	5151	4748	0.4	-1.2	-1.8
Freight transport	2027	2248	2234	2171	2229	2218	2240	1.0	0.0	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.7	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.7	12.3	15.0			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43653	42918	42079	0.6	-1.1	-0.4
Final Energy Demand	33561	33492	34077	31885	31932	31374	30342	0.2	-0.6	-0.5
by sector										
Industry	12854	12464	12205	11531	12077	12061	11820	-0.5	-0.1	-0.2
Energy intensive industries	9198	9252	9141	8370	8744	8572	8244	-0.1	-0.4	-0.6
Other industrial sectors	3656	3212	3064	3161	3334	3490	3576	-1.8	0.8	0.7
Residential	7300	7305	7557	7197	7049	7110	6768	0.3	-0.7	-0.4
Tertiary	5214	5114	5720	4897	4908	4834	4766	0.9	-1.5	-0.3
Transport ⁽⁵⁾	8192	8609	8595	8260	7898	7369	6987	0.5	-0.8	-1.2
by fuel										
Solids	1114	1346	1202	1122	1131	932	541	0.8	-0.6	-7.1
Oil	11861	11256	10038	8856	8008	6895	5965	-1.7	-2.2	-2.9
Gas	673	765	728	677	798	894	903	0.8	0.9	1.2
Electricity	11068	11238	11283	11102	11601	12045	12356	0.2	0.3	0.6
Heat (from CHP and District Heating)	3550	4174	5141	4420	4454	4441	4148	3.8	-1.4	-0.7
Renewable energy forms	5294	4714	5685	5705	5937	6155	6358	0.7	0.4	0.7
Other	0	0	0	3	3	12	72	0.0	0.0	36.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	165	151	139	116	103	91	81	-1.7	-3.0	-2.4
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	54	49	-3.5	-1.7	-1.9
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	55	47	-1.7	-3.0	-2.8
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	55	49	-0.9	-3.7	-2.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	27	23	-0.5	-2.2	-3.0
Freight transport (toe/Mtkm)	29	29	28	27	25	23	21	-0.5	-1.1	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.7	49.7	42.5	-0.9	-1.4	-2.8
of which ETS sectors (2013 scope) GHG emissions	25.9	25.6	19.9	19.9	23.7	20.4	16.8		-0.8	-3.4
of which ESD sectors (2013 scope) GHG emissions	43.0	39.5	35.8	35.8	33.0	29.3	25.8		-1.8	-2.4
CO2 Emissions (energy related)	52.2	52.1	49.0	40.6	42.2	36.0	30.2	-0.6	-1.5	-3.3
Power generation/District heating	7.7	7.7	9.1	4.4	8.6	6.9	5.9	1.7	-0.5	-3.7
Energy Branch	2.0	1.9	2.0	2.1	1.8	1.8	1.7	0.4	-1.0	-0.9
Industry	11.9	13.3	10.5	10.1	9.6	7.6	5.0	-1.2	-1.0	-6.3
Residential	3.0	1.5	0.4	0.2	0.2	0.2	0.2	-17.9	-6.6	-2.3
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.7	-4.2	-6.8	-7.4
Transport	23.2	24.6	24.1	22.0	20.5	18.7	16.8	0.4	-1.6	-2.0
CO2 Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.4	3.2	2.7	1.5	-0.8	-2.1
Non-CO2 GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	9.6	-2.7	-1.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.5	67.9	58.1	-0.9	-1.4	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.04	0.04	0.04	0.02	0.04	0.03	0.03	0.6	-1.2	-4.1
Final energy demand (t of CO2/toe)	1.27	1.27	1.11	1.07	0.99	0.87	0.74	-1.3	-1.1	-2.9
Industry	0.93	1.07	0.86	0.87	0.79	0.63	0.42	-0.7	-0.9	-6.1
Residential	0.41	0.20	0.05	0.03	0.03	0.03	0.02	-18.2	-5.9	-1.9
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.14	-5.1	-5.4	-7.1
Transport	2.83	2.86	2.80	2.66	2.60	2.53	2.40	-0.1	-0.7	-0.8
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.7	62.0	66.4			
RES-H&C share	48.7	52.4	60.9	72.7	68.9	75.4	80.3			
RES-E share	51.7	51.6	56.6	67.3	69.2	73.2	76.4			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.2	36.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	62	56	59	-0.1	0.9	-0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	141	141	145	5.7	-0.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.1	52.8	56.6	3.9	0.6	1.4
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.6	10.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EUCO27				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 M€13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	186172	176274	170476	-0.8	-1.3	-0.9	
Solids	36516	37737	30761	30896	13013	8229	4640	-1.7	-8.2	-9.8	
Oil	81031	84449	72986	71030	65631	60209	55345	-1.0	-1.1	-1.7	
Natural gas	87399	85473	85050	67578	64727	61224	51851	-0.3	-2.7	-2.2	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	26086	31586	33850	11.3	13.8	2.6	
Energy Branch Consumption	14909	16092	13761	10879	9615	8684	7919	-0.8	-3.5	-1.9	
Non-Energy Uses	11330	11213	7524	8461	8861	8853	8819	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	108551	98687	96088	-5.8	-3.0	-1.2	
Solids	18658	11899	10751	6067	3607	3116	1915	-5.4	-10.3	-6.1	
Oil	127939	87930	63788	48199	40958	32894	26231	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26825	22639	15914	-6.2	-6.3	-5.1	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10759	21787	26178	28253	8.6	14.6	2.6	
Hydro	437	423	307	477	453	457	458	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11786	15281	16630	8.4	10.6	3.5	
Wind	81	250	875	2969	8204	8822	9453	26.8	25.1	1.4	
Solar and others	11	30	101	878	1341	1606	1684	24.5	29.5	2.3	
Geothermal	1	1	1	1	3	11	28	0.0	13.4	25.6	
Net Imports (ktoe)	-39220	31596	61239	87711	80825	80749	77546	0.0	2.8	-0.4	
Solids	14454	27222	16045	24829	9406	5114	2725	1.0	-5.2	-11.7	
Oil	-45582	-2738	11181	25966	27840	30400	32071	0.0	9.6	1.4	
Crude oil and Feedstocks	-39093	4558	13213	20985	23649	26640	28819	0.0	6.0	2.0	
Oil products	-6489	-7296	-2032	4981	4192	3760	3252	-11.0	0.0	-2.5	
Natural gas	-9311	5973	32205	33331	37938	38662	36135	0.0	1.7	-0.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.7	45.0	44.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357131	372018	378746	401130	0.1	-0.2	0.8	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	29386	12099	3676	-1.1	-12.2	-18.8	
Oil (including refinery gas)	8446	5339	4804	4252	3298	2497	2471	-5.5	-3.7	-2.8	
Gas (including derived gases)	150427	154339	176759	117631	115488	118703	92211	1.6	-4.2	-2.2	
Biomass-waste	4455	11658	13373	26283	51007	68361	71241	11.6	14.3	3.4	
Hydro (pumping excluded)	5086	4922	3568	5550	5273	5318	5323	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	95394	102586	109914	26.8	25.1	1.4	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	120146	112412	116749	1.2	3.1	-0.3	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	46309	48652	50944	14.1	20.6	1.0	
Hydro (pumping excluded)	1485	1501	1637	1693	1744	1744	1744	1.0	0.6	0.0	
Wind	412	1565	5396	13603	33421	35745	38035	29.3	20.0	1.3	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64952	55950	52698	1.1	-0.9	-2.1	
of which cogeneration units	5794	5440	6102	5053	5517	5592	14739	0.5	-1.0	10.3	
of which CCS units	0	0	0	0	833	833	1233	0.0	0.0	4.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35330	35248	33909	3.1	0.6	-0.4	
Oil fired	9696	9323	9064	2227	1235	1135	1091	-0.7	-18.1	-1.2	
Biomass-waste fired	2403	2961	3335	3634	17238	17244	17196	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.0	37.0	37.6				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	45.0	46.1	45.5				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	5.0	4.4	4.8				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.5	2.6				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	60.2	64.8	75.5				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	38076	37607	32031	0.1	-4.4	-1.7	
Solids	28425	29812	23816	23961	7148	2974	779	-1.8	-11.3	-19.9	
Oil (including refinery gas)	1453	1060	789	920	737	559	553	-5.9	-0.7	-2.8	
Gas (including derived gases)	28139	28415	31452	20339	19239	19263	15063	1.1	-4.8	-2.4	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15636	10.9	11.5	3.6	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83383	77394	82419	-1.9	-1.6	-0.1	
Refineries	88821	88399	75162	65526	61285	56631	52408	-1.7	-2.0	-1.6	
Biofuels and hydrogen production	0	80	1130	1361	2134	2008	1973	0.0	6.6	-0.8	
District heating	15	14	13	13	11	15	9	-0.9	-2.2	-1.9	
Derived gases, cokeries etc.	29623	26714	21187	21212	19953	18740	28029	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUQ27				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
							Annual % Change				
TRANSPORT											
Passenger transport activity (Gpkm)	822	872	849	878	934	968	1016	0.3	1.0	0.8	
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.4	
Private cars and motorcycles	644	673	649	659	702	721	753	0.1	0.8	0.7	
Rail	47	53	66	76	80	87	93	3.5	2.0	1.5	
Aviation ⁽³⁾	77	97	83	90	100	107	115	0.7	1.8	1.5	
Inland navigation	6	6	5	5	6	6	6	-0.3	0.8	1.0	
Freight transport activity (Gtkm)	237	248	216	242	252	263	275	-0.9	1.6	0.9	
Heavy goods and light commercial vehicles	183	183	164	187	194	202	211	-1.1	1.7	0.8	
Rail	18	21	19	22	23	24	26	0.3	2.1	1.3	
Inland navigation	36	43	33	34	35	37	39	-0.9	0.6	1.1	
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49619	46522	44390	-0.2	-0.4	-1.1	
Public road transport	559	499	515	511	505	496	480	-0.8	-0.2	-0.5	
Private cars and motorcycles	29150	30049	29058	27657	25132	22309	21025	0.0	-1.4	-1.8	
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9035	8998	8701	-1.5	0.7	-0.4	
Rail	821	988	966	1108	1158	1212	1264	1.6	1.8	0.9	
Aviation	11115	13069	11650	12400	12873	12557	11931	0.5	1.0	-0.8	
Inland navigation	933	1282	884	881	916	949	989	-0.5	0.4	0.8	
By transport activity											
Passenger transport	41504	44033	41640	40984	38952	35814	33904	0.0	-0.7	-1.4	
Freight transport	10882	11467	9830	11030	10667	10708	10485	-1.0	0.8	-0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.2	2.6				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.2	5.5				
ENERGY EFFICIENCY											
Primary energy consumption	219230	222779	204710	191181	177311	167422	161659	-0.7	-1.4	-0.9	
Final Energy Demand	153236	152728	142723	138484	135335	128504	120611	-0.7	-0.5	-1.1	
by sector											
Industry	36930	33388	26923	25432	25513	23394	20741	-3.1	-0.5	-2.0	
Energy intensive industries	19392	16472	12350	11464	11280	9732	7870	-4.4	-0.9	-3.5	
Other industrial sectors	17537	16916	14573	13968	14233	13662	12871	-1.8	-0.2	-1.0	
Residential	43034	44151	44715	40936	39868	39215	36966	0.4	-1.1	-0.8	
Tertiary	20377	19686	19633	20101	20335	19373	18515	-0.4	0.4	-0.9	
Transport ⁽⁵⁾	52895	55503	51452	52014	49619	46522	44390	-0.3	-0.4	-1.1	
by fuel											
Solids	5954	4530	4133	4583	3841	3121	1852	-3.6	-0.7	-7.0	
Oil	63674	65851	59524	58175	53052	48220	43742	-0.7	-1.1	-1.9	
Gas	52180	50380	47246	43853	42450	39666	35230	-1.0	-1.1	-1.8	
Electricity	28360	29998	28286	27707	28978	29352	30700	0.0	0.2	0.6	
Heat (from CHP and District Heating)	2439	1268	1266	1255	1338	1434	1495	-6.3	0.6	1.1	
Renewable energy forms	630	702	2268	2885	5579	6306	6990	13.7	9.4	2.3	
Other	0	0	0	26	97	404	602	-100.0	0.0	20.0	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	150	131	117	101	88	78	70	-2.4	-2.8	-2.2	
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	60	51	-2.3	-1.5	-2.8	
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	63	55	-1.4	-2.4	-2.2	
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	60	52	-2.6	-1.5	-2.4	
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.5	
Freight transport (toe/Mtkm)	46	46	46	46	42	41	38	-0.1	-0.7	-1.0	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	475.9	424.4	353.2	-1.2	-2.9	-2.9	
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	244.9	164.7	140.0	103.6		-5.0	-4.5	
of which ESD sectors (2013 scope) GHG emissions		413.6	362.5	341.0	311.3	284.3	249.6		-1.5	-2.2	
CO2 Emissions (energy related)	568.2	573.4	518.3	477.6	376.4	332.9	276.3	-0.9	-3.1	-3.0	
Power generation/District heating	194.2	199.6	178.4	155.5	78.7	62.0	37.5	-0.8	-7.9	-7.1	
Energy Branch	31.3	35.2	29.4	20.9	18.4	16.2	13.7	-0.6	-4.5	-2.9	
Industry	77.4	67.5	52.1	49.5	46.2	38.4	27.1	-3.9	-1.2	-5.2	
Residential	82.6	80.4	83.1	74.7	68.8	66.5	59.2	0.1	-1.9	-1.5	
Tertiary	27.0	25.3	24.8	25.3	22.6	18.7	15.7	-0.9	-0.9	-3.6	
Transport	155.6	165.4	150.6	151.7	141.7	131.2	123.1	-0.3	-0.6	-1.4	
CO2 Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	18.7	17.9	15.8	-2.8	1.8	-1.7	
Non-CO2 GHG emissions	131.6	133.2	102.5	90.5	80.9	73.6	61.0	-2.5	-2.3	-2.8	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	58.1	51.8	43.1	-1.2	-2.9	-2.9	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.48	0.49	0.45	0.42	0.20	0.16	0.09	-0.6	-7.8	-7.9	
Final energy demand (t of CO2/toe)	2.24	2.22	2.18	2.18	2.06	1.98	1.87	-0.3	-0.5	-1.0	
Industry	2.10	2.02	1.93	1.95	1.81	1.64	1.31	-0.8	-0.7	-3.2	
Residential	1.92	1.82	1.86	1.82	1.73	1.70	1.60	-0.3	-0.7	-0.7	
Tertiary	1.32	1.29	1.26	1.26	1.11	0.97	0.85	-0.5	-1.3	-2.7	
Transport	2.94	2.98	2.93	2.92	2.86	2.82	2.77	-0.1	-0.2	-0.3	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.7	17.6	20.0				
RES-H&C share	0.8	0.8	1.8	3.4	7.0	8.2	10.9				
RES-E share	2.6	4.1	7.4	19.3	41.1	46.9	47.0				
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	16.3	20.5				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	114	116	115	3.4	6.9	0.0	
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	170	179	180	0.3	2.8	0.6	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	231.0	252.6	270.5	1.5	2.5	1.6	
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.2	11.2				

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances and disutilities (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively.

For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix I.b: EUCO30 scenario - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 M€13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	172688	182472	1760315	1666601	1641602	1558106	1438410	0.2	-0.7	-1.3
Solids	321292	318127	282994	277891	252239	214984	170255	-1.3	-1.1	-3.9
Oil	660025	677021	612954	579805	545058	505154	463058	-0.7	-1.2	-1.6
Natural gas	396144	445263	447394	387731	385493	368879	316706	1.2	-1.5	-1.9
Nuclear	243841	257516	236562	213043	188974	174739	185077	-0.3	-2.2	-0.2
Electricity	2030	1412	712	1761	1247	523	-43	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206370	268591	293828	303357	5.7	4.1	1.2
Energy Branch Consumption	86261	91922	86455	81624	75828	69045	63810	0.0	-1.3	-1.7
Non-Energy Uses	113106	116080	110230	106709	112514	116557	117073	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	944996	903986	835772	758584	758694	725855	697616	-1.2	-1.0	-0.8
Solids	214596	196030	164837	148196	135621	119391	96369	-2.6	-1.9	-3.4
Oil	173901	135553	100408	78529	69707	57624	47471	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106361	91866	76235	-2.7	-4.0	-3.3
Nuclear	243841	257516	236562	213043	188974	174739	185077	-0.3	-2.2	-0.2
Renewable energy sources	103222	124116	174017	200379	258031	282235	292465	5.4	4.0	1.3
Hydro	30703	26859	32312	31167	32357	32376	32685	0.5	0.0	0.1
Biomass & Waste	65583	85060	119573	132613	164909	169837	168000	6.2	3.3	0.3
Wind	1913	6058	12836	23588	39813	48236	59454	21.0	12.0	4.1
Solar and others	436	827	3775	11001	17737	28015	33844	24.1	16.7	6.7
Geothermal	4587	5312	5521	2009	3214	3771	5681	1.9	-5.3	5.9
Net Imports (ktoe)	826349	979676	955004	962880	939110	889964	800723	1.5	-0.2	-1.6
Solids	98320	125363	111814	129695	116618	95593	73887	1.3	0.4	-4.5
Oil	532226	597491	558847	556140	530803	503252	470293	0.5	-0.5	-1.2
Crude oil and Feedstocks	514686	578712	537586	515210	492843	467726	440251	0.4	-0.9	-1.1
Oil products	17540	18779	21261	40930	37960	35527	30042	1.9	6.0	-2.3
Natural gas	193432	254054	278015	269292	279881	279003	245695	3.7	0.1	-1.3
Electricity	2030	1412	712	1761	1247	523	-43	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	55.1	53.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251302	3373985	3443495	3413078	1.0	0.1	0.1
Nuclear energy	944993	997699	916610	867402	772986	717746	768931	-0.3	-1.7	-0.1
Solids	933855	965565	830393	846836	773030	649979	506561	-1.2	-0.7	-4.1
Oil (including refinery gas)	181296	142772	86899	34609	21897	17378	12418	-7.1	-12.9	-5.5
Gas (including derived gases)	514267	705961	798645	568028	589115	594721	449159	4.5	-3.0	-2.7
Biomass-waste	46401	87831	145814	188857	214585	264929	289277	12.1	3.9	3.0
Hydro (pumping excluded)	357072	312372	375785	362408	376248	376461	380061	0.5	0.0	0.1
Wind	22254	70455	149278	274278	462942	560889	691327	21.0	12.0	4.1
Solar	117	1458	22502	103798	154722	252475	305613	69.1	21.3	7.0
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	9732	2.6	2.1	1.4
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1031397	1072929	1125077	2.3	1.9	0.9
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	475366	570590	666441	6.3	7.1	3.3
Hydro (pumping excluded)	115841	119177	122922	127470	131613	132231	133433	0.6	0.7	0.1
Wind	12730	40485	85701	141580	207269	238725	284924	21.0	9.2	3.2
Solar	178	2292	29774	97443	135999	198944	237047	66.9	16.4	5.7
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	441827	397288	358731	1.6	-1.0	-2.1
of which cogeneration units	92439	107819	107430	112502	85055	92493	93387	1.5	-2.3	0.9
of which CCS units	0	0	0	0	833	1083	1483	0.0	0.0	5.9
Solids fired	194525	185353	180110	176559	146219	117702	99374	-0.8	-2.1	-3.8
Gas fired	123821	163333	215485	219628	211332	205210	189355	5.7	-0.2	-1.1
Oil fired	83315	74582	69295	53085	31444	20711	15307	-1.8	-7.6	-6.9
Biomass-waste fired	12657	16610	21719	27908	51788	52622	53652	5.5	9.1	0.4
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1030	2.4	3.1	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.6	35.1	33.3			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.5	40.6	40.4			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	10.4	10.7	10.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.4			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	59.0	63.3	71.6			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	340752	324989	269287	0.7	-2.0	-2.3
Solids	223608	229335	197694	200223	178375	149115	116154	-1.2	-1.0	-4.2
Oil (including refinery gas)	40868	32485	20566	7340	5031	4435	3410	-6.6	-13.1	-3.8
Gas (including derived gases)	105105	137667	151968	100069	99800	102452	78186	3.8	-4.1	-2.4
Biomass & Waste	14651	26766	41420	43077	55615	67055	69605	11.0	3.0	2.3
Geothermal heat	4114	4645	4828	1184	1932	1932	1932	1.6	-8.8	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997999	908897	859404	805110	771784	-0.7	-1.5	-1.1
Refineries	735106	756042	667606	609584	582733	548467	511369	-1.0	-1.4	-1.3
Biofuels and hydrogen production	709	3279	13086	16149	20765	19470	19408	33.8	4.7	-0.7
District heating	15899	17445	19101	16261	16212	14872	13528	1.9	-1.6	-1.8
Derived gases, cokeries etc.	316179	324441	298206	266904	239695	222300	227479	-0.6	-2.2	-0.5

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28, EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7157	7491	7864	0.8	1.0	0.9
Public road transport	549	541	528	546	569	585	598	-0.4	0.8	0.5
Private cars and motorcycles	4466	4721	4843	5001	5254	5418	5625	0.8	0.8	0.7
Rail	450	464	499	540	599	669	734	1.0	1.8	2.1
Aviation ⁽³⁾	458	528	539	608	692	773	858	1.7	2.5	2.2
Inland navigation	42	42	40	40	43	46	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2981	3216	3457	1.1	1.5	1.5
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2109	2258	2414	1.3	1.5	1.4
Rail	405	416	394	428	482	538	595	-0.3	2.0	2.1
Inland navigation	300	343	354	361	390	419	448	1.7	1.0	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350304	332707	321621	0.5	-0.3	-0.9
Public road transport	8775	8725	8834	9040	9327	9251	9132	0.1	0.5	-0.1
Private cars and motorcycles	206270	212102	211618	204765	189780	168987	157395	0.3	-1.1	-1.9
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81587	82259	82943	1.3	0.6	0.2
Rail	8168	7668	7129	7395	7897	8456	8891	-1.4	1.0	1.2
Aviation	44876	49959	49230	53303	56436	58111	57349	0.9	1.4	0.2
Inland navigation	6156	6798	5673	5051	5346	5643	5912	-0.8	-0.6	1.0
By transport activity										
Passenger transport	266294	275041	273897	271237	259782	240909	228584	0.3	-0.5	-1.3
Freight transport	75231	89484	85505	86825	90522	91798	93037	1.3	0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.5	6.6			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559891	1529088	1441550	1321337	0.2	-0.8	-1.4
Final Energy Demand	1129427	1186370	1155879	1133457	1134845	1075010	987097	0.2	-0.2	-1.4
by sector										
Industry	330627	327576	283437	284538	294521	283115	267903	-1.5	0.4	-0.9
Energy intensive industries	215899	215115	182721	182407	188494	178666	165322	-1.7	0.3	-1.3
Other industrial sectors	114728	112461	100716	102131	106027	104448	102581	-1.3	0.5	-0.3
Residential	288564	307594	313829	299747	299090	281619	242783	0.8	-0.5	-2.1
Tertiary	166677	183368	196770	188333	188041	174657	151925	1.7	-0.5	-2.1
Transport ⁽⁵⁾	343558	367831	361842	360838	353193	335620	324487	0.5	-0.2	-0.8
by fuel										
Solids	61977	53988	50512	47694	45606	40563	30646	-2.0	-1.0	-3.9
Oil	487065	502509	455207	437598	404640	365668	327630	-0.7	-1.2	-2.1
Gas	267588	281191	273366	265878	263988	246335	220897	0.2	-0.3	-1.8
Electricity	217644	239548	244471	241010	251711	258075	255856	1.2	0.3	0.2
Heat (from CHP and District Heating)	46044	52425	52875	49062	50683	49867	46952	1.4	-0.4	-0.8
Renewable energy forms	49109	56708	79448	92104	117843	112858	102280	4.9	4.0	-1.4
Other	0	0	0	111	375	1644	2836	0.0	0.0	22.4
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	154	148	137	124	113	100	86	-1.2	-1.9	-2.7
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	68	61	-2.2	-0.6	-2.0
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	69	55	-0.6	-1.7	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	83	72	58	0.0	-1.8	-3.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	26	23	-0.8	-1.8	-2.4
Freight transport (toe/Mtkm)	33	34	33	32	30	29	27	0.2	-1.0	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4277.7	3901.0	3408.9	-0.9	-1.3	-2.2
of which ETS sectors (2013 scope) GHG emissions		2501.2	2175.1	2016.6	1890.4	1706.3	1424.0	-1.4	-2.8	
of which ESD sectors (2013 scope) GHG emissions		2847.9	2699.9	2566.7	2387.2	2194.7	1984.9	-1.2	-1.8	
CO2 Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3283.2	2950.8	2509.6	-0.5	-1.4	-2.7
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1068.8	945.9	735.4	-0.5	-2.3	-3.7
Energy Branch	167.3	170.7	155.2	148.5	132.4	117.5	107.6	-0.7	-1.6	-2.1
Industry	691.0	634.1	511.8	505.7	493.7	430.7	358.0	-3.0	-0.4	-3.2
Residential	468.0	484.2	466.9	422.7	385.1	350.8	288.9	0.0	-1.9	-2.8
Tertiary	257.9	271.6	267.9	245.8	221.8	183.8	145.5	0.4	-1.9	-4.1
Transport	1001.7	1079.8	1036.6	1023.4	981.8	922.1	874.2	0.3	-0.5	-1.2
CO2 Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	248.0	243.3	235.8	-1.5	0.4	-0.5
Non-CO2 GHG emissions	1057.0	939.6	855.4	820.5	746.1	706.9	663.6	-2.1	-1.4	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	74.3	67.8	59.2	-0.9	-1.3	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.39	0.37	0.33	0.30	0.26	0.23	0.18	-1.6	-2.3	-3.6
Final energy demand (t of CO2/toe)	2.14	2.08	1.98	1.94	1.83	1.76	1.69	-0.8	-0.7	-0.8
Industry	2.09	1.94	1.81	1.78	1.68	1.52	1.34	-1.5	-0.7	-2.2
Residential	1.62	1.57	1.49	1.41	1.29	1.25	1.19	-0.9	-1.4	-0.8
Tertiary	1.55	1.48	1.36	1.31	1.18	1.05	0.96	-1.3	-1.4	-2.1
Transport	2.92	2.94	2.86	2.84	2.78	2.75	2.69	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.1	24.1	27.1			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.3	26.3			
RES-E share	13.3	14.8	19.7	28.2	35.5	42.0	48.7			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	14.4	19.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	94	92	90	2.1	3.7	-0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	153	159	161	0.0	1.2	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1794.4	1925.7	2100.2	3.4	2.0	1.6
as % of GDP	9.4	10.4	11.4	11.2	12.3	12.4	12.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Austria: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5
GDP (in 000 M€13)	257	279	298	316	345	373	406	1.5	1.5	1.5
Gross Inland Consumption (ktoe)	28996	34373	34604	32934	33427	32145	29772	1.8	-0.3	-1.2
Solids	3597	4000	3365	3333	3405	2917	2568	-0.7	0.1	-2.8
Oil	12173	14448	12833	12275	11719	10840	9921	0.5	-0.9	-1.7
Natural gas	6519	8159	8215	6454	7662	7175	5622	2.3	-0.7	-3.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6
Renewable energy forms	6825	7537	9991	9810	10203	10878	11358	3.9	0.2	1.1
Energy Branch Consumption	1306	1566	1504	1594	1501	1369	1261	1.4	0.0	-1.7
Non-Energy Uses	1718	1717	1850	2037	2202	2332	2364	0.7	1.8	0.7
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	9776	10012	12114	11277	11469	11353	11380	2.2	-0.5	-0.1
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0
Oil	1092	1003	1036	813	673	343	111	-0.5	-4.2	-16.5
Natural gas	1533	1404	1486	1270	1141	667	441	-0.3	-2.6	-9.1
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	6859	7605	9592	9195	9654	10343	10828	3.4	0.1	1.2
Hydro	3597	3154	3299	3527	3698	3811	3851	-0.9	1.1	0.4
Biomass & Waste	3169	4214	5914	5018	5152	5115	4733	6.4	-1.4	-0.8
Wind	6	114	178	340	382	550	1131	40.8	8.0	11.5
Solar and others	63	93	168	260	359	782	986	10.3	7.9	10.6
Geothermal	25	30	35	49	64	85	128	3.4	6.3	7.2
Net Imports (ktoe)	18970	24517	21577	21656	21958	20791	18391	1.3	0.2	-1.8
Solids	3019	3971	3358	3333	3405	2917	2568	1.1	0.1	-2.8
Oil	10850	13204	11510	11462	11045	10498	9810	0.6	-0.4	-1.2
Crude oil and Feedstocks	7791	8100	7011	8001	7806	7636	7318	-1.1	1.1	-0.6
Oil products	3059	5104	4499	3461	3239	2861	2491	3.9	-3.2	-2.6
Natural gas	5253	7153	6115	5184	6521	6507	5181	1.5	0.6	-2.3
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6
Import Dependency (%)	65.4	71.3	62.4	65.8	65.7	64.7	61.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59622	71852	75909	77318	1.3	0.6	0.7
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	5727	7165	4918	4194	4929	3026	1946	-1.5	0.0	-8.9
Oil (including refinery gas)	1702	1641	1273	208	215	71	67	-2.9	-16.3	-11.0
Gas (including derived gases)	8864	14347	16137	6774	14518	12161	5797	6.2	-1.1	-8.8
Biomass-waste	1675	2882	5088	2592	3563	4451	4316	11.8	-3.5	1.9
Hydro (pumping excluded)	41836	36677	38363	41014	42999	44319	44776	-0.9	1.1	0.4
Wind	67	1331	2064	3958	4443	6397	13146	40.9	8.0	11.5
Solar	3	21	88	871	1174	5472	7259	38.2	29.5	20.0
Geothermal and other renewables	0	2	2	11	11	11	11	0.0	21.5	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23327	27511	31341	1.8	0.8	3.0
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	11668	12440	13841	16437	17371	22046	26200	1.7	2.3	4.2
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13702	13812	0.9	0.8	0.1
Wind	50	778	981	2412	2583	3457	5888	34.7	10.2	8.6
Solar	5	30	154	876	1090	4887	6501	40.9	21.6	19.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	6243	6652	7662	6552	5956	5465	5140	2.1	-2.5	-1.5
of which cogeneration units	2632	3253	3157	3004	3052	2904	3396	1.8	-0.3	1.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1887	1660	1359	873	802	777	777	-3.2	-5.1	-0.3
Gas fired	2816	3389	4512	4074	3559	3344	3021	4.8	-2.3	-1.6
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4
Biomass-waste fired	280	456	650	633	778	860	918	8.8	1.8	1.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	2	1	2	2	2	2	0.0	7.2	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	33.8	30.4	27.4			
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	43.9	39.5	33.3			
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.8	17.5	12.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.6	79.9	89.9			
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4552	4295	3134	4.0	-2.2	-3.7
Solids	1216	1507	1019	908	1069	671	555	-1.8	0.5	-6.3
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.8
Gas (including derived gases)	1961	2836	2868	1406	2572	2406	1282	3.9	-1.1	-6.7
Biomass & Waste	421	814	1649	604	833	1185	1265	14.6	-6.6	4.3
Geothermal heat	0	2	1	10	10	10	10	0.0	23.4	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	11349	11946	11472	12554	11800	11029	10216	0.1	0.3	-1.4
Refineries	8865	9275	8040	9141	8769	8228	7636	-1.0	0.9	-1.4
Biofuels and hydrogen production	16	50	495	571	443	419	416	41.2	-1.1	-0.6
District heating	558	613	869	678	635	592	531	4.5	-3.1	-1.8
Derived gases, cokeries etc.	1910	2009	2068	2164	1953	1790	1633	0.8	-0.6	-1.8

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	96	101	107	112	119	126	132	1.1	1.1	1.0
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.6
Private cars and motorcycles	68	72	75	78	80	84	87	1.0	0.7	0.7
Rail	12	13	15	16	18	20	22	1.9	2.2	1.7
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.2
Freight transport activity (Gtkm)	50	54	61	65	70	75	80	2.0	1.3	1.3
Heavy goods and light commercial vehicles	31	33	39	43	46	48	51	2.3	1.6	1.1
Rail	17	19	20	20	22	24	26	1.8	0.9	1.7
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8017	7510	7235	2.3	-0.6	-1.0
Public road transport	92	97	101	103	106	107	106	0.9	0.5	0.0
Private cars and motorcycles	4520	5616	5043	4708	4260	3782	3479	1.1	-1.7	-2.0
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2589	2520	2508	6.3	0.8	-0.3
Rail	267	242	247	249	264	274	278	-0.8	0.7	0.5
Aviation	591	679	707	776	773	801	836	1.8	0.9	0.8
Inland navigation	28	45	22	23	24	26	27	-2.1	0.8	1.1
<i>By transport activity</i>										
Passenger transport	5260	6438	5894	5634	5192	4745	4480	1.1	-1.3	-1.5
Freight transport	1527	2377	2613	2846	2825	2764	2755	5.5	0.8	-0.2
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.1	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30897	31225	29813	27408	1.8	-0.5	-1.3
Final Energy Demand	23692	28185	28423	28425	28024	26789	24909	1.8	-0.1	-1.2
<i>by sector</i>										
Industry	7283	8825	9195	9724	9944	9636	9298	2.4	0.8	-0.7
Energy intensive industries	5321	6148	6212	6588	6652	6348	6040	1.6	0.7	-1.0
Other industrial sectors	1962	2676	2983	3136	3291	3288	3258	4.3	1.0	-0.1
Residential	6332	6828	6797	6669	6517	6197	5295	0.7	-0.4	-2.1
Tertiary	3070	3449	3686	3285	3261	3165	2814	1.8	-1.2	-1.5
Transport ⁽⁵⁾	7007	9082	8744	8746	8301	7791	7501	2.2	-0.5	-1.0
<i>by fuel</i>										
Solids	1403	1466	1169	1135	1188	1225	1035	-1.8	0.2	-1.4
Oil	9818	12084	10539	9934	9319	8420	7562	0.7	-1.2	-2.1
Gas	4464	5125	5259	5142	5136	4722	4265	1.7	-0.2	-1.8
Electricity	4432	5013	5358	5436	5791	6003	6144	1.9	0.8	0.6
Heat (from CHP and District Heating)	1020	1353	1832	2008	1902	1947	1782	6.0	0.4	-0.6
Renewable energy forms	2555	3145	4266	4769	4683	4448	4080	5.3	0.9	-1.4
Other	0	0	0	2	5	22	41	0.0	0.0	22.9
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	113	123	116	104	97	86	74	0.3	-1.8	-2.6
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	95	86	0.8	-0.4	-1.9
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	77	67	53	-0.7	-1.9	-3.6
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	68	56	0.1	-2.7	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	31	28	0.1	-2.6	-2.7
Freight transport (toe/Mtkm)	30	44	43	44	40	37	35	3.4	-0.5	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.1	96.8	89.0	82.8	82.2	74.6	65.3	0.3	-0.8	-2.3
of which ETS sectors (2013 scope) GHG emissions		38.3	35.2	32.8	34.4	30.4	25.5		-0.3	-2.9
of which ESD sectors (2013 scope) GHG emissions		58.4	53.7	50.0	47.8	44.1	39.8		-1.2	-1.8
CO₂ Emissions (energy related)	65.6	78.6	71.5	65.7	65.8	58.8	50.6	0.9	-0.8	-2.6
Power generation/District heating	12.5	17.0	15.1	11.2	14.0	12.1	9.0	1.9	-0.7	-4.4
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.2	3.0	1.3	-0.3	-2.0
Industry	16.8	18.5	17.6	17.7	17.2	15.3	13.1	0.5	-0.2	-2.7
Residential	8.9	8.6	7.7	6.8	6.4	5.5	4.4	-1.5	-1.9	-3.5
Tertiary	3.9	4.4	3.2	2.0	1.8	1.6	1.1	-1.8	-5.8	-4.3
Transport	20.2	26.5	24.1	23.9	22.8	21.1	20.0	1.8	-0.6	-1.3
CO₂ Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.2	5.2	1.6	-0.3	-0.2
Non-CO₂ GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.5	-2.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.3	93.7	82.0	0.3	-0.8	-2.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.21	0.17	0.13	0.15	0.12	0.09	-0.3	-1.2	-4.7
Final energy demand (t of CO ₂ /toe)	2.10	2.06	1.85	1.77	1.72	1.62	1.55	-1.3	-0.7	-1.0
Industry	2.31	2.10	1.92	1.82	1.73	1.59	1.41	-1.9	-1.0	-2.0
Residential	1.41	1.26	1.13	1.02	0.98	0.89	0.84	-2.2	-1.4	-1.5
Tertiary	1.26	1.27	0.88	0.60	0.55	0.49	0.41	-3.6	-4.6	-2.8
Transport	2.88	2.91	2.76	2.73	2.74	2.71	2.67	-0.4	0.0	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.2	37.8	42.3			
RES-H&C share	20.4	22.0	29.7	37.0	36.3	35.7	38.0			
RES-E share	66.9	62.4	65.7	68.0	68.5	76.9	87.1			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.6	16.1	22.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	65	71	73	0.0	-0.5	1.2
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	140	150	150	0.9	-0.2	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.6	42.5	46.4	4.2	1.6	1.9
as % of GDP	8.5	10.2	11.0	10.2	11.2	11.4	11.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Belgium: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	10	10	11	11	12	12	13	0.6	0.9	0.9
GDP (in 000 M€13)	324	350	372	385	414	443	479	1.4	1.1	1.5
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54714	49891	46060	0.3	-1.1	-1.7
Solids	7922	5081	3673	3205	2007	2011	1706	-7.4	-5.9	-1.6
Oil	24136	24721	24699	23472	21985	20957	19670	0.2	-1.2	-1.1
Natural gas	13369	14728	16999	14941	14143	16727	15230	2.4	-1.8	0.7
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5
Renewable energy forms	1081	1658	3560	4242	6206	6786	7020	12.7	5.7	1.2
Energy Branch Consumption	2366	2403	2246	2406	2216	2117	2047	-0.5	-0.1	-0.8
Non-Energy Uses	6739	7516	8541	8464	8523	8620	8538	2.4	0.0	0.0
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14086	7319	6398	1.2	-0.9	-7.6
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0
Oil	0	6	-7	-14	-14	-14	-13	1692.2	7.2	-0.3
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0
Renewable energy sources	977	1377	2996	3725	5468	6092	6411	11.9	6.2	1.6
Hydro	40	25	27	31	32	46	49	-3.8	1.7	4.5
Biomass & Waste	931	1327	2793	2944	3956	3917	3777	11.6	3.5	-0.5
Wind	1	20	111	431	1032	1500	1755	54.9	25.0	5.5
Solar and others	1	3	60	313	441	617	804	50.7	22.0	6.2
Geothermal	3	3	4	6	7	12	27	3.0	5.7	13.6
Net Imports (ktoe)	50502	53396	53753	52611	49707	51996	49472	0.6	-0.8	0.0
Solids	7220	5150	3591	3205	2007	2011	1706	-6.7	-5.7	-1.6
Oil	29527	32605	32752	32035	31031	29938	28269	1.0	-0.5	-0.9
Crude oil and Feedstocks	34177	32251	31004	27409	27190	26837	26138	-1.0	-1.3	-0.4
Oil products	-4650	354	1749	4626	3841	3101	2131	0.0	8.2	-5.7
Natural gas	13278	14817	16791	14941	14190	17183	16433	2.4	-1.7	1.5
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.7	88.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	73960	70099	69135	1.3	-2.3	-0.7
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0
Solids	12916	8199	4190	2975	195	288	42	-10.6	-26.4	-14.3
Oil (including refinery gas)	797	1740	406	96	674	696	717	-6.5	5.2	0.6
Gas (including derived gases)	19091	25143	33178	23812	18269	36274	34930	5.7	-5.8	6.7
Biomass-waste	1336	2516	5882	5914	3236	4047	5142	16.0	-5.8	4.7
Hydro (pumping excluded)	460	288	312	365	368	530	571	-3.8	1.7	4.5
Wind	16	227	1292	5009	11998	17441	20401	55.1	25.0	5.5
Solar	0	1	560	3376	4013	5750	7332	0.0	21.8	6.2
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	14674	14867	17071	18515	20996	22771	25202	1.5	2.1	1.8
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0
Renewable energy	117	274	1934	5560	8494	11861	14471	32.4	15.9	5.5
Hydro (pumping excluded)	103	105	118	119	119	166	177	1.4	0.1	4.1
Wind	14	167	912	2229	4558	6253	7386	51.8	17.5	4.9
Solar	0	2	904	3212	3818	5443	6907	0.0	15.5	6.1
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	8636	8672	9216	9048	7447	7869	10731	0.7	-2.1	3.7
of which cogeneration units	1112	1893	2575	1552	655	1351	1241	8.8	-12.8	6.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	2290	1450	1184	825	43	43	16	-6.4	-28.2	-9.7
Gas fired	4392	5201	6468	6799	6270	6805	9687	3.9	-0.3	4.4
Oil fired	1581	1494	836	646	266	249	218	-6.2	-10.8	-2.0
Biomass-waste fired	373	527	727	777	868	773	811	6.9	1.8	-0.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.8	34.3	30.8			
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.3	47.0	50.8			
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.0	17.6	17.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.1	46.8	48.4			
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4339	7561	6917	1.7	-6.4	4.8
Solids	2629	1833	936	761	47	66	9	-9.8	-25.8	-15.8
Oil (including refinery gas)	180	411	57	29	223	230	237	-10.8	14.6	0.6
Gas (including derived gases)	3790	4612	5671	4111	2949	5966	5165	4.1	-6.3	5.8
Biomass & Waste	492	821	1722	1414	1120	1298	1506	13.4	-4.2	3.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	54711	52964	50595	41255	42565	34977	32832	-0.8	-1.7	-2.6
Refineries	38602	37483	35454	31882	31692	31387	30643	-0.8	-1.1	-0.3
Biofuels and hydrogen production	0	0	352	341	870	790	759	0.0	9.5	-1.4
District heating	45	29	6	15	19	17	21	-18.1	11.8	1.4
Derived gases, cokeries etc.	16064	15452	14782	9016	9983	2783	1409	-0.8	-3.8	-17.8

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Belgium: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	137	145	154	158	169	176	185	1.2	1.0	0.9
Public road transport	13	18	17	18	18	18	18	2.7	0.2	0.1
Private cars and motorcycles	107	109	115	117	126	129	135	0.8	0.9	0.6
Rail	9	10	12	12	13	15	16	3.1	1.2	2.3
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.4
Freight transport activity (Gtkm)	70	65	63	66	76	84	92	-1.1	1.8	2.0
Heavy goods and light commercial vehicles	55	48	46	47	54	60	64	-1.7	1.5	1.8
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.4
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	9998	9774	9719	0.8	-0.6	-0.3
Public road transport	158	204	292	290	287	281	271	6.4	-0.2	-0.6
Private cars and motorcycles	4815	4463	5177	4757	4252	3778	3592	0.7	-1.9	-1.7
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3632	3744	3831	1.8	0.6	0.5
Rail	184	186	177	181	210	237	262	-0.4	1.7	2.2
Aviation	1530	1281	1382	1389	1443	1545	1555	-1.0	0.4	0.8
Inland navigation	204	219	152	164	176	189	208	-2.9	1.5	1.7
By transport activity										
Passenger transport	6608	6016	6932	6518	6070	5702	5524	0.5	-1.3	-0.9
Freight transport	3139	3956	3661	3660	3928	4072	4195	1.6	0.7	0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.3	9.2			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46191	41270	37542	0.0	-1.3	-2.1
Final Energy Demand	37766	36705	37534	36239	36431	34877	32674	-0.1	-0.3	-1.1
by sector										
Industry	14218	11775	11688	11055	11229	10657	10176	-1.9	-0.4	-1.0
Energy intensive industries	10700	9088	8641	8013	8027	7657	7256	-2.1	-0.7	-1.0
Other industrial sectors	3518	2686	3047	3042	3202	3000	2920	-1.4	0.5	-0.9
Residential	8974	9299	9266	9230	9329	9068	7760	0.3	0.1	-1.8
Tertiary	4827	5658	5982	5722	5825	5326	4969	2.2	-0.3	-1.6
Transport ⁽⁵⁾	9747	9973	10598	10232	10049	9827	9769	0.8	-0.5	-0.3
by fuel										
Solids	3403	2019	1621	1505	1358	1262	1041	-7.2	-1.8	-2.6
Oil	16661	16586	15314	14610	13000	11935	10801	-0.8	-1.6	-1.8
Gas	10010	10009	11147	10465	10564	10170	9433	1.1	-0.5	-1.1
Electricity	6667	6896	7163	7033	7244	7411	7613	0.7	0.1	0.5
Heat (from CHP and District Heating)	492	428	640	567	607	667	712	2.7	-0.5	1.6
Renewable energy forms	533	767	1650	2058	3636	3337	2942	12.0	8.2	-2.1
Other	0	0	0	3	23	94	130	0.0	0.0	19.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/€13)	183	168	165	142	132	112	96	-1.0	-2.2	-3.1
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	69	62	-1.3	-1.3	-2.2
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	70	55	-1.1	-1.4	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	78	67	0.5	-1.4	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	27	24	-1.1	-2.5	-2.1
Freight transport (toe/Mtkm)	45	61	58	55	52	48	45	2.6	-1.1	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	154.0	148.3	136.1	127.3	112.0	113.4	102.8	-1.2	-1.9	-0.9
of which ETS sectors (2013 scope) GHG emissions		70.1	58.6	52.1	42.8	49.0	44.3		-3.1	0.3
of which ESD sectors (2013 scope) GHG emissions		78.3	77.6	75.2	69.2	64.4	58.5		-1.1	-1.7
CO ₂ Emissions (energy related)	122.7	114.2	106.4	97.8	84.6	88.0	79.4	-1.4	-2.3	-0.6
Power generation/District heating	25.1	24.0	20.4	15.8	9.0	17.9	15.8	-2.0	-7.9	5.8
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.7	-2.3	0.4	-0.9
Industry	34.5	24.8	22.1	19.7	18.4	16.0	14.1	-4.4	-1.8	-2.6
Residential	20.3	20.5	18.9	18.4	16.9	16.1	13.2	-0.7	-1.1	-2.4
Tertiary	8.7	10.6	10.2	9.5	9.0	7.8	6.7	1.6	-1.3	-2.9
Transport	29.2	29.9	30.9	29.7	27.4	26.5	25.9	0.6	-1.2	-0.6
CO ₂ Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.1	8.2	1.6	0.4	-1.8
Non-CO2 GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	15.2	-1.3	-1.4	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	75.4	68.4	-1.2	-1.9	-0.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.28	0.26	0.20	0.20	0.11	0.22	0.20	-3.5	-5.8	6.2
Final energy demand (t of CO ₂ /toe)	2.45	2.34	2.19	2.14	1.97	1.90	1.83	-1.1	-1.1	-0.7
Industry	2.43	2.11	1.89	1.79	1.63	1.50	1.39	-2.5	-1.4	-1.6
Residential	2.26	2.21	2.04	2.00	1.81	1.78	1.70	-1.0	-1.2	-0.6
Tertiary	1.80	1.87	1.71	1.66	1.55	1.46	1.36	-0.5	-1.0	-1.3
Transport	2.99	3.00	2.91	2.91	2.72	2.70	2.65	-0.3	-0.7	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.0	16.0	17.4			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	13.8	13.5			
RES-E share	1.1	2.4	7.1	15.2	20.0	28.3	33.5			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	13.0	17.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	105	116	113	3.2	6.0	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	146	157	162	0.9	0.5	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	58.9	64.4	71.9	4.0	1.9	2.0
as % of GDP	10.2	10.3	13.1	12.3	14.2	14.5	15.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
	Annual % Change									
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7
GDP (in 000 M€13)	25	33	38	40	45	50	53	4.1	1.8	1.7
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16338	15365	14390	-0.4	-0.8	-1.3
Solids	6433	6895	6887	5983	5643	4494	3557	0.7	-2.0	-4.5
Oil	4068	4725	3888	3732	3543	3447	3250	-0.5	-0.9	-0.9
Natural gas	2931	2804	2300	2118	2120	1845	1636	-2.4	-0.8	-2.6
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7
Renewable energy forms	788	1156	1465	1870	2170	2719	3022	6.4	4.0	3.4
Energy Branch Consumption	905	911	1032	907	859	757	696	1.3	-1.8	-2.1
Non-Energy Uses	980	851	422	427	498	571	605	-8.1	1.7	2.0
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	9867	10629	10531	9856	10684	10271	10193	0.7	0.1	-0.5
Solids	4295	4178	4942	4055	4625	3654	3269	1.4	-0.7	-3.4
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9
Natural gas	12	384	59	125	128	129	137	17.0	8.0	0.7
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0
Renewable energy sources	792	1182	1512	1883	2135	2686	2983	6.7	3.5	3.4
Hydro	230	373	435	350	373	364	363	6.6	-1.5	-0.3
Biomass & Waste	562	776	975	1283	1485	1516	1475	5.7	4.3	-0.1
Wind	0	0	59	98	102	386	647	0.0	5.7	20.3
Solar and others	0	0	12	118	140	389	469	0.0	28.4	12.9
Geothermal	0	33	33	34	36	31	30	0.0	0.9	-1.8
Net Imports (ktoe)	8544	9276	7075	6717	5800	5255	4370	-1.9	-2.0	-2.8
Solids	2258	2553	1700	1928	1017	840	288	-2.8	-5.0	-11.8
Oil	3944	4943	4025	3820	3668	3581	3382	0.2	-0.9	-0.8
Crude oil and Feedstocks	5228	6145	5916	6308	5991	5717	5383	1.2	0.1	-1.1
Oil products	-1284	-1202	-1891	-2489	-2322	-2136	-2000	3.9	2.1	-1.5
Natural gas	2742	2458	2131	1993	1993	1718	1511	-2.5	-0.7	-2.7
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7
Import Dependency (%)	46.0	46.7	39.6	40.5	35.2	33.8	30.0			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48846	48695	48087	46654	1.2	0.6	-0.4
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0
Solids	16941	18458	22606	23317	22602	17818	13678	2.9	0.0	-4.9
Oil (including refinery gas)	661	606	393	440	70	0	0	-5.1	-15.8	-100.0
Gas (including derived gases)	2178	1896	1967	3035	3865	2277	1428	-1.0	7.0	-9.5
Biomass-waste	15	17	49	54	164	389	459	12.6	12.8	10.8
Hydro (pumping excluded)	2673	4337	5057	4065	4332	4235	4218	6.6	-1.5	-0.3
Wind	0	5	681	1144	1183	4487	7520	0.0	5.7	20.3
Solar	0	0	15	1129	1152	3553	4024	0.0	54.2	13.3
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11802	13366	14451	-0.5	1.7	2.0
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0
Renewable energy	1016	1992	2697	4081	4110	6982	8259	10.3	4.3	7.2
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0
Wind	0	8	488	691	703	1900	2852	0.0	3.7	15.0
Solar	0	0	25	1052	1069	2744	3069	0.0	45.6	11.1
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	5845	5878	5326	5967	5771	4464	4272	-0.9	0.8	-3.0
of which cogeneration units	1129	1191	1017	1814	1695	1730	1214	-1.0	5.2	-3.3
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5100	5100	4703	5313	4809	3492	3381	-0.8	0.2	-3.5
Gas fired	689	737	607	626	909	877	790	-1.3	4.1	-1.4
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0
Biomass-waste fired	0	0	3	15	51	94	99	0.0	32.3	6.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.3	38.4	34.8			
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	39.0	38.3	37.2			
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.6	9.3	9.2			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.1	45.5	58.2	67.6			
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7553	6282	5884	4598	3598	2.4	-2.5	-4.8
Solids	4928	5817	6610	5466	5204	4159	3277	3.0	-2.4	-4.5
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0
Gas (including derived gases)	884	697	720	692	625	349	218	-2.0	-1.4	-10.0
Biomass & Waste	3	2	4	15	38	91	104	1.4	25.9	10.5
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12213	13505	11285	10638	10378	10093	9752	-0.8	-0.8	-0.6
Refineries	5310	6421	6041	6617	6290	6016	5665	1.3	0.4	-1.0
Biofuels and hydrogen production	0	0	13	106	188	181	187	0.0	30.2	-0.1
District heating	324	368	304	96	98	105	111	-0.6	-10.7	1.3
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3791	3789	-2.9	-2.6	0.0

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	48	56	65	72	76	80	84	3.2	1.4	1.1
Public road transport	15	14	11	11	11	11	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	57	58	5.7	1.3	0.7
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.9
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.3
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	1.9	2.4
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2879	2836	2807	4.0	0.6	-0.3
Public road transport	399	362	262	263	270	267	263	-4.1	0.3	-0.3
Private cars and motorcycles	956	1389	1581	1628	1559	1433	1363	5.2	-0.1	-1.3
Heavy goods and light commercial vehicles	305	652	590	646	699	718	707	6.8	1.7	0.1
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.3
Aviation	101	201	182	207	244	301	349	6.1	3.0	3.7
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
By transport activity										
Passenger transport	1473	1965	2034	2106	2082	2012	1987	3.3	0.2	-0.5
Freight transport	369	718	685	731	796	824	820	6.4	1.5	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.5	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	15840	14794	13785	-0.1	-0.9	-1.4
Final Energy Demand	9106	10184	8843	9205	9463	9306	8910	-0.3	0.7	-0.6
by sector										
Industry	3967	4037	2561	2709	2775	2800	2794	-4.3	0.8	0.1
Energy intensive industries	3124	3161	1789	1929	1918	1892	1865	-5.4	0.7	-0.3
Other industrial sectors	843	876	772	780	857	909	929	-0.9	1.0	0.8
Residential	2155	2117	2246	2307	2374	2308	2065	0.4	0.6	-1.4
Tertiary	972	1128	1174	1179	1268	1206	1099	1.9	0.8	-1.4
Transport ⁽⁵⁾	2013	2903	2862	3011	3046	2993	2952	3.6	0.6	-0.3
by fuel										
Solids	879	979	414	487	415	314	261	-7.3	0.0	-4.5
Oil	3026	3712	3125	3134	3045	2959	2776	0.3	-0.3	-0.9
Gas	1681	1565	1058	1052	1078	1037	983	-4.5	0.2	-0.9
Electricity	2085	2211	2331	2382	2505	2543	2548	1.1	0.7	0.2
Heat (from CHP and District Heating)	880	939	960	841	864	900	853	0.9	-1.0	-0.1
Renewable energy forms	555	778	956	1309	1556	1552	1482	5.6	5.0	-0.5
Other	0	0	0	0	0	2	6	0.0	0.0	32.4
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	733	599	472	415	362	308	269	-4.3	-2.6	-2.9
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	30	-9.4	-0.6	-1.7
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	51	42	-3.9	-1.4	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	61	52	-2.1	-1.3	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	24	22	0.0	-1.3	-1.7
Freight transport (toe/Mtkm)	35	44	37	37	36	34	31	0.7	-0.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	64.4	67.0	61.2	55.6	51.0	44.7	39.5	-0.5	-1.8	-2.5
of which ETS sectors (2013 scope) GHG emissions		39.4	35.6	30.0	28.3	23.0	18.7		-2.3	-4.0
of which ESD sectors (2013 scope) GHG emissions		27.6	25.6	25.6	22.7	21.7	20.8		-1.2	-0.8
CO ₂ Emissions (energy related)	44.3	49.1	45.9	40.1	38.0	32.1	27.0	0.4	-1.9	-3.4
Power generation/District heating	24.6	27.9	31.2	25.1	23.7	18.6	14.5	2.4	-2.7	-4.8
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.8	-1.8	-1.5
Industry	10.6	9.8	3.7	4.0	3.9	3.6	3.1	-10.0	0.6	-2.4
Residential	1.4	1.2	1.0	1.0	0.7	0.5	0.4	-3.1	-4.0	-5.1
Tertiary	1.2	1.1	0.8	0.7	0.7	0.6	0.4	-4.0	-1.5	-4.4
Transport	5.7	8.3	8.3	8.4	8.3	8.2	8.0	3.7	0.1	-0.4
CO ₂ Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.5
Non-CO2 GHG emissions	16.7	14.0	12.3	12.5	9.8	9.4	9.3	-3.0	-2.2	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	46.3	40.6	35.9	-0.5	-1.8	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.46	0.49	0.51	0.41	0.39	0.31	0.25	1.2	-2.8	-4.4
Final energy demand (t of CO ₂ /toe)	2.07	2.01	1.55	1.53	1.44	1.38	1.33	-2.8	-0.8	-0.7
Industry	2.67	2.43	1.44	1.47	1.41	1.28	1.10	-6.0	-0.2	-2.5
Residential	0.63	0.58	0.44	0.41	0.28	0.21	0.19	-3.5	-4.5	-3.7
Tertiary	1.24	0.97	0.69	0.61	0.54	0.48	0.40	-5.8	-2.3	-3.0
Transport	2.85	2.88	2.88	2.80	2.73	2.73	2.70	0.1	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	21.1	26.6	31.0			
RES-H&C share	10.5	14.1	25.2	30.8	34.0	35.4	38.3			
RES-E share	4.0	8.5	12.3	17.4	18.1	34.1	44.5			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	10.8	13.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	69	75	77	0.8	1.8	1.2
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	106	128	131	5.4	3.5	2.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.5	16.9	6.2	3.0	2.8
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.1	31.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (In million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8230	7723	7142	0.9	-0.4	-1.4
Solids	431	683	683	751	696	309	291	4.7	0.2	-8.3
Oil	3929	4490	3699	3414	3230	3055	2797	-0.6	-1.3	-1.4
Natural gas	2210	2370	2632	2144	2473	2373	1936	1.8	-0.6	-2.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1
Renewable energy forms	880	906	1138	1195	1417	1638	1708	2.6	2.2	1.9
Energy Branch Consumption	821	825	745	726	707	597	577	-1.0	-0.5	-2.0
Non-Energy Uses	656	675	596	514	529	536	535	-0.9	-1.2	0.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	3580	3799	4222	3368	3650	3609	3409	1.7	-1.4	-0.7
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0
Oil	1345	1029	767	466	461	436	390	-5.5	-5.0	-1.7
Natural gas	1355	1865	2215	1431	1537	1311	1103	5.0	-3.6	-3.3
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	880	906	1240	1471	1652	1862	1916	3.5	2.9	1.5
Hydro	505	545	716	533	544	549	550	3.6	-2.7	0.1
Biomass & Waste	375	360	500	859	1021	988	923	2.9	7.4	-1.0
Wind	0	1	12	56	56	113	186	0.0	16.6	12.7
Solar and others	0	0	5	16	23	205	242	0.0	16.0	26.5
Geothermal	0	0	7	7	8	8	15	0.0	1.3	7.1
Net Imports (ktoe)	4134	5208	4461	4657	4588	4122	3740	0.8	0.3	-2.0
Solids	478	624	699	751	696	309	291	3.9	-0.1	-8.3
Oil	2406	3583	2980	2955	2776	2625	2413	2.2	-0.7	-1.4
Crude oil and Feedstocks	3952	4334	3647	2979	2838	2744	2594	-0.8	-2.5	-0.9
Oil products	-1546	-751	-667	-24	-62	-119	-181	-8.1	-21.2	11.3
Natural gas	905	562	476	713	937	1062	833	-6.2	7.0	-1.2
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1
Import Dependency (%)	52.9	58.4	52.1	58.0	55.7	53.3	52.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14110	14647	13633	2.7	0.1	-0.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	1551	2328	2385	2671	2695	914	868	4.4	1.2	-10.7
Oil (including refinery gas)	1687	1855	560	77	25	281	212	-10.4	-26.7	23.9
Gas (including derived gases)	1571	1814	2553	2232	4063	3490	1632	5.0	4.8	-8.7
Biomass-waste	1	14	33	98	285	310	299	41.9	24.1	0.5
Hydro (pumping excluded)	5874	6333	8329	6200	6324	6387	6392	3.6	-2.7	0.1
Wind	0	10	139	650	650	1309	2158	0.0	16.7	12.7
Solar	0	0	0	68	68	1957	2072	0.0	0.0	40.8
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4894	6320	6743	1.1	1.5	3.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2079	2066	2220	2668	2668	4284	4853	0.7	1.9	6.2
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2190	0.3	0.2	0.0
Wind	0	6	79	423	423	721	1211	0.0	18.3	11.1
Solar	0	0	0	55	55	1373	1453	0.0	0.0	38.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1707	1879	1996	2216	2226	2036	1890	1.6	1.1	-1.6
of which cogeneration units	558	515	486	298	596	888	656	-1.4	2.1	1.0
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0
Gas fired	781	919	1031	1706	1396	1196	1090	2.8	3.1	-2.4
Oil fired	615	646	649	185	150	157	111	0.5	-13.6	-2.9
Biomass-waste fired	0	3	5	13	24	27	33	0.0	17.3	3.2
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	32.1	26.1	22.8			
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	47.5	44.1	38.4			
% of gross electricity from CHP	16.8	0.0	14.3	15.5	19.0	17.6	17.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	51.9	68.0	80.1			
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1279	973	674	0.2	0.1	-6.2
Solids	357	537	532	612	568	207	226	4.1	0.7	-8.8
Oil (including refinery gas)	395	447	120	14	8	78	63	-11.3	-23.4	22.6
Gas (including derived gases)	497	490	611	350	648	627	320	2.1	0.6	-6.8
Biomass & Waste	0	4	7	17	55	61	64	36.6	23.2	1.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	5394	5327	4409	3555	3568	3434	3218	-2.0	-2.1	-1.0
Refineries	5299	5210	4304	3414	3268	3150	2959	-2.1	-2.7	-1.0
Biofuels and hydrogen production	0	0	3	70	223	201	181	0.0	56.1	-2.0
District heating	83	104	97	70	74	72	65	1.6	-2.7	-1.2
Derived gases, cokeries etc.	12	13	4	1	2	10	12	-10.0	-5.6	17.7

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EU030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	1.0
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.6
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.9
Rail	2	2	2	2	3	3	3	2.7	1.3	0.8
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.7	2.6
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.7
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.6
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.7
Rail	2	3	3	3	3	3	3	3.9	1.4	1.4
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.0
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2133	2058	2016	3.0	0.3	-0.6
Public road transport	41	39	61	63	66	66	65	3.9	0.8	-0.1
Private cars and motorcycles	1192	1192	1332	1324	1319	1220	1161	1.1	-0.1	-1.3
Heavy goods and light commercial vehicles	161	508	479	465	510	520	529	11.5	0.6	0.4
Rail	46	52	50	48	52	53	55	0.8	0.5	0.5
Aviation	76	98	108	134	144	154	161	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	0.8
By transport activity										
Passenger transport	1329	1340	1514	1535	1542	1454	1401	1.3	0.2	-1.0
Freight transport	215	581	554	540	591	604	616	9.9	0.7	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.5	9.9			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7701	7188	6606	1.1	-0.3	-1.5
Final Energy Demand	5371	6343	6347	6190	6299	6057	5645	1.7	-0.1	-1.1
by sector										
Industry	1378	1563	1366	1394	1388	1306	1241	-0.1	0.2	-1.1
Energy intensive industries	847	907	752	745	734	673	620	-1.2	-0.2	-1.7
Other industrial sectors	531	656	614	649	654	633	621	1.5	0.6	-0.5
Residential	1666	1922	1893	1784	1778	1722	1502	1.3	-0.6	-1.7
Tertiary	781	935	1018	934	996	967	882	2.7	-0.2	-1.2
Transport ⁽⁵⁾	1547	1923	2070	2078	2137	2062	2020	3.0	0.3	-0.6
by fuel										
Solids	74	146	150	139	127	102	65	7.3	-1.6	-6.5
Oil	2683	3108	2902	2754	2564	2376	2143	0.8	-1.2	-1.8
Gas	1009	1236	1288	1170	1227	1203	1121	2.5	-0.5	-0.9
Electricity	1018	1240	1364	1317	1393	1398	1387	3.0	0.2	0.0
Heat (from CHP and District Heating)	213	258	246	226	239	249	234	1.4	-0.3	-0.2
Renewable energy forms	375	356	397	582	747	719	682	0.6	6.5	-0.9
Other	0	0	0	1	2	10	13	0.0	0.0	18.3
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	214	196	184	179	168	149	129	-1.5	-0.9	-2.6
Industry (Energy on Value added, index 2000=100)	100	97	88	93	86	78	71	-1.3	-0.2	-1.9
Residential (Energy on Private Income, index 2000=100)	100	91	88	84	76	69	56	-1.2	-1.5	-3.0
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	91	83	70	-0.1	-0.8	-2.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	34	31	-1.2	-1.3	-2.0
Freight transport (toe/Mtkm)	48	49	47	45	43	41	38	-0.2	-0.8	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	25.0	22.2	20.1	0.8	-1.3	-2.2
of which ETS sectors (2013 scope) GHG emissions		12.7	10.8	9.7	10.0	8.1	6.9		-0.8	-3.6
of which ESD sectors (2013 scope) GHG emissions		17.9	17.7	15.7	14.9	14.1	13.1		-1.7	-1.3
CO ₂ Emissions (energy related)	17.0	20.2	18.6	17.0	17.0	14.6	12.7	0.9	-0.9	-2.9
Power generation/District heating	4.1	5.1	4.3	3.5	4.0	2.7	1.9	0.3	-0.5	-7.1
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.4	1.4	-1.0	-0.5	-2.2
Industry	2.9	3.5	2.8	2.9	2.7	2.3	1.8	-0.2	-0.5	-3.7
Residential	1.9	2.4	2.1	1.7	1.7	1.6	1.3	1.0	-2.1	-2.7
Tertiary	1.5	1.5	1.4	1.2	1.2	1.1	1.0	-0.6	-1.6	-2.1
Transport	4.5	5.7	6.2	6.0	5.7	5.4	5.3	3.1	-0.8	-0.7
CO ₂ Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.4	2.3	-0.3	0.1	-0.8
Non-CO2 GHG emissions	6.7	7.4	7.4	5.9	5.4	5.2	5.0	0.9	-3.1	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	70.4	62.6	56.6	0.8	-1.3	-2.2
Carbon Intensity Indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.30	0.32	0.25	0.23	0.23	0.15	0.11	-2.1	-0.5	-6.9
Final energy demand (t of CO ₂ /toe)	2.01	2.06	1.97	1.90	1.79	1.73	1.67	-0.2	-1.0	-0.7
Industry	2.09	2.23	2.08	2.08	1.94	1.78	1.49	-0.1	-0.7	-2.6
Residential	1.15	1.24	1.12	0.95	0.96	0.94	0.87	-0.3	-1.5	-1.0
Tertiary	1.89	1.57	1.37	1.26	1.19	1.15	1.09	-3.2	-1.4	-0.9
Transport	2.94	2.97	2.97	2.88	2.65	2.64	2.62	0.1	-1.1	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.2	25.8	29.1			
RES-H&C share	13.0	10.9	13.1	18.0	18.7	20.6	24.5			
RES-E share	36.2	32.8	34.2	39.1	38.8	53.4	59.5			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.0	12.8	15.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	67	80	85	-2.1	0.1	2.3
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	122	131	134	1.3	1.1	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.3	11.6	5.5	1.7	2.5
as % of GDP	12.2	12.9	16.4	16.8	18.5	19.8	20.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Cyprus: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3
GDP (in 000 M€13)	14	16	18	16	19	21	22	2.8	0.2	1.9
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2149	2004	1907	1.3	-2.4	-1.2
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-12.4
Oil	2334	2446	2611	1995	1346	1208	1137	1.1	-6.4	-1.7
Natural gas	0	0	0	0	558	517	490	0.0	0.0	-1.3
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	0	0	0	0	0	0	0	0.0	0.0	-22.4
Renewable energy forms	46	57	112	162	245	279	280	9.4	8.1	1.3
Energy Branch Consumption	54	22	19	17	15	8	7	-9.7	-2.4	-7.4
Non-Energy Uses	86	73	85	38	42	44	44	-0.1	-7.0	0.6
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	44	51	89	137	195	2042	2859	7.2	8.2	30.8
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0
Natural gas	0	0	0	0	0	1810	2623	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	44	51	89	137	195	231	236	7.2	8.2	1.9
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0
Biomass & Waste	9	10	24	28	37	46	47	10.5	4.3	2.4
Wind	0	0	3	21	36	36	40	0.0	29.7	0.9
Solar and others	36	41	61	86	118	144	144	5.6	6.8	2.0
Geothermal	0	0	1	2	4	5	5	0.0	18.6	1.9
Net Imports (ktoe)	2565	2843	2945	2243	2197	228	-667	1.4	-2.9	0.0
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-12.4
Oil	2531	2794	2910	2218	1587	1468	1398	1.4	-5.9	-1.3
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	1371	2794	2910	2218	1587	1468	1398	7.8	-5.9	-1.3
Natural gas	0	0	0	0	561	-1288	-2108	0.0	0.0	0.0
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0
Import Dependency (%)	98.6	100.7	100.8	94.3	91.8	10.0	-30.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4933	5171	5022	4.7	-0.8	0.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	3370	4376	5249	4086	435	22	22	4.5	-22.0	-25.7
Gas (including derived gases)	0	0	0	0	3441	3719	3409	0.0	0.0	-0.1
Biomass-waste	0	0	35	45	59	109	133	0.0	5.4	8.4
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0
Wind	0	0	31	248	422	422	462	0.0	29.8	0.9
Solar	0	0	6	195	576	899	996	0.0	58.4	5.6
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	2169	2228	4.3	2.8	1.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	0	0	89	292	554	715	773	0.0	20.1	3.4
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0
Wind	0	0	82	158	216	216	229	0.0	10.2	0.6
Solar	0	0	7	135	338	499	544	0.0	47.4	4.9
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	983	1119	1409	1462	1426	1455	1455	3.7	0.1	0.2
of which cogeneration units	0	5	22	2	2	1	2	0.0	-21.7	1.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	0	0	0	0	34	514	514	0.0	0.0	31.3
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.4	26.7	25.3			
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.9	61.8	60.3			
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	0.8			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.4	27.7	31.7			
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	653	536	508	3.0	-5.8	-2.5
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	881	1077	1178	731	82	0	0	2.9	-23.4	-100.0
Gas (including derived gases)	0	0	0	0	558	516	487	0.0	0.0	-1.3
Biomass & Waste	0	0	4	10	13	20	21	0.0	12.6	4.7
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1178	0	15	17	41	37	32	-35.4	10.5	-2.5
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	15	17	41	36	31	0.0	10.5	-2.6
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	16.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.3	1.9
Public road transport	1	1	1	1	1	1	1	1.4	0.8	0.2
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.7
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.3
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	962	945	934	2.0	-0.9	-0.3
Public road transport	32	35	37	37	38	37	35	1.5	0.3	-0.6
Private cars and motorcycles	373	444	577	490	483	428	383	4.5	-1.8	-2.3
Heavy goods and light commercial vehicles	173	197	152	125	126	126	127	-1.3	-1.8	0.1
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	316	354	389	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	687	785	898	791	836	819	807	2.7	-0.7	-0.4
Freight transport	173	197	152	125	126	126	127	-1.3	-1.8	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.5	1.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.9	3.3			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2108	1960	1864	1.3	-2.3	-1.2
Final Energy Demand	1650	1834	1926	1700	1761	1728	1637	1.6	-0.9	-0.7
by sector										
Industry	445	320	235	202	204	198	191	-6.2	-1.4	-0.7
Energy intensive industries	240	221	171	141	145	145	148	-3.3	-1.7	0.2
Other industrial sectors	205	98	63	61	59	53	43	-11.1	-0.6	-3.2
Residential	211	322	333	323	315	298	258	4.7	-0.5	-2.0
Tertiary	134	209	309	259	279	287	253	8.7	-1.0	-0.9
Transport ⁽⁵⁾	860	983	1050	916	962	945	934	2.0	-0.9	-0.3
by fuel										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-12.4
Oil	1317	1403	1384	1226	1222	1164	1093	0.5	-1.2	-1.1
Gas	0	0	0	0	0	1	3	0.0	0.0	20.1
Electricity	258	341	420	360	390	417	404	5.0	-0.7	0.4
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.5	-2.4
Renewable energy forms	42	54	105	114	146	145	133	9.6	3.4	-0.9
Other	0	0	0	0	0	1	2	-100.0	0.0	26.5
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	175	157	151	131	115	97	85	-1.5	-2.6	-3.0
Industry (Energy on Value added, index 2000=100)	100	70	56	57	53	48	43	-5.6	-0.7	-2.1
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	88	71	1.3	-1.1	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	142	132	106	5.2	-1.5	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	33	30	0.5	-3.2	-2.4
Freight transport (toe/Mtkm)	129	135	133	109	104	97	92	0.3	-2.5	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	11.3	10.4	10.3	8.2	7.3	6.8	6.7	-0.9	-3.4	-0.9
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.2	3.3		-4.9	-0.5
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.6	3.3		-1.8	-1.2
CO ₂ Emissions (energy related)	7.2	8.0	8.1	6.1	5.3	4.8	4.5	1.2	-4.1	-1.6
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.2	1.1	2.9	-8.4	-3.1
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.5	0.4	-7.6	-1.6	-2.5
Residential	0.2	0.5	0.4	0.3	0.3	0.2	0.2	4.7	-2.4	-6.2
Tertiary	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	-1.9	-3.9
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.7	1.8	-1.2	-0.3
CO ₂ Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.7	-3.5	-0.5	1.4
Non-CO2 GHG emissions	3.2	1.5	1.6	1.6	1.4	1.4	1.5	-6.9	-1.5	0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	115.6	108.8	106.0	-0.9	-3.4	-0.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.85	0.80	0.71	0.52	0.32	0.23	0.23	-1.7	-7.7	-3.3
Final energy demand (t of CO ₂ /toe)	2.57	2.45	2.24	2.22	2.14	2.07	2.06	-1.3	-0.5	-0.3
Industry	3.16	3.11	2.70	2.73	2.64	2.48	2.20	-1.6	-0.2	-1.8
Residential	1.11	1.44	1.11	1.04	0.91	0.77	0.59	0.0	-1.9	-4.3
Tertiary	0.00	0.43	0.69	0.73	0.63	0.53	0.47	0.0	-0.9	-3.0
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.88	-0.2	-0.3	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.9	17.6	19.4			
RES-H&C share	7.9	10.0	18.2	21.8	24.3	27.3	30.6			
RES-E share	0.0	0.0	1.4	10.6	21.4	27.7	31.7			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	11.0	11.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	112	109	114	3.1	-3.1	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	198	183	189	3.2	0.9	-0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.4	3.0	3.3	3.7	8.1	2.0	1.8
as % of GDP	8.3	12.0	13.7	14.8	16.3	16.0	16.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EUCO30				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1	
GDP (in 000 M€13)	112	137	157	165	181	197	216	3.4	1.4	1.8	
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	40993	40622	36811	0.8	-0.9	-0.5	
Solids	21643	20248	18364	15061	14940	14366	13494	-1.6	-2.0	-1.0	
Oil	7881	9899	9306	8965	8810	8513	8370	1.7	-0.5	-0.5	
Natural gas	7500	7703	8070	7797	7179	7120	6044	0.7	-1.2	-1.7	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7	
Renewable energy forms	1429	1955	2980	3521	3857	4439	4802	7.6	2.6	2.2	
Energy Branch Consumption	1768	1796	2068	1808	1763	1735	1690	1.6	-1.6	-0.4	
Non-Energy Uses	2093	2948	2783	2447	2583	2691	2747	2.9	-0.7	0.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	27870	28589	27728	0.3	-1.2	-0.1	
Solids	25049	23570	20730	16524	16883	17013	15838	-1.9	-2.0	-0.6	
Oil	386	591	290	223	222	210	190	-2.8	-2.7	-1.6	
Natural gas	169	154	202	191	181	171	160	1.8	-1.1	-1.2	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Renewable energy sources	1426	2142	3101	3560	3786	4396	4742	8.1	2.0	2.3	
Hydro	151	205	240	208	218	211	228	4.7	-0.9	0.4	
Biomass & Waste	1275	1933	2770	3106	3234	3674	3640	8.1	1.6	1.2	
Wind	0	2	29	44	65	184	543	76.2	8.5	23.6	
Solar and others	0	3	62	202	266	324	324	0.0	15.7	2.0	
Geothermal	0	0	0	0	2	3	7	0.0	0.0	13.2	
Net Imports (ktoe)	9414	12641	11447	13826	13123	12033	11083	2.0	1.4	-1.7	
Solids	-4721	-3270	-2968	-1463	-1944	-2647	-2344	-4.5	-4.1	1.9	
Oil	7512	9649	8974	8742	8588	8303	8180	1.8	-0.4	-0.5	
Crude oil and Feedstocks	5596	7730	7837	6115	6049	5907	5855	3.4	-2.6	-0.3	
Oil products	1916	1919	1137	2627	2539	2396	2325	-5.1	8.4	-0.9	
Natural gas	7482	7535	6846	7606	6998	6948	5883	-0.9	0.2	-1.7	
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7	
Import Dependency (%)	22.9	28.0	25.6	33.6	32.0	29.6	28.6				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	80218	82860	85373	1.6	-0.6	0.6	
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0	
Solids	52752	49522	47113	41095	42446	40190	37645	-1.1	-1.0	-1.2	
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0	
Gas (including derived gases)	3907	4215	4121	5853	3561	5415	5083	0.5	-1.5	3.6	
Biomass-waste	531	739	2188	2214	1099	2600	3566	15.2	-6.7	12.5	
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2449	2655	4.7	-0.9	0.4	
Wind	1	21	335	508	759	2142	6310	78.9	8.5	23.6	
Solar	0	0	615	2149	2214	2466	2518	0.0	13.7	1.3	
Geothermal and other renewables	0	0	1	0	2	2	2	0.0	9.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18573	19526	20788	2.5	0.3	1.1	
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0	
Renewable energy	953	1043	2989	3628	3816	4570	6436	12.1	2.5	5.4	
Hydro (pumping excluded)	952	1020	1049	1080	1080	1085	1129	1.0	0.3	0.4	
Wind	1	22	213	282	408	923	2690	70.9	6.7	20.8	
Solar	0	1	1727	2266	2328	2563	2617	0.0	3.0	1.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	11079	11265	11000	11182	10751	10949	10346	-0.1	-0.2	-0.4	
of which cogeneration units	3733	5199	4792	3852	3973	3148	2703	2.5	-1.9	-3.8	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9823	9935	9571	9656	9487	9414	8798	-0.3	-0.1	-0.8	
Gas fired	1097	1110	1176	1220	935	1211	1067	0.7	-2.3	1.3	
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2	
Biomass-waste fired	19	80	136	171	258	260	418	21.7	6.6	5.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	45.8	45.1	43.9				
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	32.8	32.1	32.2				
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.4	15.7	14.0				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	42.6	45.0	50.0				
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12354	12911	12378	-0.3	-2.1	0.0	
Solids	13945	14025	13445	10677	11109	10898	10367	-0.4	-1.9	-0.7	
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0	
Gas (including derived gases)	1236	1292	1134	1938	959	1290	1157	-0.9	-1.7	1.9	
Biomass & Waste	253	224	562	626	284	721	852	8.3	-6.6	11.6	
Geothermal heat	0	0	0	0	2	2	2	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	15035	19758	20049	17183	17041	16826	16503	2.9	-1.6	-0.3	
Refineries	6151	8144	8337	6497	6445	6301	6231	3.1	-2.5	-0.3	
Biofuels and hydrogen production	62	3	231	285	594	530	520	14.1	9.9	-1.3	
District heating	975	916	787	650	692	690	565	-2.1	-1.3	-2.0	
Derived gases, cokeries etc.	7846	10696	10693	9751	9311	9305	9186	3.1	-1.4	-0.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Czech Republic, EUO30			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	103	112	108	113	124	135	146	0.5	1.4	1.6
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.3
Private cars and motorcycles	67	72	67	68	75	81	86	0.0	1.1	1.4
Rail	15	15	16	18	20	22	24	0.1	2.6	1.9
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.6
Heavy goods and light commercial vehicles	29	34	34	35	38	41	43	1.7	1.1	1.4
Rail	17	15	14	15	17	19	20	-2.4	2.1	1.9
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6304	6042	5985	3.7	0.3	-0.5
Public road transport	233	296	379	385	401	408	414	5.0	0.6	0.3
Private cars and motorcycles	2563	3389	3394	3319	3295	2989	2844	2.8	-0.3	-1.5
Heavy goods and light commercial vehicles	1038	1753	1810	1914	1996	1987	2015	5.7	1.0	0.1
Rail	216	197	193	211	235	248	264	-1.1	2.0	1.2
Aviation	197	343	341	345	373	406	443	5.6	0.9	1.7
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	1.9
By transport activity										
Passenger transport	3107	4132	4229	4175	4214	3956	3866	3.1	0.0	-0.9
Freight transport	1145	1850	1892	2003	2090	2085	2119	5.1	1.0	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.2			
ENERGY EFFICIENCY										
Primary energy consumption	39004	42175	41899	38675	38410	37931	36063	0.7	-0.9	-0.6
Final Energy Demand	24798	26026	24853	24635	25286	24465	22957	0.0	0.2	-1.0
by sector										
Industry	10129	9681	7933	7883	8106	7919	7777	-2.4	0.2	-0.4
Energy intensive industries	6420	6748	5015	5079	5067	4910	4687	-2.4	0.1	-0.8
Other industrial sectors	3709	2934	2919	2804	3039	3008	3090	-2.4	0.4	0.2
Residential	6150	6345	6665	6340	6582	6413	5542	0.8	-0.1	-1.7
Tertiary	4151	3904	3979	4098	4141	3931	3487	-0.4	0.4	-1.7
Transport ⁽⁵⁾	4368	6095	6276	6315	6457	6202	6151	3.7	0.3	-0.5
by fuel										
Solids	5134	3769	2424	2616	2238	1867	1563	-7.2	-0.8	-3.5
Oil	5322	6817	6541	6366	6151	5760	5522	2.1	-0.6	-1.1
Gas	6491	6741	6662	6128	6320	6018	5397	0.3	-0.5	-1.6
Electricity	4246	4754	4919	5012	5280	5490	5640	1.5	0.7	0.7
Heat (from CHP and District Heating)	2624	2478	2249	2102	2277	2356	2147	-1.5	0.1	-0.6
Renewable energy forms	981	1467	2058	2411	3017	2959	2658	7.7	3.9	-1.3
Other	0	0	0	1	2	15	30	-100.0	0.0	30.6
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	366	329	285	250	227	207	180	-2.5	-2.3	-2.3
Industry (Energy on Value added, index 2000=100)	100	69	44	43	40	37	33	-7.8	-0.9	-2.0
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	61	47	-2.2	-1.4	-3.8
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	67	58	47	-2.7	-1.3	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	27	24	2.2	-1.5	-2.5
Freight transport (toe/Mtkm)	25	38	40	40	38	35	33	4.8	-0.4	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	121.6	117.3	108.9	-0.8	-1.5	-1.1
of which ETS sectors (2013 scope) GHG emissions		87.1	79.4	68.7	65.9	65.3	61.2		-1.9	-0.7
of which ESD sectors (2013 scope) GHG emissions		63.6	61.4	59.9	55.8	52.0	47.7		-1.0	-1.6
CO ₂ Emissions (energy related)	125.7	124.3	114.6	102.9	99.2	95.7	88.9	-0.9	-1.4	-1.1
Power generation/District heating	66.8	66.2	63.2	52.9	51.8	51.7	48.6	-0.6	-2.0	-0.6
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.5	2.4	1.6	-1.8	-0.5
Industry	28.3	24.7	17.5	17.1	15.7	14.4	12.8	-4.7	-1.1	-2.0
Residential	8.8	8.4	8.3	7.8	7.5	6.9	6.1	-0.6	-0.9	-2.2
Tertiary	6.8	4.9	4.9	4.8	4.7	3.8	3.0	-3.3	-0.4	-4.2
Transport	12.4	17.8	17.6	17.6	17.0	16.3	16.0	3.6	-0.4	-0.6
CO ₂ Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.1	5.0	-1.7	1.1	-0.5
Non-CO2 GHG emissions	21.7	21.1	21.5	20.5	17.1	16.4	14.9	-0.1	-2.3	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	61.6	59.4	55.1	-0.8	-1.5	-1.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.60	0.55	0.52	0.46	0.45	0.44	0.42	-1.4	-1.4	-0.8
Final energy demand (t of CO ₂ /toe)	2.27	2.15	1.94	1.92	1.78	1.69	1.65	-1.6	-0.9	-0.7
Industry	2.79	2.55	2.21	2.17	1.94	1.82	1.64	-2.3	-1.3	-1.6
Residential	1.43	1.33	1.24	1.24	1.14	1.07	1.09	-1.4	-0.8	-0.5
Tertiary	1.63	1.26	1.22	1.18	1.13	0.97	0.87	-2.9	-0.8	-2.6
Transport	2.85	2.92	2.81	2.79	2.63	2.63	2.60	-0.1	-0.7	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.6	15.5	17.8			
RES-H&C share	5.9	9.1	12.6	15.5	17.3	19.4	21.0			
RES-E share	3.4	3.8	7.5	10.3	9.0	12.7	19.4			
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.6	11.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	83	89	81	2.0	3.3	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	132	134	132	7.9	-0.8	0.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.1	35.2	39.1	6.8	1.2	2.0
as % of GDP	13.1	14.8	18.1	16.7	17.7	17.9	18.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	6	6	6	6	6	0.4	0.4	0.5
GDP (in 000 M€13)	233	248	247	256	289	321	350	0.6	1.6	1.9
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16817	15883	15140	0.2	-1.7	-1.0
Solids	3985	3713	3809	1860	1678	898	570	-0.5	-7.9	-10.2
Oil	9101	8063	7568	6738	6246	5741	5213	-1.8	-1.9	-1.8
Natural gas	4465	4413	4435	3680	2642	2458	2160	-0.1	-5.0	-2.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Renewable energy forms	2124	3246	4326	3795	5635	6080	6832	7.4	2.7	1.9
Energy Branch Consumption	1121	1205	1132	911	890	740	615	0.1	-2.4	-3.6
Non-Energy Uses	301	289	263	283	313	339	346	-1.3	1.8	1.0
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	27958	30781	22915	15259	15896	13603	11862	-2.0	-3.6	-2.9
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil	18465	18464	12040	8158	7711	6408	4420	-4.2	-4.4	-5.4
Natural gas	7428	9397	7356	4188	3858	2455	1790	-0.1	-6.2	-7.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	2065	2920	3520	2913	4327	4739	5652	5.5	2.1	2.7
Hydro	3	2	2	2	2	2	2	-3.6	0.2	1.1
Biomass & Waste	1688	2335	2825	1819	2823	2998	2880	5.3	0.0	0.2
Wind	365	569	672	1007	1318	1496	2033	6.3	7.0	4.4
Solar and others	8	10	16	80	100	126	177	7.2	19.9	5.9
Geothermal	1	4	5	6	85	117	560	13.8	32.6	20.7
Net Imports (ktoe)	-7370	-10130	-3257	2304	1723	3131	4183	-7.8	0.0	9.3
Solids	3783	3505	2642	1860	1678	898	570	-3.5	-4.4	-10.2
Oil	-8386	-9068	-3586	-676	-670	166	1614	-8.1	-15.4	0.0
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-740	67	1551	-5.4	-17.4	0.0
Oil products	397	1865	1447	-7	70	99	63	13.8	-26.1	-1.1
Natural gas	-2882	-5010	-3022	-508	-1208	20	454	0.5	-8.8	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	9.8	18.7	26.1			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30692	30764	35970	0.8	-2.3	1.6
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	16673	15463	17006	6440	5408	2719	1556	0.2	-10.8	-11.7
Oil (including refinery gas)	4439	1375	774	214	7	50	48	-16.0	-37.5	21.2
Gas (including derived gases)	8774	8780	7906	4589	708	1351	1188	-1.0	-21.4	5.3
Biomass-waste	1895	3989	5340	3223	8455	8465	8743	10.9	4.7	0.3
Hydro (pumping excluded)	30	23	21	21	21	21	24	-3.5	0.2	1.1
Wind	4241	6614	7809	11709	15325	17390	23645	6.3	7.0	4.4
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13235	13699	1.3	0.2	0.0
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2401	3141	3818	5910	6456	6682	8352	4.7	5.4	2.6
Hydro (pumping excluded)	10	11	9	9	9	9	10	-1.0	0.0	1.1
Wind	2390	3127	3802	5064	5609	5835	7505	4.8	4.0	3.0
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	9386	9880	9601	9297	7179	6554	5347	0.2	-2.9	-2.9
of which cogeneration units	5578	5685	5806	7114	6188	5538	4559	0.4	0.6	-3.0
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6
Gas fired	1862	2278	2274	2274	1135	1128	788	2.0	-6.7	-3.6
Oil fired	860	860	1017	1017	492	223	217	1.7	-7.0	-7.9
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2870	2.4	5.6	-1.0
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.7	25.7	29.2			
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.4	32.7	33.1			
% of gross electricity from CHP	52.6	52.1	49.2	53.6	46.9	39.8	30.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.3	80.1	86.6	92.2			
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3759	3305	2999	-0.3	-6.8	-2.2
Solids	3669	3444	3770	1696	1529	803	479	0.3	-8.6	-11.0
Oil (including refinery gas)	1354	346	221	65	2	16	16	-16.6	-39.0	25.9
Gas (including derived gases)	2112	1996	1812	1197	203	357	301	-1.5	-19.7	4.0
Biomass & Waste	699	1341	1821	880	2026	2128	2203	10.0	1.1	0.8
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	9001	8288	8139	8416	8106	7570	7305	-1.0	0.0	-1.0
Refineries	8435	7700	7175	7493	6971	6471	5965	-1.6	-0.3	-1.5
Biofuels and hydrogen production	0	0	27	277	433	364	312	0.0	32.1	-3.2
District heating	549	575	923	644	691	695	977	5.3	-2.9	3.5
Derived gases, cokeries etc.	17	13	13	3	10	39	51	-2.9	-2.2	17.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Denmark: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.6
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3
Aviation ⁽³⁾	8	9	10	12	13	14	17	2.7	2.5	2.2
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1
Freight transport activity (Gtkm)	21	22	23	25	29	31	33	0.6	2.3	1.3
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.3
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4961	4700	4560	0.7	-0.4	-0.8
Public road transport	203	202	199	204	213	214	212	-0.2	0.7	0.0
Private cars and motorcycles	2627	2866	2828	2599	2396	2089	1950	0.7	-1.6	-2.0
Heavy goods and light commercial vehicles	864	1003	1011	971	1059	1070	1058	1.6	0.5	0.0
Rail	103	107	113	118	125	132	137	0.9	1.0	0.9
Aviation	856	955	874	960	997	1014	1017	0.2	1.3	0.2
Inland navigation	163	192	156	158	171	180	186	-0.4	0.9	0.8
By transport activity										
Passenger transport	3874	4197	4049	3915	3771	3493	3362	0.4	-0.7	-1.1
Freight transport	942	1128	1132	1094	1190	1206	1198	1.9	0.5	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.7	8.1			
ENERGY EFFICIENCY										
Primary energy consumption	19432	19264	19777	16536	16504	15544	14795	0.2	-1.8	-1.1
Final Energy Demand	14717	15497	15606	14800	14752	14187	13080	0.6	-0.6	-1.2
by sector										
Industry	2934	2864	2417	2568	2704	2629	2510	-1.9	1.1	-0.7
Energy intensive industries	1156	1107	849	908	933	852	778	-3.0	1.0	-1.8
Other industrial sectors	1778	1757	1569	1659	1771	1776	1731	-1.2	1.2	-0.2
Residential	4162	4453	4916	4345	4188	4069	3499	1.7	-1.6	-1.8
Tertiary	2805	2856	3094	2879	2900	2789	2511	1.0	-0.6	-1.4
Transport ⁽⁵⁾	4816	5324	5179	5009	4961	4700	4560	0.7	-0.4	-0.8
by fuel										
Solids	290	253	166	163	150	95	88	-5.4	-1.0	-5.1
Oil	7058	7293	6759	6083	5655	5137	4626	-0.4	-1.8	-2.0
Gas	1667	1708	1771	1744	1824	1678	1518	0.6	0.3	-1.8
Electricity	2791	2877	2783	2733	2836	2917	3075	0.0	0.2	0.8
Heat (from CHP and District Heating)	2255	2424	2840	2556	2494	2457	2041	2.3	-1.3	-2.0
Renewable energy forms	656	943	1287	1519	1783	1862	1676	7.0	3.3	-0.6
Other	0	0	0	3	10	40	56	-100.0	0.0	18.3
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	85	79	81	66	58	49	43	-0.4	-3.3	-2.9
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	80	71	-0.9	-0.1	-2.4
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	62	48	0.2	-3.5	-3.8
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	69	57	0.1	-2.3	-3.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	30	27	-0.4	-2.2	-2.4
Freight transport (toe/Mtkm)	44	51	50	44	42	39	37	1.3	-1.7	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.7	66.3	63.9	50.5	45.7	40.0	35.8	-1.1	-3.3	-2.4
of which ETS sectors (2013 scope) GHG emissions		29.3	27.9	18.0	14.6	11.3	9.2		-6.3	-4.5
of which ESD sectors (2013 scope) GHG emissions		37.0	36.0	32.5	31.1	28.8	26.6		-1.5	-1.5
CO ₂ Emissions (energy related)	53.3	50.0	48.8	35.8	31.1	25.8	22.1	-0.9	-4.4	-3.3
Power generation/District heating	24.5	20.3	21.2	10.6	7.1	4.4	2.9	-1.4	-10.4	-8.5
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.3
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.7	-3.2	0.4	-4.2
Residential	3.9	3.6	3.2	2.6	2.2	2.0	1.6	-2.0	-3.7	-3.4
Tertiary	3.0	2.7	2.9	2.5	2.4	1.8	1.5	-0.3	-1.8	-4.6
Transport	14.3	15.9	15.5	14.2	13.5	12.8	12.3	0.8	-1.3	-0.9
CO ₂ Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.5	1.4	1.4	-6.1	1.0	-1.0
Non-CO2 GHG emissions	15.8	14.0	13.7	13.3	13.1	12.7	12.3	-1.4	-0.4	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.2	55.4	49.6	-1.1	-3.3	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.36	0.28	0.26	0.17	0.11	0.07	0.05	-3.0	-8.3	-8.2
Final energy demand (t of CO ₂ /toe)	1.81	1.76	1.63	1.58	1.51	1.42	1.38	-1.0	-0.8	-0.9
Industry	1.85	1.79	1.63	1.58	1.52	1.31	1.07	-1.3	-0.7	-3.5
Residential	0.95	0.80	0.66	0.59	0.53	0.50	0.45	-3.6	-2.1	-1.7
Tertiary	1.05	0.95	0.93	0.88	0.83	0.66	0.60	-1.2	-1.2	-3.2
Transport	2.97	2.99	2.99	2.83	2.72	2.72	2.71	0.0	-0.9	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	33.9	39.5	44.5			
RES-H&C share	15.3	22.2	30.8	28.2	36.9	45.2	48.3			
RES-E share	15.0	25.0	33.1	42.0	62.7	66.5	80.8			
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	16.0	22.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	108	112	100	1.8	1.9	-0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	207	211	213	1.4	0.6	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.1	31.4	2.4	1.0	2.1
as % of GDP	7.9	8.8	9.4	8.2	8.8	8.7	9.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Estonia: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.5		
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6		
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6427	6261	5484	2.1	0.4	-1.6		
Solids	2968	3190	3917	3589	3673	3592	2875	2.8	-0.6	-2.4		
Oil	916	1182	1109	1065	975	891	833	1.9	-1.3	-1.6		
Natural gas	662	800	563	796	854	805	566	-1.6	4.3	-4.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Renewable energy forms	513	589	847	995	1039	1070	1140	5.1	2.1	0.9		
Energy Branch Consumption	163	193	199	190	186	178	147	2.0	-0.7	-2.3		
Non-Energy Uses	180	229	90	280	295	305	309	-6.7	12.6	0.4		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	3435	4250	5467	5368	5400	5314	4618	4.8	-0.1	-1.6		
Solids	2669	3176	3943	3594	3674	3602	2883	4.0	-0.7	-2.4		
Oil	249	375	532	681	649	588	531	7.9	2.0	-2.0		
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	512	692	988	1093	1077	1124	1204	6.8	0.9	1.1		
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0		
Biomass & Waste	512	686	962	1040	1015	1058	1090	6.5	0.5	0.7		
Wind	0	5	24	49	57	59	105	0.0	9.2	6.3		
Solar and others	0	0	0	0	2	3	6	0.0	0.0	13.2		
Geothermal	0	0	0	0	0	0	1	0.0	0.0	20.0		
Net Imports (ktoe)	1628	1489	862	1219	1262	1182	1103	-6.2	3.9	-1.3		
Solids	270	23	-22	-5	-2	-10	-8	0.0	-22.5	16.6		
Oil	786	917	760	625	555	525	506	-0.3	-3.1	-0.9		
Crude oil and Feedstocks	-125	-225	-394	-560	-524	-466	-413	12.2	2.9	-2.3		
Oil products	911	1142	1153	1185	1079	991	920	2.4	-0.7	-1.6		
Natural gas	657	792	558	796	861	818	599	-1.6	4.4	-3.6		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Import Dependency (%)	32.0	25.9	13.5	18.5	18.9	18.2	19.3					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11312	11330	9351	4.3	-1.4	-1.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	7682	9302	11167	8608	9080	9057	6643	3.8	-2.0	-3.1		
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0		
Gas (including derived gases)	757	760	712	689	658	628	516	-0.6	-0.8	-2.4		
Biomass-waste	13	35	740	859	873	921	933	49.8	1.7	0.7		
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0		
Wind	0	54	277	575	668	691	1226	0.0	9.2	6.3		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2275	2283	2471	-0.3	-2.1	0.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2	36	114	312	343	355	521	49.8	11.6	4.3		
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0		
Wind	0	31	108	303	334	346	512	0.0	12.0	4.4		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2910	2648	2713	2377	1932	1928	1950	-0.7	-3.3	0.1		
of which cogeneration units	452	1604	447	438	266	254	452	-0.1	-5.1	5.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2684	2411	2430	1871	1413	1413	1413	-1.0	-5.3	0.0		
Gas fired	218	224	224	362	372	364	383	0.3	5.2	0.3		
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0		
Biomass-waste fired	0	5	51	144	148	151	154	0.0	11.2	0.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	51.2	51.2	39.4					
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.3	33.9	33.7					
% of gross electricity from CHP	11.0	10.2	10.3	12.7	11.1	9.4	10.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.9	14.5	23.4					
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2661	2693	2065	2.5	-1.6	-2.5		
Solids	2199	2353	2715	2171	2287	2308	1692	2.1	-1.7	-3.0		
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0		
Gas (including derived gases)	226	227	209	168	166	166	150	-0.8	-2.3	-1.0		
Biomass & Waste	2	10	179	205	208	218	222	55.3	1.5	0.6		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	926	1271	1523	1753	1789	1670	1503	5.1	1.6	-1.7		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	0	10	65	54	45	0.0	0.0	-3.6		
District heating	454	489	446	418	434	418	354	-0.2	-0.3	-2.0		
Derived gases, cokeries etc.	473	782	1077	1325	1290	1198	1105	8.6	1.8	-1.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EU030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.8
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.5
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.5
Rail	0	0	0	0	0	1	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.3
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	794	732	700	3.0	0.2	-1.2
Public road transport	62	62	67	74	76	76	74	0.7	1.3	-0.2
Private cars and motorcycles	349	475	499	524	483	408	364	3.6	-0.3	-2.8
Heavy goods and light commercial vehicles	95	135	116	132	139	142	145	2.0	1.9	0.4
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	66	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
By transport activity										
Passenger transport	441	589	614	647	618	551	513	3.4	0.1	-1.8
Freight transport	138	178	167	164	176	181	188	1.9	0.5	0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.8	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6132	5956	5176	2.4	0.1	-1.7
Final Energy Demand	2434	2877	2907	3036	3090	3000	2781	1.8	0.6	-1.0
by sector										
Industry	571	718	575	713	744	740	714	0.1	2.6	-0.4
Energy intensive industries	245	273	231	294	305	302	288	-0.6	2.8	-0.6
Other industrial sectors	327	446	343	419	440	438	427	0.5	2.5	-0.3
Residential	929	890	1028	963	989	980	866	1.0	-0.4	-1.3
Tertiary	348	495	520	544	557	542	493	4.1	0.7	-1.2
Transport ⁽⁵⁾	586	774	785	816	800	738	707	3.0	0.2	-1.2
by fuel										
Solids	118	118	83	64	56	46	37	-3.4	-3.8	-4.2
Oil	772	982	941	966	860	763	698	2.0	-0.9	-2.1
Gas	177	263	207	286	328	323	247	1.6	4.7	-2.8
Electricity	431	519	594	614	653	678	697	3.3	0.9	0.7
Heat (from CHP and District Heating)	511	547	531	484	512	504	463	0.4	-0.4	-1.0
Renewable energy forms	425	447	550	622	680	683	633	2.6	2.1	-0.7
Other	0	0	0	0	0	3	7	-100.0	0.0	38.8
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	465	372	405	346	314	282	228	-1.4	-2.5	-3.1
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	61	55	-4.0	-0.2	-1.7
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	47	38	-2.9	-3.4	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	75	63	0.8	-2.4	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	32	28	0.3	-1.7	-2.7
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.7	16.3	12.7	1.0	-1.2	-2.7
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	11.9	11.9	8.8		-1.4	-3.0
of which ESD sectors (2013 scope) GHG emissions		5.1	5.0	5.1	4.7	4.4	3.9		-0.6	-1.9
CO ₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.4	14.1	10.7	1.6	-1.3	-2.9
Power generation/District heating	10.7	11.3	12.7	10.1	10.6	10.7	7.7	1.7	-1.7	-3.1
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.0	-2.2
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.5	-1.8	-0.1	-4.5
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-4.2	0.5	-2.6
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.3	2.1	1.9	-3.9
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.9	3.1	-0.6	-1.4
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.4	0.4	-6.0	3.0	-1.5
Non-CO2 GHG emissions	2.3	1.9	2.0	1.9	1.8	1.8	1.6	-1.4	-1.0	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	41.5	40.5	31.6	1.0	-1.2	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.59	0.60	0.51	-0.6	-0.6	-1.5
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.09	1.03	-0.5	-0.8	-1.3
Industry	1.58	1.43	1.31	1.07	1.01	0.93	0.66	-1.8	-2.6	-4.1
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.18	-5.2	0.9	-1.4
Tertiary	0.91	1.05	0.75	0.92	0.84	0.70	0.64	-2.0	1.2	-2.7
Transport	2.96	2.98	2.99	2.96	2.75	2.74	2.71	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.9	27.0	31.2			
RES-H&C share	31.8	32.2	43.2	39.9	38.8	40.8	47.5			
RES-E share	0.2	1.1	10.4	14.4	14.9	15.3	20.8			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.4	11.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	43	47	65	66	73	83	1.0	3.5	2.4
Average Price of Electricity in Final demand sectors (€13/MWh)	59	63	80	109	124	137	136	3.2	4.5	1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	5.2	8.6	4.1	1.8
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.6	21.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Finland: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5
GDP (in 000 M€13)	157	179	187	188	199	210	226	1.7	0.6	1.3
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35222	34722	32037	1.3	-0.5	-0.9
Solids	5131	4936	6874	4106	4601	4182	3125	3.0	-3.9	-3.8
Oil	9342	10335	10121	9288	8368	7410	6349	0.8	-1.9	-2.7
Natural gas	3422	3598	3838	2821	2678	2837	2695	1.2	-3.5	0.1
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8
Renewable energy forms	7816	8195	9508	10767	10552	12077	13139	2.0	1.0	2.2
Energy Branch Consumption	1168	1209	1529	1577	1540	1348	1278	2.7	0.1	-1.8
Non-Energy Uses	1040	1155	1229	1157	1191	1240	1243	1.7	-0.3	0.4
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	20960	22589	21766	1.7	1.7	0.4
Solids	1088	2136	1803	1007	1111	1271	1296	5.2	-4.7	1.5
Oil	189	257	389	433	393	353	311	7.5	0.1	-2.3
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7
Renewable energy sources	7816	8273	9589	10905	10722	12231	13495	2.1	1.1	2.3
Hydro	1261	1185	1111	1350	1215	1268	1308	-1.3	0.9	0.7
Biomass & Waste	6549	7072	8451	9354	9030	10025	11207	2.6	0.7	2.2
Wind	7	15	25	198	464	913	944	14.2	33.8	7.4
Solar and others	1	1	1	2	13	23	32	10.0	26.4	8.9
Geothermal	0	0	0	0	0	1	5	0.0	0.0	40.3
Net Imports (ktoe)	18337	18979	17869	16077	14469	12332	10467	-0.3	-2.1	-3.2
Solids	3537	3341	3977	3099	3490	2911	1830	1.2	-1.3	-6.3
Oil	10357	10655	9232	9068	8178	7247	6213	-1.1	-1.2	-2.7
Crude oil and Feedstocks	11964	10713	11206	13148	11843	10664	9475	-0.7	0.6	-2.2
Oil products	-1607	-58	-1974	-4080	-3666	-3417	-3262	2.1	6.4	-1.2
Natural gas	3422	3598	3838	2821	2682	2845	2715	1.2	-3.5	0.1
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8
Import Dependency (%)	55.2	54.2	47.9	47.0	40.8	35.3	32.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71479	84073	98237	93438	1.4	0.4	1.1
Nuclear energy	22479	23271	22800	23137	36999	37079	28850	0.1	5.0	-2.5
Solids	12452	10998	20826	8559	11126	11979	8764	5.3	-6.1	-2.4
Oil (including refinery gas)	587	500	484	635	38	263	131	-1.9	-22.4	13.1
Gas (including derived gases)	10816	11921	11847	7771	6539	8927	8371	0.9	-5.8	2.5
Biomass-waste	8860	9891	11413	13361	9849	14613	21127	2.6	-1.5	7.9
Hydro (pumping excluded)	14660	13784	12922	15702	14123	14747	15209	-1.3	0.9	0.7
Wind	78	170	294	2307	5392	10621	10973	14.2	33.8	7.4
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19609	20651	19587	0.4	1.6	0.0
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5
Renewable energy	2923	3121	3359	4289	5628	7390	7640	1.4	5.3	3.1
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3371	3481	0.9	0.4	0.6
Wind	38	82	197	1001	2343	4010	4140	17.9	28.1	5.9
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	10363	10739	10605	11158	9604	8883	8548	0.2	-1.0	-1.2
of which cogeneration units	8280	5832	6168	6361	5443	5391	4837	-2.9	-1.2	-1.2
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	4676	4633	4532	4340	3303	2308	1763	-0.3	-3.1	-6.1
Gas fired	2570	2481	2703	2698	2822	3110	2915	0.5	0.4	0.3
Oil fired	1519	1505	1194	1532	643	629	609	-2.4	-6.0	-0.5
Biomass-waste fired	1597	2120	2176	2589	2836	2836	3260	3.1	2.7	1.4
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.0	52.2	52.2			
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.4	35.0	36.7			
% of gross electricity from CHP	36.4	38.9	36.2	33.7	26.8	28.8	28.6			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	78.9	78.4	81.5			
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	6888	8792	9008	3.9	-4.1	2.7
Solids	3181	2998	5098	2421	2886	2914	2041	4.8	-5.5	-3.4
Oil (including refinery gas)	122	98	99	168	12	65	32	-2.1	-18.8	9.9
Gas (including derived gases)	2119	2385	2516	1493	1280	1551	1442	1.7	-6.5	1.2
Biomass & Waste	1744	2302	2747	3480	2710	4263	5494	4.6	-0.1	7.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	21306	21544	23155	24530	26247	24165	20122	0.8	1.3	-2.6
Refineries	13059	12876	14265	15688	14227	12775	11261	0.9	0.0	-2.3
Biofuels and hydrogen production	0	0	140	334	373	339	321	0.0	10.3	-1.5
District heating	1059	1265	1600	1434	1502	1243	980	4.2	-0.6	-4.2
Derived gases, cokeries etc.	7188	7403	7149	7074	10144	9809	7559	-0.1	3.6	-2.9

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EU CO ₂		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.7
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.3
Private cars and motorcycles	57	63	66	68	69	70	71	1.5	0.4	0.4
Rail	4	4	4	5	5	6	6	1.4	1.5	1.5
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.2
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.6
Freight transport activity (Gtkm)	42	42	42	43	46	49	53	-0.2	1.0	1.4
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.2
Rail	10	10	10	10	11	12	13	-0.4	1.4	1.8
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4735	4448	4221	1.1	-0.2	-1.1
Public road transport	120	116	121	121	121	119	116	0.1	0.0	-0.4
Private cars and motorcycles	2334	2542	2693	2631	2399	2102	1904	1.4	-1.1	-2.3
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1163	1144	1152	-0.3	0.3	-0.1
Rail	90	92	90	94	101	106	110	0.0	1.2	0.9
Aviation	469	526	619	746	785	807	762	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
By transport activity										
Passenger transport	3086	3310	3549	3604	3416	3142	2898	1.4	-0.4	-1.6
Freight transport	1251	1314	1278	1292	1319	1307	1323	0.2	0.3	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.1	2.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.5			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32815	34031	33481	30794	1.3	-0.5	-1.0
Final Energy Demand	24510	25239	26243	24732	24675	23046	21424	0.7	-0.6	-1.4
by sector										
Industry	12313	11922	11428	10647	10724	9889	9511	-0.7	-0.6	-1.2
Energy intensive industries	10172	9616	9017	8347	8390	7520	7138	-1.2	-0.7	-1.6
Other industrial sectors	2141	2306	2412	2299	2334	2370	2373	1.2	-0.3	0.2
Residential	4544	5053	5804	5338	5406	5006	4354	2.5	-0.7	-2.1
Tertiary	3296	3616	4169	3837	3797	3688	3325	2.4	-0.9	-1.3
Transport ⁽⁵⁾	4356	4648	4842	4910	4749	4462	4235	1.1	-0.2	-1.1
by fuel										
Solids	1109	873	843	702	691	638	494	-2.7	-2.0	-3.3
Oil	7850	8102	7619	7073	6494	5497	4545	-0.3	-1.6	-3.5
Gas	1209	1082	1012	981	984	1050	1273	-1.8	-0.3	2.6
Electricity	6507	6942	7178	6788	6893	7255	7410	1.0	-0.4	0.7
Heat (from CHP and District Heating)	3334	3972	4656	4143	4249	3824	3140	3.4	-0.9	-3.0
Renewable energy forms	4501	4268	4935	5042	5356	4759	4528	0.9	0.8	-1.7
Other	0	0	0	3	7	23	33	0.0	1586.2	17.3
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	207	193	199	181	177	165	142	-0.4	-1.2	-2.2
Industry (Energy on Value added, index 2000=100)	100	81	79	75	73	65	59	-2.3	-0.8	-2.1
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	72	58	-0.2	-1.8	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	84	71	0.9	-1.7	-2.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	23	-0.6	-1.5	-2.5
Freight transport (toe/Mtkm)	30	31	31	30	29	27	25	0.4	-0.6	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO ₂ eq.)	73.1	71.5	78.2	61.1	58.7	53.5	45.3	0.7	-2.8	-2.6
of which ETS sectors (2013 scope) GHG emissions		37.2	43.9	30.8	31.5	29.4	23.4		-3.2	-3.0
of which ESD sectors (2013 scope) GHG emissions		34.3	34.3	30.3	27.2	24.0	22.0		-2.3	-2.1
CO ₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.5	42.7	34.9	1.2	-3.1	-3.0
Power generation/District heating	22.5	23.0	32.3	17.5	18.7	18.2	13.7	3.7	-5.3	-3.0
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.1	1.9	1.2	0.0	-3.7
Industry	14.2	12.7	11.0	10.1	9.5	7.8	6.5	-2.5	-1.5	-3.7
Residential	2.4	2.3	1.8	1.4	1.3	1.0	0.5	-2.6	-3.5	-8.9
Tertiary	3.6	3.5	3.4	2.8	2.4	1.4	1.0	-0.6	-3.6	-8.5
Transport	12.9	13.8	14.0	13.6	13.0	12.1	11.3	0.8	-0.8	-1.4
CO ₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.2	2.0	3.8	0.3	-0.9
Non-CO ₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.4	-2.3	-1.8	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.2	73.9	62.6	0.7	-2.8	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.14	0.12	0.10	1.4	-5.3	-2.7
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.97	0.90	-1.6	-0.8	-1.6
Industry	1.15	1.06	0.96	0.95	0.88	0.79	0.69	-1.8	-0.8	-2.5
Residential	0.52	0.45	0.32	0.26	0.24	0.20	0.12	-5.0	-2.8	-6.9
Tertiary	1.09	0.97	0.81	0.74	0.62	0.38	0.29	-2.9	-2.7	-7.2
Transport	2.97	2.97	2.89	2.77	2.73	2.70	2.66	-0.3	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	42.1	46.2	51.2			
RES-H&C share	38.2	39.1	44.4	55.2	58.0	61.3	67.8			
RES-E share	27.3	26.9	27.7	36.2	33.2	43.0	49.9			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	22.3	26.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	92	88	94	1.4	4.5	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	132	139	142	3.7	3.0	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.7	35.1	38.5	4.4	2.4	1.6
as % of GDP	10.7	11.3	13.8	14.6	16.4	16.7	17.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								France: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (In million)	57	60	61	63	64	66	67	0.7	0.5	0.4
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4
Gross Inland Consumption (ktoe)	257565	276646	267546	255764	248981	234571	219179	0.4	-0.7	-1.3
Solids	15048	14303	12076	8763	8537	5883	5064	-2.2	-3.4	-5.1
Oil	88937	93185	82668	79806	75201	69861	64245	-0.7	-0.9	-1.6
Natural gas	35766	41025	42540	38807	35954	32359	27422	1.7	-1.7	-2.7
Nuclear	107093	116474	110539	109294	97019	94378	94378	0.3	-1.3	-0.3
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3
Renewable energy forms	16695	16847	22365	24473	37965	37777	33615	3.0	5.4	-1.2
Energy Branch Consumption	10822	9989	9635	8309	7414	6643	6232	-1.2	-2.6	-1.7
Non-Energy Uses	16851	16704	14290	14232	14666	14892	14848	-1.6	0.3	0.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	136034	132974	128722	0.4	0.1	-0.6
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0
Oil	2023	1604	1542	1217	1122	957	902	-2.7	-3.1	-2.2
Natural gas	1505	909	646	304	294	283	272	-8.1	-7.6	-0.8
Nuclear	107093	116474	110539	109294	97019	94378	94378	0.3	-1.3	-0.3
Renewable energy sources	16688	16902	22206	24212	37599	37356	33169	2.9	5.4	-1.2
Hydro	5771	4442	5364	5476	5753	5515	5516	-0.7	0.7	-0.4
Biomass & Waste	10763	12159	15690	15780	23697	21408	16738	3.8	4.2	-3.4
Wind	7	83	855	1850	4741	5620	5627	62.6	18.7	1.7
Solar and others	21	26	118	870	3082	4429	4829	18.7	38.6	4.6
Geothermal	126	192	180	236	325	385	460	3.6	6.1	3.5
Net Imports (ktoe)	134082	144103	132149	123217	115698	104462	93425	-0.1	-1.3	-2.1
Solids	13005	13511	12192	8620	8537	5883	5064	-0.6	-3.5	-5.1
Oil	91265	95114	82886	81211	76776	71644	65971	-1.0	-0.8	-1.5
Crude oil and Feedstocks	85329	85302	65254	46552	45751	43972	41812	-2.6	-3.5	-0.9
Oil products	5936	9813	17632	34659	31024	27672	24159	11.5	5.8	-2.5
Natural gas	35779	40720	39553	38504	35714	32202	27489	1.0	-1.0	-2.6
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3
Import Dependency (%)	51.5	51.6	49.0	47.7	46.0	44.0	42.1			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584203	597270	595695	585639	0.5	0.6	-0.2
Nuclear energy	415162	451529	428521	444338	396167	385196	385062	0.3	-0.8	-0.3
Solids	27004	27515	23359	8820	9109	414	0	-1.4	-9.0	-100.0
Oil (including refinery gas)	7165	7925	5565	516	0	337	324	-2.5	-100.0	0.0
Gas (including derived gases)	15365	26254	26385	25753	23465	16004	5439	5.6	-1.2	-13.6
Biomass-waste	3559	5016	6675	10512	14131	19578	17933	6.5	7.8	2.4
Hydro (pumping excluded)	67121	51658	62388	63671	66898	64123	64140	-0.7	0.7	-0.4
Wind	77	964	9942	21517	55129	65350	65426	62.6	18.7	1.7
Solar	5	10	620	8601	31589	43495	45309	63.1	48.2	3.7
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148953	154203	154525	0.7	1.9	0.4
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3
Renewable energy	23570	24601	32099	40333	66684	76839	78053	3.1	7.6	1.6
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	23635	0.2	-0.1	0.0
Wind	57	777	7050	10358	22130	25130	25150	61.9	12.1	1.3
Solar	7	13	1030	6100	20535	27504	28354	64.7	34.9	3.3
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1
Thermal power	26680	25361	27256	23974	20942	17871	16979	0.2	-2.6	-2.1
of which cogeneration units	7013	5779	4606	10620	5925	4272	3450	-4.1	2.5	-5.3
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2
Gas fired	4116	6055	9334	9646	9181	8963	8261	8.5	-0.2	-1.1
Oil fired	11328	9794	9643	7693	5008	1849	1701	-1.6	-6.3	-10.2
Biomass-waste fired	684	876	1049	1249	2894	3221	3233	4.4	10.7	1.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	42.6	41.8			
Efficiency of gross thermal power generation (%)	34.9	33.3	30.0	39.7	38.7	35.7	31.8			
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.8	1.7	1.6			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.5	97.2	99.0			
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10382	8761	6406	3.0	-5.3	-4.7
Solids	6559	6402	4717	2258	2322	94	0	-3.2	-6.8	-100.0
Oil (including refinery gas)	1242	2160	1639	135	0	111	107	2.8	-79.3	267.2
Gas (including derived gases)	4002	6298	8178	4941	3917	3157	1442	7.4	-7.1	-9.5
Biomass & Waste	1476	2469	3352	2529	4127	5383	4842	8.5	2.1	1.6
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	205144	211862	191250	166425	153115	148637	146035	-0.7	-2.2	-0.5
Refineries	90823	88392	73306	49009	48039	46118	43854	-2.1	-4.1	-0.9
Biofuels and hydrogen production	325	651	2397	2746	3118	2941	2907	22.1	2.7	-0.7
District heating	312	448	608	546	574	581	457	6.9	-0.6	-2.2
Derived gases, cokeries etc.	113684	122371	114938	114124	101384	98996	98818	0.1	-1.2	-0.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1210	1265	0.8	1.2	0.8
Public road transport	42	42	50	55	60	63	65	1.7	1.9	0.8
Private cars and motorcycles	754	801	811	850	901	916	942	0.7	1.1	0.4
Rail	81	90	101	107	119	131	144	2.1	1.7	1.9
Aviation ⁽³⁾	69	62	68	76	86	97	110	-0.1	2.3	2.5
Inland navigation	3	3	3	3	3	4	4	-0.8	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	519	575	-0.5	1.8	2.0
Heavy goods and light commercial vehicles	311	319	296	310	356	391	433	-0.5	1.9	2.0
Rail	58	41	30	37	42	50	59	-6.3	3.5	3.4
Inland navigation	43	49	66	66	71	77	83	4.4	0.8	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	49937	47528	45976	-0.2	0.1	-0.8
Public road transport	536	519	595	654	705	718	717	1.0	1.7	0.2
Private cars and motorcycles	31157	31368	31602	31615	29848	26460	24321	0.1	-0.6	-2.0
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10233	10574	11029	-1.5	0.8	0.8
Rail	1134	980	932	1017	1082	1156	1224	-1.9	1.5	1.2
Aviation	6088	6291	6294	6827	7535	8046	8075	0.3	1.8	0.7
Inland navigation	483	481	500	499	535	573	609	0.4	0.7	1.3
By transport activity										
Passenger transport	38753	38887	39197	39839	38861	36026	33933	0.1	-0.1	-1.3
Freight transport	11607	11307	10150	10316	11076	11502	12043	-1.3	0.9	0.8
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.4	3.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234314	219679	204331	0.5	-0.8	-1.4
Final Energy Demand	154639	160337	155397	155251	156477	145065	131343	0.0	0.1	-1.7
by sector										
Industry	36670	34356	28478	30330	31258	29901	29016	-2.5	0.9	-0.7
Energy intensive industries	20906	20576	16506	17590	18018	16903	16247	-2.3	0.9	-1.0
Other industrial sectors	15764	13780	11972	12740	13241	12998	12769	-2.7	1.0	-0.4
Residential	42153	45931	45463	44159	45108	40101	32715	0.8	-0.1	-3.2
Tertiary	25209	29569	31792	30270	29809	27143	23215	2.3	-0.6	-2.5
Transport ⁽⁵⁾	50607	50482	49664	50492	50302	47920	46397	-0.2	0.1	-0.8
by fuel										
Solids	5775	5218	4547	4076	4176	3591	2898	-2.4	-0.8	-3.6
Oil	72503	71421	64647	63583	58931	53626	48274	-1.1	-0.9	-2.0
Gas	30907	33744	32430	32675	30984	28619	25594	0.5	-0.5	-1.9
Electricity	33096	36352	38185	37788	38972	39111	38518	1.4	0.2	-0.1
Heat (from CHP and District Heating)	3236	4163	3525	3658	3385	3246	2830	0.9	-0.4	-1.8
Renewable energy forms	9123	9439	12064	13458	19984	16704	12918	2.8	5.2	-4.3
Other	0	0	0	12	46	168	311	0.0	0.0	21.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	142	141	132	122	110	97	84	-0.7	-1.8	-2.6
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	70	64	-2.5	-0.1	-1.7
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	67	50	-0.9	-1.3	-4.5
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	91	78	62	1.0	-1.8	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	24	21	-0.7	-1.6	-2.5
Freight transport (toe/Mtkm)	28	28	26	25	24	22	21	-0.9	-0.9	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	585.3	552.1	512.0	482.2	444.4	401.9	363.7	-1.3	-1.4	-2.0
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	147.3	131.7	125.4	110.1	99.3	-1.6	-2.3	
of which ESD sectors (2013 scope) GHG emissions	378.8	364.7	364.7	350.4	319.0	291.8	264.4	-1.3	-1.9	
CO ₂ Emissions (energy related)	388.3	394.4	360.0	332.5	307.6	272.0	240.3	-0.8	-1.6	-2.4
Power generation/District heating	46.7	53.6	48.1	26.7	22.4	13.2	8.9	0.3	-7.4	-8.9
Energy Branch	19.9	16.3	15.0	13.6	11.5	10.2	9.5	-2.7	-2.6	-2.0
Industry	74.6	67.0	54.1	59.9	57.6	50.6	45.3	-3.2	0.6	-2.4
Residential	59.3	64.8	57.2	51.5	43.6	38.7	30.1	-0.4	-2.7	-3.6
Tertiary	39.8	44.4	44.7	38.9	33.3	28.7	23.1	1.1	-2.9	-3.6
Transport	148.0	148.1	140.9	141.9	139.2	130.6	123.5	-0.5	-0.1	-1.2
CO ₂ Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	26.6	24.8	22.4	-1.2	0.4	-1.7
Non-CO ₂ GHG emissions	168.1	129.2	126.3	124.1	110.1	105.1	101.0	-2.8	-1.4	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.3	71.8	65.0	-1.3	-1.4	-2.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.08	0.09	0.08	0.04	0.04	0.02	0.01	-0.3	-7.9	-8.6
Final energy demand (t of CO ₂ /toe)	2.08	2.02	1.91	1.88	1.75	1.71	1.69	-0.8	-0.9	-0.3
Industry	2.03	1.95	1.90	1.97	1.84	1.69	1.56	-0.7	-0.3	-1.6
Residential	1.41	1.41	1.26	1.17	0.97	0.96	0.92	-1.1	-2.6	-0.5
Tertiary	1.58	1.50	1.41	1.29	1.12	1.06	0.99	-1.2	-2.3	-1.1
Transport	2.92	2.93	2.84	2.81	2.77	2.73	2.66	-0.3	-0.2	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	25.2	24.9			
RES-H&C share	12.4	12.3	15.8	19.4	30.0	30.3	29.0			
RES-E share	14.7	13.7	14.9	19.8	31.5	36.4	37.2			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	12.8	16.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	82	71	-0.7	5.1	-2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	147	151	0.0	2.9	0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	273.9	281.7	293.5	2.4	3.4	0.7
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.7	11.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Germany: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1
GDP (in 000 M€13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	308843	289116	257367	-0.3	-0.7	-1.8
Solids	84802	81952	78824	78036	77902	75306	61781	-0.7	-0.1	-2.3
Oil	130980	121460	111798	111688	102697	92867	83080	-1.6	-0.8	-2.1
Natural gas	71878	77782	75905	74011	68467	67443	60352	0.5	-1.0	-1.3
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0
Renewable energy forms	10665	19054	31477	39195	50745	52115	50852	11.4	4.9	0.0
Energy Branch Consumption	14566	14384	13378	13631	12247	11511	10265	-0.8	-0.9	-1.8
Non-Energy Uses	25064	24662	22582	24685	25861	26629	26415	-1.0	1.4	0.2
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	135549	137356	129648	120921	110002	98961	86427	-0.4	-1.6	-2.4
Solids	60629	56484	45906	42340	37288	35882	27420	-2.7	-2.1	-3.0
Oil	4680	5782	4754	4964	3809	2919	2234	0.2	-2.2	-5.2
Natural gas	15825	14334	11113	10749	9888	8242	6142	-3.5	-1.2	-4.7
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0
Renewable energy sources	10665	18695	31618	39043	50544	51918	50631	11.5	4.8	0.0
Hydro	1869	1689	1802	1925	1936	2024	2080	-0.4	0.7	0.7
Biomass & Waste	7876	14249	24988	27662	32666	32031	26943	12.2	2.7	-1.9
Wind	804	2341	3250	5689	9411	9693	11361	15.0	11.2	1.9
Solar and others	116	371	1493	3575	5506	7095	8744	29.1	13.9	4.7
Geothermal	0	46	86	192	1026	1075	1503	0.0	28.1	3.9
Net Imports (ktoe)	204709	208118	201696	204465	201837	193227	174155	-0.1	0.0	-1.5
Solids	21663	25972	31644	35695	40614	39424	34360	3.9	2.5	-1.7
Oil	125918	120239	109834	109501	101825	92888	83794	-1.4	-0.8	-1.9
Crude oil and Feedstocks	101441	111039	91612	87783	82375	75983	69823	-1.0	-1.1	-1.6
Oil products	24477	9200	18222	21718	19451	16905	13971	-2.9	0.7	-3.3
Natural gas	56865	61940	61645	63262	58639	59334	54458	0.8	-0.5	-0.7
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0
Import Dependency (%)	59.4	60.4	60.1	62.8	64.7	66.1	66.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645692	598175	617515	591550	0.9	-0.5	-0.1
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0
Solids	296687	288142	262896	272895	273974	271826	221108	-1.2	0.4	-2.1
Oil (including refinery gas)	4785	11997	8741	1079	941	2111	2071	6.2	-20.0	8.2
Gas (including derived gases)	59970	83608	100912	92761	72056	99077	86202	5.3	-3.3	1.8
Biomass-waste	10121	20849	42975	58761	35367	45061	45573	15.6	-1.9	2.6
Hydro (pumping excluded)	21732	19638	20953	22378	22506	23539	24188	-0.4	0.7	0.7
Wind	9352	27229	37793	66153	109427	112710	132102	15.0	11.2	1.9
Solar	60	1283	11727	34612	48465	62223	79337	69.3	15.2	5.1
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207113	206309	220659	3.1	3.0	0.6
Nuclear energy	21644	20656	20656	12188	6907	0	0	-0.5	-10.4	-100.0
Renewable energy	11040	25641	50141	90293	120216	132008	156882	16.3	9.1	2.7
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5802	5930	1.1	0.3	0.6
Wind	6095	18375	27180	44946	61821	60536	69449	16.1	8.6	1.2
Solar	114	2056	17554	39757	52803	65670	81503	65.5	11.6	4.4
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	81689	77676	83806	86551	79990	74300	63777	0.3	-0.5	-2.2
of which cogeneration units	14369	20840	24554	17078	6200	10977	11485	5.5	-12.9	6.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	50924	48087	47789	52819	49170	44016	36711	-0.6	0.3	-2.9
Gas fired	21336	21671	26890	25178	21891	21578	18752	2.3	-2.0	-1.5
Oil fired	8066	5686	5688	5028	1674	1457	1247	-3.4	-11.5	-2.9
Biomass-waste fired	1363	2232	3432	3501	7084	7079	6896	9.7	7.5	-0.3
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.2	32.4	29.2			
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	39.2	40.3			
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.2	10.9	12.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	42.0	39.6	47.7			
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	87566	91934	75919	0.7	-0.3	-1.4
Solids	67101	65740	59687	61356	60916	59777	47701	-1.2	0.2	-2.4
Oil (including refinery gas)	1411	1427	855	236	311	683	669	-4.9	-9.6	8.0
Gas (including derived gases)	12891	17808	19955	16546	12444	17095	14809	4.5	-4.6	1.8
Biomass & Waste	3158	5100	10066	12030	13061	13546	11907	12.3	2.6	-0.9
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	180304	187908	163048	142875	120379	102985	95229	-1.0	-3.0	-2.3
Refineries	119420	125092	103238	98875	92816	85646	78636	-1.4	-1.1	-1.6
Biofuels and hydrogen production	237	1859	2884	3011	2833	2650	2753	28.4	-0.2	-0.3
District heating	1198	3942	4754	4043	3515	3023	2557	14.8	-3.0	-3.1
Derived gases, cokeries etc.	59450	57015	52171	36947	21216	11666	11283	-1.3	-8.6	-6.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1208	1238	1267	0.6	0.7	0.5
Public road transport	69	67	62	63	67	67	68	-1.1	0.8	0.2
Private cars and motorcycles	850	876	905	942	949	959	973	0.6	0.5	0.2
Rail	90	92	100	111	115	128	138	1.1	1.4	1.8
Aviation ⁽³⁾	55	62	61	69	75	81	86	1.1	2.0	1.4
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.5
Freight transport activity (Gtkm)	493	545	592	619	682	720	762	1.9	1.4	1.1
Heavy goods and light commercial vehicles	342	385	422	439	486	511	539	2.1	1.4	1.0
Rail	83	95	107	116	126	135	144	2.6	1.6	1.4
Inland navigation	68	65	63	65	70	74	79	-0.7	1.1	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56095	51666	48691	-1.1	-0.4	-1.4
Public road transport	1047	897	803	815	836	821	798	-2.6	0.4	-0.5
Private cars and motorcycles	42176	37675	35607	35814	31214	26889	24419	-1.7	-1.3	-2.4
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12340	12100	12108	-0.8	0.9	-0.2
Rail	1947	1580	1414	1496	1455	1519	1525	-3.2	0.3	0.5
Aviation	7345	8265	8719	9601	9944	10013	9503	1.7	1.3	-0.5
Inland navigation	283	323	278	285	307	324	338	-0.2	1.0	1.0
By transport activity										
Passenger transport	51841	47805	45951	47113	42807	38575	35558	-1.2	-0.7	-1.8
Freight transport	13261	11992	12194	12678	13288	13091	13133	-0.8	0.9	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.4	3.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	6.0	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	317273	317254	310393	297924	282982	262486	230972	-0.2	-0.9	-2.0
Final Energy Demand	219889	218456	219721	217308	213297	198123	178732	0.0	-0.3	-1.8
by sector										
Industry	57570	59093	60563	62096	65050	62382	57965	0.5	0.7	-1.1
Energy intensive industries	39345	40705	42170	43510	45828	43744	39789	0.7	0.8	-1.4
Other industrial sectors	18225	18389	18393	18586	19222	18638	18176	0.1	0.4	-0.6
Residential	63072	63498	62442	58726	57392	52683	45579	-0.1	-0.8	-2.3
Tertiary	34239	35302	38222	36396	34480	31126	26256	1.1	-1.0	-2.7
Transport ⁽⁵⁾	65109	60563	58494	60090	56375	51932	48932	-1.1	-0.4	-1.4
by fuel										
Solids	10958	8238	9379	9284	9907	9556	8033	-1.5	0.5	-2.1
Oil	99738	90309	83168	82419	73177	62938	53941	-1.8	-1.3	-3.0
Gas	56064	55136	56501	56368	55488	49565	45127	0.1	-0.2	-2.0
Electricity	41570	44907	45781	44880	45869	48238	46200	1.0	0.0	0.1
Heat (from CHP and District Heating)	6831	10751	11268	9856	9768	9597	9251	5.1	-1.4	-0.5
Renewable energy forms	4828	9116	13625	14468	18994	17787	15473	10.9	3.4	-2.0
Other	0	0	0	32	94	442	707	0.0	0.0	22.3
Energy intensity indicators										
Gross Int. Cons./GDP (toe/ME13)	144	140	128	116	104	92	79	-1.2	-2.0	-2.7
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	83	75	-0.7	-0.3	-1.8
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	65	54	-0.6	-2.2	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	66	53	-0.2	-2.4	-3.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	24	21	-2.2	-1.7	-2.7
Freight transport (toe/Mtkm)	27	22	21	20	19	18	17	-2.6	-0.6	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	1076.8	1015.8	957.1	943.5	892.1	835.8	722.7	-1.2	-0.7	-2.1
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	495.7	484.7	411.6		-0.2	-1.8	
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	396.4	351.1	311.0		-1.3	-2.4	
CO ₂ Emissions (energy related)	852.1	825.2	787.8	777.7	733.3	684.7	583.1	-0.8	-0.7	-2.3
Power generation/District heating	330.6	344.9	324.5	317.5	303.6	309.3	253.7	-0.2	-0.7	-1.8
Energy Branch	28.1	26.2	23.5	25.8	22.0	19.6	18.0	-1.8	-0.6	-2.0
Industry	130.2	115.3	115.3	112.8	114.8	99.9	86.4	-1.2	0.0	-2.8
Residential	119.4	110.8	104.3	98.0	87.9	76.3	65.9	-1.3	-1.7	-2.8
Tertiary	58.5	55.9	56.3	55.4	47.9	37.6	28.4	-0.4	-1.6	-5.1
Transport	185.3	172.2	163.8	168.2	157.0	142.1	130.6	-1.2	-0.4	-1.8
CO ₂ Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.4	57.1	53.8	-1.4	0.5	-0.8
Non-CO ₂ GHG emissions	161.0	128.9	113.7	109.1	100.4	94.0	85.7	-3.4	-1.2	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	70.8	66.4	57.4	-1.2	-0.7	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.50	0.46	0.42	0.41	0.42	0.42	0.36	-1.7	-0.1	-1.6
Final energy demand (t of CO ₂ /toe)	2.24	2.08	2.00	2.00	1.91	1.80	1.74	-1.1	-0.5	-0.9
Industry	2.26	1.95	1.90	1.82	1.76	1.60	1.49	-1.7	-0.8	-1.7
Residential	1.89	1.74	1.67	1.67	1.53	1.45	1.45	-1.2	-0.9	-0.6
Tertiary	1.71	1.58	1.47	1.52	1.39	1.21	1.08	-1.5	-0.6	-2.5
Transport	2.85	2.84	2.80	2.80	2.79	2.74	2.67	-0.2	-0.1	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	20.9	23.1			
RES-H&C share	4.2	6.7	9.6	10.6	17.6	19.3	18.6			
RES-E share	6.1	10.5	18.1	29.5	34.9	37.6	45.6			
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	15.4	21.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	106	103	100	3.7	5.6	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	169	176	177	2.2	0.3	0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	344.0	362.1	390.7	3.0	1.3	1.3
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.6	12.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Greece: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.6
GDP (in 000 M€13)	190	231	232	200	207	213	225	2.0	-1.1	0.8
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25189	22006	18658	0.2	-1.3	-3.0
Solids	9038	8944	7863	6765	5643	3564	2341	-1.4	-3.3	-8.4
Oil	16085	18119	14974	12997	12142	10608	8959	-0.7	-2.1	-3.0
Natural gas	1705	2354	3235	2979	3779	3374	2195	6.6	1.6	-5.3
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5
Renewable energy forms	1466	1668	2163	2714	3225	4215	4980	4.0	4.1	4.4
Energy Branch Consumption	1634	1820	1839	1906	1779	1561	1414	1.2	-0.3	-2.3
Non-Energy Uses	719	761	1108	824	847	842	835	4.4	-2.7	-0.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	10012	10326	9461	9027	8358	7364	7018	-0.6	-1.2	-1.7
Solids	8222	8538	7315	6430	5346	3339	2200	-1.2	-3.1	-8.5
Oil	282	101	132	75	73	70	68	-7.3	-5.7	-0.8
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	1466	1668	2006	2521	2940	3954	4751	3.2	3.9	4.9
Hydro	318	431	641	506	508	477	480	7.3	-2.3	-0.6
Biomass & Waste	1009	1015	919	1157	1348	1385	1324	-0.9	3.9	-0.2
Wind	39	109	233	330	448	1114	1629	19.7	6.7	13.8
Solar and others	99	101	197	514	621	961	1300	7.1	12.2	7.7
Geothermal	2	12	16	16	15	17	18	25.9	-0.4	1.8
Net Imports (ktoe)	22151	23498	21712	20057	19815	17571	14601	-0.2	-0.9	-3.0
Solids	769	364	401	335	297	225	141	-6.3	-2.9	-7.2
Oil	19695	20476	17433	15950	15019	13394	11666	-1.2	-1.5	-2.5
Crude oil and Feedstocks	20596	19488	20633	24349	23253	21620	19963	0.0	1.2	-1.5
Oil products	-900	988	-3200	-8399	-8235	-8227	-8297	13.5	9.9	0.1
Natural gas	1689	2332	3231	2979	3813	3446	2382	6.7	1.7	-4.6
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5
Import Dependency (%)	69.5	68.6	69.1	69.0	70.3	70.5	67.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58235	55995	51015	0.7	0.2	-1.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	34313	35543	30797	26751	23068	14753	9351	-1.1	-2.8	-8.6
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	129	-3.7	-1.7	-30.8
Gas (including derived gases)	5920	8171	9830	8817	13840	11443	3861	5.2	3.5	-12.0
Biomass-waste	163	222	319	195	382	679	932	6.9	1.8	9.3
Hydro (pumping excluded)	3693	5017	7460	5880	5901	5552	5577	7.3	-2.3	-0.6
Wind	451	1266	2714	3834	5207	12953	18939	19.7	6.7	13.8
Solar	0	1	158	3757	4715	8232	12227	0.0	40.4	10.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19724	23624	27010	3.5	2.2	3.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	3298	3598	4715	8146	9363	14164	18412	3.6	7.1	7.0
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0
Wind	226	491	1298	2152	2637	5265	7157	19.1	7.3	10.5
Solar	0	1	202	2605	3147	5320	7675	0.0	31.6	9.3
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	7914	9610	11174	11062	10361	9460	8598	3.5	-0.8	-1.8
of which cogeneration units	195	3051	588	284	309	311	337	11.7	-6.2	0.9
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	4454	4754	4312	3923	3050	3120	2865	-0.3	-3.4	-0.6
Gas fired	1157	2203	4189	5062	5306	5273	4738	13.7	2.4	-1.1
Oil fired	2302	2625	2618	2022	1824	834	733	1.3	-3.6	-8.7
Biomass-waste fired	1	28	55	55	180	232	262	50.5	12.6	3.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.5	25.9	21.0			
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	42.9	39.5			
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.4	3.0	3.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.8	49.0	73.8			
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8813	5863	3111	-0.6	-2.0	-9.9
Solids	8170	8694	7567	6558	5451	3402	2243	-0.8	-3.2	-8.5
Oil (including refinery gas)	1978	1992	1278	1005	1071	505	43	-4.3	-1.8	-27.6
Gas (including derived gases)	1280	1605	1863	1435	2209	1813	637	3.8	1.7	-11.7
Biomass & Waste	64	52	79	43	83	144	188	2.2	0.4	8.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	22570	21629	22585	24150	24045	22488	20910	0.0	0.6	-1.4
Refineries	22508	21536	22462	23941	23760	22193	20597	0.0	0.6	-1.4
Biofuels and hydrogen production	0	0	124	207	279	277	288	0.0	8.4	0.3
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	62	93	0	2	7	18	26	-95.7	1750.5	14.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	129	153	161	164	172	176	183	2.2	0.7	0.6
Public road transport	22	22	21	21	22	23	23	-0.3	0.6	0.4
Private cars and motorcycles	67	90	105	106	108	107	108	4.7	0.2	0.1
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.8
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.3
Inland navigation	7	7	7	7	7	8	8	-0.1	0.2	0.6
Freight transport activity (Gtkm)	38	34	37	37	39	41	42	-0.1	0.5	0.7
Heavy goods and light commercial vehicles	28	24	30	30	32	33	34	0.8	0.5	0.7
Rail	0	1	1	1	1	1	1	3.7	0.8	1.1
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7249	6838	6473	1.1	-1.2	-1.1
Public road transport	423	438	403	403	408	402	387	-0.5	0.1	-0.5
Private cars and motorcycles	3327	4435	4483	4018	3693	3240	2852	3.0	-1.9	-2.6
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1486	1452	1407	-0.4	-0.7	-0.5
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.3
Aviation	1325	1181	919	936	1016	1086	1156	-3.6	1.0	1.3
Inland navigation	495	648	717	612	622	635	647	3.8	-1.4	0.4
By transport activity										
Passenger transport	5530	6460	6297	5784	5547	5166	4837	1.3	-1.3	-1.4
Freight transport	1756	1714	1850	1688	1701	1673	1636	0.5	-0.8	-0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.3	4.7			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24342	21164	17823	0.0	-1.3	-3.1
Final Energy Demand	18676	20958	19197	17486	17108	16003	14318	0.3	-1.1	-1.8
by sector										
Industry	4450	4161	3672	3224	3303	3198	2900	-1.9	-1.1	-1.3
Energy intensive industries	2737	2588	2427	2157	2193	2095	1807	-1.2	-1.0	-1.9
Other industrial sectors	1714	1573	1245	1067	1110	1103	1092	-3.1	-1.1	-0.2
Residential	4502	5510	4615	4351	4280	3927	3255	0.2	-0.8	-2.7
Tertiary	2426	3100	2752	2426	2264	2026	1676	1.3	-1.9	-3.0
Transport ⁽⁵⁾	7297	8188	8158	7484	7262	6852	6488	1.1	-1.2	-1.1
by fuel										
Solids	891	458	302	208	192	162	98	-10.3	-4.4	-6.5
Oil	12744	14413	12110	10307	9460	8583	7520	-0.5	-2.4	-2.3
Gas	257	586	982	1018	1030	1025	1002	14.3	0.5	-0.3
Electricity	3710	4377	4568	4397	4595	4402	4002	2.1	0.1	-1.4
Heat (from CHP and District Heating)	28	49	46	44	50	56	59	5.2	0.8	1.7
Renewable energy forms	1046	1076	1191	1510	1774	1754	1598	1.3	4.1	-1.0
Other	0	0	0	2	7	21	38	0.0	0.0	17.9
Energy intensity indicators										
Gross Int. Cons./GDP (toe/ME13)	149	136	124	130	122	103	83	-1.8	-0.2	-3.7
Industry (Energy on Value added, index 2000=100)	100	88	101	99	97	92	80	0.1	-0.4	-1.9
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	79	63	-2.2	1.0	-3.2
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	79	69	54	-1.5	-0.9	-3.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.1
Freight transport (toe/Mtkm)	46	51	50	45	43	41	39	0.7	-1.4	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	133.3	139.6	121.4	105.7	96.7	78.9	63.9	-0.9	-2.3	-4.1
of which ETS sectors (2013 scope) GHG emissions		77.2	64.9	57.3	53.0	39.2	28.5		-2.0	-6.0
of which ESD sectors (2013 scope) GHG emissions		62.4	56.5	48.4	43.6	39.7	35.4		-2.6	-2.1
CO ₂ Emissions (energy related)	98.4	106.4	92.1	79.6	73.0	56.5	42.3	-0.7	-2.3	-5.3
Power generation/District heating	52.1	55.6	47.9	40.9	37.1	23.7	13.4	-0.8	-2.5	-9.7
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	3.0	1.6	-0.1	-1.7
Industry	10.4	8.9	7.2	6.2	5.9	5.2	4.1	-3.7	-1.9	-3.6
Residential	7.6	9.9	6.7	5.0	4.3	3.8	2.9	-1.3	-4.2	-4.0
Tertiary	3.4	4.3	2.8	1.8	1.2	1.0	0.7	-2.1	-8.0	-5.6
Transport	21.8	24.4	24.0	21.7	20.9	19.6	18.3	1.0	-1.4	-1.3
CO ₂ Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	7.5	-2.9	0.1	1.1
Non-CO2 GHG emissions	26.1	23.6	22.6	19.3	16.9	15.4	14.0	-1.4	-2.9	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.0	73.4	59.5	-0.9	-2.3	-4.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.97	0.93	0.83	0.75	0.63	0.42	0.26	-1.6	-2.7	-8.6
Final energy demand (t of CO ₂ /toe)	2.32	2.26	2.12	1.99	1.89	1.85	1.82	-0.9	-1.1	-0.4
Industry	2.35	2.13	1.96	1.91	1.79	1.64	1.42	-1.8	-0.9	-2.3
Residential	1.69	1.79	1.45	1.16	1.01	0.96	0.88	-1.5	-3.5	-1.4
Tertiary	1.41	1.38	1.01	0.76	0.53	0.47	0.40	-3.3	-6.2	-2.7
Transport	2.99	2.98	2.94	2.90	2.87	2.86	2.83	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.5	25.8	34.3			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.2	36.9			
RES-E share	7.2	8.2	12.3	22.4	25.8	46.6	71.5			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.3	18.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	97	102	99	1.9	3.0	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	137	149	157	3.8	2.4	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 ME13)	15.2	20.2	26.7	26.6	31.4	33.2	35.3	5.8	1.6	1.2
as % of GDP	8.0	8.7	11.5	13.3	15.1	15.6	15.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Hungary: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1
GDP (in 000 M€13)	83	102	101	107	117	131	145	1.9	1.5	2.2
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24250	24559	24040	0.2	-0.6	-0.1
Solids	3850	3031	2730	2635	2123	1423	1147	-3.4	-2.5	-6.0
Oil	6964	7115	6699	6271	6313	6372	6335	-0.4	-0.6	0.0
Natural gas	9657	12094	9816	7786	8576	6770	6103	0.2	-1.3	-3.3
Nuclear	3672	3585	4078	3666	3677	6045	6528	1.1	-1.0	5.9
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Renewable energy forms	859	1251	2042	1931	2700	3122	3237	9.0	2.8	1.8
Energy Branch Consumption	1164	1062	1095	1029	949	928	922	-0.6	-1.4	-0.3
Non-Energy Uses	1587	2169	1974	2275	2502	2826	3079	2.2	2.4	2.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	9897	10950	11394	-0.5	-1.1	1.4
Solids	2893	1748	1593	1794	1366	669	634	-5.8	-1.5	-7.4
Oil	1699	1457	1150	795	619	277	193	-3.8	-6.0	-11.0
Natural gas	2475	2331	2235	1857	1199	520	489	-1.0	-6.0	-8.6
Nuclear	3672	3585	4078	3666	3677	6045	6528	1.1	-1.0	5.9
Renewable energy sources	859	1251	2010	2132	3037	3440	3549	8.9	4.2	1.6
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0
Biomass & Waste	758	1145	1844	1905	2659	2605	2416	9.3	3.7	-1.0
Wind	0	1	46	50	77	183	211	0.0	5.3	10.7
Solar and others	0	2	6	9	45	209	234	0.0	23.5	17.8
Geothermal	86	87	99	148	237	423	669	1.4	9.1	11.0
Net Imports (ktoe)	13956	17421	14988	13249	14352	13610	12647	0.7	-0.4	-1.3
Solids	1087	1299	1143	841	757	755	513	0.5	-4.0	-3.8
Oil	5291	5780	5637	5476	5694	6095	6142	0.6	0.1	0.8
Crude oil and Feedstocks	5887	5988	5806	5273	5500	5915	5999	-0.1	-0.5	0.9
Oil products	-596	-208	-169	203	194	180	143	-11.9	0.0	-3.0
Natural gas	7283	9808	7726	5929	7377	6250	5614	0.6	-0.5	-2.7
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Import Dependency (%)	55.2	63.1	58.1	56.4	59.2	55.4	52.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33191	35948	36294	0.6	-1.2	0.9
Nuclear energy	14180	13834	15761	15087	15024	24706	26683	1.1	-0.5	5.9
Solids	9590	7023	6234	6436	5072	2310	2187	-4.2	-2.0	-8.1
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0
Gas (including derived gases)	6719	12502	11714	3383	9570	2503	735	5.7	-2.0	-22.6
Biomass-waste	120	1730	2449	2015	2241	2344	2069	35.2	-0.9	-0.8
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0
Wind	0	10	534	585	890	2133	2450	0.0	5.2	10.7
Solar	0	0	1	32	97	1656	1873	0.0	55.6	34.5
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7094	9862	11218	-0.4	-1.5	4.7
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6
Renewable energy	48	66	348	431	640	2661	3049	21.9	6.3	16.9
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0
Wind	0	17	293	329	477	1040	1226	0.0	5.0	9.9
Solar	0	0	2	45	106	1564	1766	0.0	48.7	32.5
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	6621	6311	6024	5103	4495	3980	3687	-0.9	-2.9	-2.0
of which cogeneration units	1464	2047	1862	1144	1575	1025	992	2.4	-1.7	-4.5
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1747	1380	1155	1137	691	425	414	-4.1	-5.0	-5.0
Gas fired	4160	4622	4605	3496	3385	3134	2858	1.0	-3.0	-1.7
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3
Biomass-waste fired	112	133	173	349	356	358	358	4.4	7.5	0.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.4	39.4	35.0			
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	40.5	34.8	29.5			
% of gross electricity from CHP	13.5	19.1	19.6	14.4	13.8	9.1	6.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.9	86.6	92.0			
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3597	1785	1475	-1.3	-3.7	-8.5
Solids	2755	1924	1646	1611	1288	599	569	-5.0	-2.4	-7.9
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0
Gas (including derived gases)	2140	3079	2704	657	1600	456	236	2.4	-5.1	-17.4
Biomass & Waste	61	534	777	436	653	674	614	28.9	-1.7	-0.6
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12946	13165	14441	12781	12803	15152	15581	1.1	-1.2	2.0
Refineries	7638	8118	8427	6997	7084	7165	7134	1.0	-1.7	0.1
Biofuels and hydrogen production	0	3	175	182	348	322	322	0.0	7.1	-0.8
District heating	471	627	474	648	634	621	826	0.1	3.0	2.7
Derived gases, cokeries etc.	4837	4417	5365	4954	4737	7044	7300	1.0	-1.2	4.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Hungary, EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	80	84	84	86	95	103	110	0.5	1.3	1.5
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	64	68	1.4	1.1	1.1
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.3
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	42	46	2.3	1.1	1.9
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.7	1.6
Rail	9	9	9	10	11	12	14	0.0	2.1	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	1.0	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4116	4104	4164	2.8	-0.5	0.1
Public road transport	339	361	335	346	353	351	346	-0.1	0.5	-0.2
Private cars and motorcycles	1805	2191	2208	2035	2070	1974	1922	2.0	-0.6	-0.7
Heavy goods and light commercial vehicles	763	1341	1418	1214	1274	1282	1321	6.4	-1.1	0.4
Rail	171	154	150	152	172	193	208	-1.3	1.3	1.9
Aviation	230	261	230	207	243	300	362	0.0	0.6	4.1
Inland navigation	1	1	1	4	4	4	5	3.1	14.6	1.6
By transport activity										
Passenger transport	2449	2877	2826	2642	2730	2696	2705	1.4	-0.3	-0.1
Freight transport	860	1431	1515	1316	1386	1408	1458	5.8	-0.9	0.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.5	8.6			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21747	21733	20962	0.1	-0.9	-0.4
Final Energy Demand	16139	18218	16596	15895	16139	15546	14455	0.3	-0.3	-1.1
by sector										
Industry	3513	3369	2890	3081	2999	3106	3068	-1.9	0.4	0.2
Energy intensive industries	2517	2267	1854	1941	1848	1870	1757	-3.0	0.0	-0.5
Other industrial sectors	996	1102	1036	1141	1151	1236	1311	0.4	1.1	1.3
Residential	5603	6464	5740	5253	5260	4921	4356	0.2	-0.9	-1.9
Tertiary	3712	4072	3625	3566	3726	3380	2836	-0.2	0.3	-2.7
Transport ⁽⁵⁾	3311	4313	4341	3995	4155	4138	4195	2.7	-0.4	0.1
by fuel										
Solids	665	690	481	501	370	379	182	-3.2	-2.6	-6.8
Oil	4218	4904	4638	4261	4174	3996	3812	1.0	-1.0	-0.9
Gas	6503	7852	6261	5868	5787	5328	4844	-0.4	-0.8	-1.8
Electricity	2531	2780	2941	2977	3096	3254	3220	1.5	0.5	0.4
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	903	895	-2.8	-0.8	-1.2
Renewable energy forms	774	683	1184	1301	1701	1671	1481	4.3	3.7	-1.4
Other	0	0	0	1	5	15	21	0.0	0.0	15.7
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	305	271	257	219	207	188	166	-1.7	-2.1	-2.2
Industry (Energy on Value added, index 2000=100)	100	74	64	63	56	52	47	-4.4	-1.2	-1.8
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	59	47	-1.4	-2.0	-3.9
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	58	44	-2.0	-1.3	-4.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	25	23	0.8	-1.7	-1.7
Freight transport (toe/Mtkm)	32	41	45	38	37	34	32	3.5	-2.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	79.8	76.9	67.7	59.4	55.7	47.4	43.4	-1.6	-1.9	-2.5
of which ETS sectors (2013 scope) GHG emissions		30.6	25.6	19.8	19.5	13.5	12.1		-2.7	-4.7
of which ESD sectors (2013 scope) GHG emissions		46.3	42.1	39.6	36.2	33.9	31.3		-1.5	-1.4
CO ₂ Emissions (energy related)	55.0	56.4	49.0	41.5	40.5	32.8	29.4	-1.1	-1.9	-3.2
Power generation/District heating	22.1	18.3	16.0	10.5	10.9	5.0	4.3	-3.2	-3.8	-8.9
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.2
Industry	6.8	6.7	5.3	5.8	4.9	4.6	3.7	-2.4	-0.8	-2.9
Residential	8.8	10.7	8.6	7.3	7.0	6.6	5.7	-0.2	-2.1	-2.0
Tertiary	6.1	6.7	5.2	5.2	5.2	4.3	3.5	-1.6	-0.1	-4.0
Transport	9.7	12.7	12.3	11.2	11.2	11.0	11.0	2.4	-1.0	-0.1
CO ₂ Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.0	5.1	-1.9	2.5	0.8
Non-CO2 GHG emissions	20.3	15.6	15.0	13.5	10.4	9.6	8.9	-3.0	-3.6	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	58.8	50.1	45.8	-1.6	-1.9	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.34	0.31	0.26	0.23	0.10	0.09	-2.7	-2.7	-9.2
Final energy demand (t of CO ₂ /toe)	1.94	2.02	1.90	1.85	1.75	1.70	1.65	-0.2	-0.8	-0.6
Industry	1.92	2.00	1.84	1.87	1.64	1.49	1.20	-0.4	-1.1	-3.1
Residential	1.57	1.66	1.50	1.39	1.33	1.33	1.31	-0.4	-1.2	-0.2
Tertiary	1.65	1.65	1.44	1.45	1.39	1.26	1.22	-1.4	-0.3	-1.3
Transport	2.92	2.94	2.83	2.81	2.69	2.67	2.63	-0.3	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.2	15.4	16.2			
RES-H&C share	7.6	6.0	11.1	13.4	17.1	19.1	20.7			
RES-E share	0.6	4.4	7.1	6.7	7.9	13.9	14.8			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	10.0	10.6	11.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	71	79	92	3.5	0.5	2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	130	140	165	5.4	-0.2	2.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.2	25.2	29.0	6.1	0.9	2.7
as % of GDP	13.5	15.9	20.2	16.7	18.9	19.3	20.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Ireland: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14447	14116	13079	0.5	-0.5	-1.0
Solids	2601	2664	1979	2028	1844	1569	1076	-2.7	-0.7	-5.2
Oil	8145	8589	7818	6926	6744	6470	6090	-0.4	-1.5	-1.0
Natural gas	3436	3470	4683	4016	4013	4011	3457	3.1	-1.5	-1.5
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1
Renewable energy forms	235	366	671	1152	1983	2213	2580	11.1	11.4	2.7
Energy Branch Consumption	254	300	243	250	206	199	174	-0.4	-1.7	-1.7
Non-Energy Uses	675	516	341	360	405	441	449	-6.6	1.7	1.0
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1944	2147	2513	-1.6	0.5	2.6
Solids	965	820	981	740	0	1	1	0.2	-56.5	13.8
Oil	0	0	0	44	0	0	0	0.0	0.0	13.8
Natural gas	958	461	233	231	233	233	229	-13.2	0.0	-0.2
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	235	366	628	1016	1710	1913	2283	10.3	10.5	2.9
Hydro	73	54	52	62	66	65	65	-3.4	2.6	-0.2
Biomass & Waste	141	216	327	420	651	810	820	8.8	7.1	2.3
Wind	21	96	242	520	935	950	1286	27.7	14.5	3.2
Solar and others	0	1	8	13	58	87	109	54.0	22.6	6.6
Geothermal	0	0	0	0	0	1	3	0.0	0.0	20.7
Net Imports (ktoe)	12370	13765	13215	12285	12611	12085	10688	0.7	-0.5	-1.6
Solids	1681	1886	945	1288	1844	1568	1075	-5.6	6.9	-5.3
Oil	8203	8694	7706	6991	6852	6583	6197	-0.6	-1.2	-1.0
Crude oil and Feedstocks	3016	3166	2987	2873	2873	2690	2479	-0.1	-0.4	-1.5
Oil products	5186	5527	4718	4118	3979	3893	3717	-0.9	-1.7	-0.7
Natural gas	2478	3010	4480	3784	3781	3781	3242	6.1	-1.7	-1.5
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1
Import Dependency (%)	84.9	89.6	86.5	85.8	86.6	84.9	81.0			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31143	32144	32281	1.8	0.9	0.4
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	8587	8839	6384	6793	6070	5291	3557	-2.9	-0.5	-5.2
Oil (including refinery gas)	4638	3340	605	15	3	15	6	-18.4	-41.0	7.3
Gas (including derived gases)	9263	11574	17705	12617	12731	14131	11891	6.7	-3.2	-0.7
Biomass-waste	95	130	317	660	682	887	1097	12.8	8.0	4.9
Hydro (pumping excluded)	846	631	599	721	771	760	760	-3.4	2.6	-0.2
Wind	244	1112	2815	6049	10869	11044	14954	27.7	14.5	3.2
Solar	0	0	0	1	16	16	16	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9685	9113	9860	6.2	1.8	0.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	355	751	1611	2724	4222	4275	5506	16.3	10.1	2.7
Hydro (pumping excluded)	236	234	237	237	258	258	258	0.0	0.8	0.0
Wind	119	517	1374	2486	3945	3999	5230	27.7	11.1	2.9
Solar	0	0	0	1	19	19	19	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	4097	5179	6480	6366	5464	4838	4354	4.7	-1.7	-2.2
of which cogeneration units	77	240	285	264	63	266	278	14.0	-14.0	16.0
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0
Gas fired	1872	2625	4081	3969	3624	3472	3138	8.1	-1.2	-1.4
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2
Biomass-waste fired	14	43	43	69	197	198	200	11.4	16.6	0.2
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	35.6	39.1	36.6			
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.6	47.3	47.2			
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.8	12.0	13.9			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	39.6	39.5	52.1			
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3518	3697	3019	-0.4	-2.6	-1.5
Solids	1930	1920	1358	1448	1344	1173	798	-3.5	-0.1	-5.1
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4
Gas (including derived gases)	1825	2040	3039	2066	2020	2308	1962	5.2	-4.0	-0.3
Biomass & Waste	24	30	75	143	153	212	258	12.2	7.5	5.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	3341	3204	3033	3024	3133	2964	2767	-1.0	0.3	-1.2
Refineries	3341	3203	2940	2933	2926	2736	2523	-1.3	0.0	-1.5
Biofuels and hydrogen production	0	1	93	89	199	193	194	0.0	7.9	-0.3
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	0	0	0	2	8	36	49	0.0	2204.5	20.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EU030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.7
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.8
Rail	1	2	2	2	2	2	2	2.7	1.0	1.0
Aviation ⁽¹⁾	6	10	10	11	14	16	17	5.2	3.1	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	0.9
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.5
Heavy goods and light commercial vehicles	11	17	10	11	13	15	17	-0.5	2.4	2.5
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.5
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4762	4744	4811	1.5	0.1	0.1
Public road transport	96	101	110	111	111	113	113	1.4	0.1	0.2
Private cars and motorcycles	2206	2577	2807	2583	2525	2410	2325	2.4	-1.1	-0.8
Heavy goods and light commercial vehicles	1086	1482	967	1019	1135	1228	1343	-1.2	1.6	1.7
Rail	40	42	44	44	47	49	50	0.8	0.7	0.6
Aviation	629	857	767	809	921	921	956	2.0	1.8	0.4
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.8
By transport activity										
Passenger transport	2958	3559	3724	3544	3602	3489	3441	2.3	-0.3	-0.5
Freight transport	1124	1519	990	1042	1160	1255	1370	-1.3	1.6	1.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.9	5.1			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14042	13675	12630	0.8	-0.6	-1.1
Final Energy Demand	10779	12597	11957	11423	11762	11318	10690	1.0	-0.2	-1.0
by sector										
Industry	2498	2582	2146	2453	2561	2414	2290	-1.5	1.8	-1.1
Energy intensive industries	1245	1341	1023	1166	1182	1022	902	-1.9	1.4	-2.7
Other industrial sectors	1252	1241	1123	1287	1380	1392	1388	-1.1	2.1	0.1
Residential	2513	2954	3296	2823	2857	2740	2356	2.7	-1.4	-1.9
Tertiary	1684	1979	1799	1556	1577	1415	1228	0.7	-1.3	-2.5
Transport ⁽⁵⁾	4085	5082	4715	4590	4767	4749	4817	1.4	0.1	0.1
by fuel										
Solids	671	751	604	567	501	396	279	-1.0	-1.9	-5.7
Oil	7045	8204	7270	6439	6230	5925	5541	0.3	-1.5	-1.2
Gas	1200	1364	1593	1883	1928	1641	1449	2.9	1.9	-2.8
Electricity	1745	2094	2186	2107	2262	2335	2385	2.3	0.3	0.5
Heat (from CHP and District Heating)	0	0	0	1	14	36	63	0.0	0.0	15.9
Renewable energy forms	118	184	304	424	820	948	921	10.0	10.4	1.2
Other	0	0	0	2	8	36	52	0.0	1734.1	20.8
Energy intensity indicators										
Gross Int. Cons./GDP (toe/ME13)	111	93	92	78	70	63	53	-1.9	-2.8	-2.6
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	64	56	-2.8	-0.3	-2.6
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	63	48	-0.2	-2.7	-4.3
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	47	38	-1.9	-3.6	-4.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	34	31	-1.2	-1.8	-2.2
Freight transport (toe/Mtkm)	96	88	92	89	86	81	79	-0.3	-0.7	-0.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.8	73.1	65.0	63.1	61.3	59.7	55.1	-1.0	-0.6	-1.1
of which ETS sectors (2013 scope) GHG emissions		25.4	20.0	18.5	17.6	16.9	14.0		-1.2	-2.3
of which ESD sectors (2013 scope) GHG emissions		47.8	45.0	44.6	43.7	42.8	41.1		-0.3	-0.6
CO ₂ Emissions (energy related)	43.2	47.3	42.0	37.8	36.1	34.1	29.6	-0.3	-1.5	-2.0
Power generation/District heating	15.6	15.3	13.3	11.0	10.3	10.3	7.9	-1.6	-2.5	-2.6
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-1.3
Industry	5.3	5.6	3.6	3.8	3.4	2.6	2.0	-3.9	-0.5	-5.1
Residential	6.4	7.2	7.8	6.5	6.1	5.4	4.2	2.1	-2.5	-3.6
Tertiary	3.4	3.5	3.1	2.5	2.4	2.0	1.6	-0.7	-2.8	-4.0
Transport	12.3	15.3	13.9	13.6	13.8	13.6	13.7	1.3	-0.1	-0.1
CO ₂ Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	1.9	1.9	1.7	-7.0	3.1	-1.3
Non-CO2 GHG emissions	25.6	23.1	21.5	23.5	23.2	23.8	23.8	-1.7	0.8	0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.0	103.3	95.3	-1.0	-0.6	-1.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.66	0.60	0.47	0.41	0.33	0.31	0.24	-3.4	-3.5	-3.1
Final energy demand (t of CO ₂ /toe)	2.53	2.51	2.38	2.32	2.18	2.08	2.01	-0.6	-0.9	-0.8
Industry	2.13	2.16	1.66	1.56	1.33	1.09	0.88	-2.5	-2.2	-4.0
Residential	2.53	2.44	2.37	2.30	2.13	1.96	1.79	-0.7	-1.1	-1.7
Tertiary	1.99	1.77	1.74	1.63	1.50	1.39	1.28	-1.3	-1.5	-1.6
Transport	3.00	3.01	2.96	2.96	2.89	2.87	2.84	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.4	17.9	22.6			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	17.1	20.6			
RES-E share	4.8	7.2	14.5	26.5	41.7	41.7	54.6			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	12.3	16.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	92	96	92	5.9	2.1	0.0
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	178	182	178	3.0	1.2	0.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 ME13)	9.8	13.9	15.5	15.6	18.8	20.7	22.4	4.7	1.9	1.7
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.2	9.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Italy: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3
GDP (in 000 M€13)	1564	1643	1622	1565	1675	1776	1695	0.4	0.3	1.2
Gross Inland Consumption (ktoe)	174219	187471	174761	159035	161276	150404	136294	0.0	-0.8	-1.7
Solids	12550	16461	14170	16106	18599	11535	6515	1.2	2.8	-10.0
Oil	89540	83963	69558	61171	56699	51049	45284	-2.5	-2.0	-2.2
Natural gas	57945	70651	68057	56177	59847	57212	52670	1.6	-1.3	-1.3
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7
Renewable energy forms	10371	12170	19180	21628	23554	27845	29072	6.3	2.1	2.1
Energy Branch Consumption	7704	10052	9539	8520	8166	7211	6495	2.2	-1.5	-2.3
Non-Energy Uses	9019	8607	9560	7050	7322	7453	7364	0.6	-2.6	0.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	28400	27839	29560	30750	31740	34676	35528	0.4	0.7	1.1
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0
Oil	4915	6376	5687	5142	5667	5611	5603	1.5	0.0	-0.1
Natural gas	13627	9886	6885	6760	5764	4589	3983	-6.6	-1.8	-3.6
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	9856	11516	16924	18793	20310	24476	25942	5.6	1.8	2.5
Hydro	3800	3101	4395	4138	4087	4212	4236	1.5	-0.7	0.4
Biomass & Waste	1736	3392	6670	10105	11373	12753	12674	14.4	5.5	1.1
Wind	48	202	785	1258	1260	2149	2702	32.1	4.8	7.9
Solar and others	12	30	298	2199	2500	4199	5085	37.4	23.7	7.4
Geothermal	4259	4791	4776	1092	1089	1164	1245	1.2	-13.7	1.3
Net Imports (ktoe)	152069	160241	149804	131764	133118	119451	104610	-0.1	-1.2	-2.4
Solids	13133	16367	14301	16050	18599	11535	6515	0.9	2.7	-10.0
Oil	87599	79154	67826	59509	54557	49032	43176	-2.5	-2.2	-2.3
Crude oil and Feedstocks	89451	94307	84882	68525	61695	54911	48093	-0.5	-3.1	-2.5
Oil products	-1852	-15153	-17056	-9016	-7138	-5880	-4917	24.9	-8.3	-3.7
Natural gas	47008	59840	61600	49416	54139	52752	49035	2.7	-1.3	-1.0
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7
Import Dependency (%)	86.5	84.5	84.3	81.1	80.7	77.5	74.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288966	317921	309161	295513	1.0	0.6	-0.7
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	26272	43606	39734	58856	67163	41209	21118	4.2	5.4	-10.9
Oil (including refinery gas)	85878	47124	21714	8781	7794	4655	3138	-12.8	-9.7	-8.7
Gas (including derived gases)	106398	156191	158215	110293	127583	108039	99228	4.0	-2.1	-2.5
Biomass-waste	1908	6153	11586	18671	21446	31625	33068	19.8	6.4	4.4
Hydro (pumping excluded)	44199	36067	51116	48116	47527	48981	49252	1.5	-0.7	0.4
Wind	563	2344	9126	14628	14646	24983	31417	32.1	4.8	7.9
Solar	17	31	1906	23409	25552	43458	52082	59.9	29.6	7.4
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122844	126718	126245	3.9	1.6	0.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	16770	18701	26470	46375	47826	62485	70958	4.7	6.1	4.0
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	18855	0.7	0.7	0.0
Wind	363	1635	5794	8958	8963	12305	14992	31.9	4.5	5.3
Solar	17	30	3113	18905	20057	31375	37111	68.3	20.5	6.3
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	55126	64249	78450	81079	75018	64232	55287	3.6	-0.4	-3.0
of which cogeneration units	6476	5888	7351	17207	16822	17038	14096	1.3	8.6	-1.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4
Gas fired	22819	36431	51677	52045	51358	46872	41410	8.5	-0.1	-2.1
Oil fired	21763	17998	14748	13928	8629	5984	2170	-3.8	-5.2	-12.9
Biomass-waste fired	436	870	1774	4810	5388	5488	5823	15.1	11.7	0.8
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.4	26.9	26.0			
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.6	45.9	46.0			
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.4	11.4	11.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	36.3	50.2	58.2			
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43374	35930	30441	0.9	-2.2	-3.5
Solids	6045	10399	9484	12963	14694	8342	4279	4.6	4.5	-11.6
Oil (including refinery gas)	18954	12079	7365	1905	1674	1123	862	-9.0	-13.8	-6.4
Gas (including derived gases)	19668	29585	28966	18745	21735	18997	17451	3.9	-2.8	-2.2
Biomass & Waste	438	2270	3527	3795	4330	6527	6909	23.2	2.1	4.8
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	101609	106909	97409	78677	74312	67227	59806	-0.4	-2.7	-2.1
Refineries	95900	101959	91472	74873	68917	62283	55459	-0.5	-2.8	-2.1
Biofuels and hydrogen production	0	177	1419	1593	2210	1996	1867	0.0	4.5	-1.7
District heating	0	0	110	121	122	122	113	0.0	1.1	-0.8
Derived gases, cokeries etc.	5709	4773	4408	2090	3063	2826	2367	-2.6	-3.6	-2.5

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EU CO ₂ 30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	943	931	952	967	1020	1053	1088	0.1	0.7	0.6
Public road transport	93	101	102	105	107	109	110	0.9	0.5	0.3
Private cars and motorcycles	756	727	740	746	781	799	821	-0.2	0.5	0.5
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.0
Aviation ⁽³⁾	34	43	51	56	63	70	75	4.3	2.2	1.7
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.1
Freight transport activity (Gtkm)	253	303	268	271	290	306	324	0.6	0.8	1.1
Heavy goods and light commercial vehicles	192	226	202	203	217	228	240	0.5	0.7	1.0
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	54	58	2.4	0.5	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	38983	36975	35658	-0.2	-0.6	-0.9
Public road transport	1061	1231	1245	1278	1309	1302	1280	1.6	0.5	-0.2
Private cars and motorcycles	27882	27505	25835	24747	23387	21162	19789	-0.8	-1.0	-1.7
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8425	8441	8475	0.9	-0.3	0.1
Rail	526	492	463	487	522	560	586	-1.3	1.2	1.2
Aviation	3491	3700	3863	4073	4275	4382	4350	1.0	1.0	0.2
Inland navigation	1269	1387	1128	1012	1065	1128	1178	-1.2	-0.6	1.0
By transport activity										
Passenger transport	33399	32865	31375	30531	29429	27337	25932	-0.6	-0.6	-1.3
Freight transport	8775	11512	9844	9324	9554	9638	9725	1.2	-0.3	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.7	5.5			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	153954	142952	128930	0.0	-0.7	-1.8
Final Energy Demand	125579	134544	124781	122385	122433	116846	106705	-0.1	-0.2	-1.4
by sector										
Industry	40502	39858	30905	27952	28623	26977	24982	-2.7	-0.8	-1.4
Energy intensive industries	25289	25477	19382	16985	17615	16624	15092	-2.6	-1.0	-1.5
Other industrial sectors	15214	14382	11523	10966	11008	10353	9891	-2.7	-0.5	-1.1
Residential	27656	31313	31959	34859	34812	33663	29585	1.5	0.9	-1.6
Tertiary	14901	18537	20182	19017	19273	18472	15711	3.1	-0.5	-2.0
Transport ⁽⁵⁾	42519	44836	41734	40557	39726	37734	36426	-0.2	-0.5	-0.9
by fuel										
Solids	3586	3980	2910	2094	2647	2148	1250	-2.1	-0.9	-7.2
Oil	57249	59005	48733	45659	41835	37328	32495	-1.6	-1.5	-2.5
Gas	38022	40609	38499	36390	37257	37364	34441	0.1	-0.3	-0.8
Electricity	23472	25871	25736	25288	26270	25982	25071	0.9	0.2	-0.5
Heat (from CHP and District Heating)	1449	3082	3332	3592	3778	3835	3695	8.7	1.3	-0.2
Renewable energy forms	1802	1997	5570	9356	10630	10104	9596	11.9	6.7	-1.0
Other	0	0	0	6	17	84	158	0.0	0.0	24.7
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	111	114	108	102	96	85	72	-0.3	-1.1	-2.8
Industry (Energy on Value added, index 2000=100)	100	100	83	79	77	71	63	-1.8	-0.7	-2.0
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	103	85	0.9	0.4	-2.8
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	102	82	2.3	-1.0	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	21	-1.0	-1.5	-2.0
Freight transport (toe/Mtkm)	35	38	37	34	33	31	30	0.6	-1.1	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO ₂ eq.)	558.5	592.5	509.9	457.0	458.6	399.3	346.3	-0.9	-1.1	-2.8
of which ETS sectors (2013 scope) GHG emissions		261.5	213.8	172.1	188.2	148.1	120.8		-1.3	-4.3
of which ESD sectors (2013 scope) GHG emissions		331.0	296.1	284.8	270.4	251.2	225.5		-0.9	-1.8
CO ₂ Emissions (energy related)	432.5	470.4	404.2	354.7	361.3	308.5	260.7	-0.7	-1.1	-3.2
Power generation/District heating	137.1	158.5	135.9	106.9	122.0	86.5	65.5	-0.1	-1.1	-6.0
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.2	10.2	0.4	-2.4	-2.3
Industry	78.0	72.5	49.5	42.3	42.6	37.3	29.9	-4.5	-1.5	-3.5
Residential	53.4	59.9	53.6	51.4	49.7	48.1	40.1	0.0	-0.8	-2.1
Tertiary	24.4	29.3	30.2	26.0	25.5	23.6	19.0	2.2	-1.7	-2.9
Transport	123.7	131.8	118.6	114.0	108.7	101.8	96.1	-0.4	-0.9	-1.2
CO ₂ Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	21.8	21.6	21.5	-1.7	-1.0	-0.1
Non-CO ₂ GHG emissions	97.3	91.3	81.6	81.2	75.5	69.2	64.1	-1.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.3	76.0	65.9	-0.9	-1.1	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.47	0.45	0.38	0.31	0.32	0.23	0.18	-2.0	-1.7	-5.4
Final energy demand (t of CO ₂ /toe)	2.23	2.18	2.02	1.91	1.85	1.80	1.73	-1.0	-0.9	-0.6
Industry	1.93	1.82	1.60	1.51	1.49	1.38	1.20	-1.8	-0.7	-2.2
Residential	1.93	1.91	1.68	1.48	1.43	1.43	1.35	-1.4	-1.6	-0.5
Tertiary	1.64	1.58	1.50	1.37	1.32	1.28	1.21	-0.9	-1.2	-0.9
Transport	2.91	2.94	2.84	2.81	2.74	2.70	2.64	-0.2	-0.4	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.8	24.0	28.7			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	24.9	31.2			
RES-E share	15.7	16.3	20.1	33.6	32.5	44.9	51.9			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.6	13.3	17.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	66	77	90	86	93	99	100	3.2	0.4	0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	157	167	172	0.9	0.3	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.0	203.1	223.8	2.0	1.4	1.6
as % of GDP	8.6	9.2	10.2	10.9	11.3	11.4	11.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Latvia: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4
GDP (in 000 M€13)	13	20	19	23	27	29	31	3.6	3.5	1.7
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4528	4651	4296	1.8	-0.2	-0.5
Solids	132	82	109	84	72	46	29	-1.9	-4.1	-8.8
Oil	1295	1487	1521	1464	1433	1391	1277	1.6	-0.6	-1.1
Natural gas	1092	1358	1462	867	923	1139	800	3.0	-4.5	-1.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6
Renewable energy forms	1191	1481	1463	1758	1956	1998	2020	2.1	3.0	0.3
Energy Branch Consumption	39	42	48	33	36	40	30	2.1	-2.9	-1.8
Non-Energy Uses	75	97	73	105	127	143	147	-0.3	5.7	1.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	1411	1868	1979	2228	2482	2509	2520	3.4	2.3	0.2
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	1393	1858	1975	2228	2482	2509	2520	3.6	2.3	0.2
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0
Biomass & Waste	1150	1568	1668	1972	2155	2179	2124	3.8	2.6	-0.1
Wind	0	4	4	8	54	55	122	30.2	29.1	8.5
Solar and others	0	0	0	0	1	2	2	0.0	0.0	4.4
Geothermal	0	0	0	0	0	0	0	0.0	0.0	10.6
Net Imports (ktoe)	2361	3097	2220	2456	2406	2511	2153	-0.6	0.8	-1.1
Solids	61	77	112	84	72	46	29	6.3	-4.4	-8.8
Oil	1235	1783	1671	1807	1788	1749	1625	3.1	0.7	-1.0
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0
Oil products	1148	1779	1669	1807	1788	1749	1625	3.8	0.7	-1.0
Natural gas	1113	1434	903	867	928	1151	830	-2.1	0.3	-1.1
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6
Import Dependency (%)	61.0	63.9	45.5	52.4	49.2	50.0	46.1			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6679	8073	7283	4.8	0.1	0.9
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	78	0	2	78	108	88	66	-30.7	49.0	-4.8
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0
Gas (including derived gases)	1128	1486	2988	2023	2119	3384	1686	10.2	-3.4	-2.3
Biomass-waste	0	41	66	511	662	798	955	0.0	25.9	3.7
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0
Wind	4	47	49	95	628	640	1416	28.5	29.1	8.5
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3106	3404	2.0	2.0	0.9
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	1515	1562	1606	1652	1872	1873	2140	0.6	1.5	1.3
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0
Wind	2	26	30	62	281	283	549	31.1	25.1	6.9
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	574	600	940	1185	1229	1232	1265	5.1	2.7	0.3
of which cogeneration units	254	586	870	1026	1028	1079	1110	13.1	1.7	0.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0
Gas fired	522	572	893	1098	1098	1090	1090	5.5	2.1	-0.1
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0
Biomass-waste fired	2	10	10	50	95	105	138	17.8	24.9	3.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.1	28.0	23.3			
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.5	45.6	37.1			
% of gross electricity from CHP	31.4	30.7	45.0	38.6	33.9	45.5	29.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.7	57.0	76.0			
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	546	806	627	4.1	-3.9	1.4
Solids	53	1	9	13	17	14	10	-15.9	6.4	-5.1
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0
Gas (including derived gases)	408	562	767	360	384	595	371	6.5	-6.7	-0.3
Biomass & Waste	0	22	29	117	144	197	245	0.0	17.4	5.5
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	570	479	383	344	425	408	365	-3.9	1.1	-1.5
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	3	27	37	89	73	67	0.0	12.6	-2.7
District heating	569	476	356	307	336	333	294	-4.6	-0.6	-1.3
Derived gases, cokeries etc.	1	0	0	0	0	2	4	-95.3	1788.1	29.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.2
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.4
Private cars and motorcycles	12	12	13	13	14	14	15	0.8	0.7	0.7
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.0
Aviation ⁽³⁾	0	1	2	2	2	3	4	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	6	5.8	2.2	1.6
Rail	13	20	17	20	21	24	27	2.6	2.2	2.5
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1187	1144	4.9	-0.1	-0.4
Public road transport	51	67	68	65	66	67	67	2.9	-0.3	0.1
Private cars and motorcycles	502	603	673	613	590	531	472	3.0	-1.3	-2.2
Heavy goods and light commercial vehicles	89	242	260	255	292	314	314	11.2	1.2	0.8
Rail	76	94	76	87	91	101	110	0.1	1.8	1.9
Aviation	27	59	118	132	148	166	172	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.2
By transport activity										
Passenger transport	582	729	861	811	805	765	713	4.0	-0.7	-1.2
Freight transport	163	335	340	347	389	422	431	7.6	1.4	1.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.6	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4401	4508	4148	1.9	-0.3	-0.6
Final Energy Demand	3254	4018	4120	4104	4246	4203	3878	2.4	0.3	-0.9
by sector										
Industry	576	699	774	912	989	1014	975	3.0	2.5	-0.1
Energy intensive industries	229	282	305	277	305	302	268	2.9	0.0	-1.3
Other industrial sectors	348	417	469	635	684	712	708	3.0	3.9	0.3
Residential	1327	1504	1389	1286	1299	1262	1102	0.5	-0.7	-1.6
Tertiary	602	749	756	744	761	737	653	2.3	0.1	-1.5
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1190	1147	4.8	0.0	-0.4
by fuel										
Solids	62	74	94	70	54	32	18	4.2	-5.4	-10.3
Oil	1056	1323	1446	1355	1306	1248	1129	3.2	-1.0	-1.4
Gas	329	508	498	391	437	458	424	4.2	-1.3	-0.3
Electricity	385	493	534	568	621	657	681	3.3	1.5	0.9
Heat (from CHP and District Heating)	598	603	575	524	569	564	502	-0.4	-0.1	-1.2
Renewable energy forms	824	1018	973	1194	1258	1241	1116	1.7	2.6	-1.2
Other	0	0	0	0	0	3	7	0.0	0.0	35.4
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	293	235	246	189	171	159	137	-1.8	-3.6	-2.2
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	86	79	0.2	-1.0	-1.6
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	39	32	-4.0	-3.9	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	52	43	-2.0	-3.2	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	33	28	1.7	-1.8	-2.7
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.5	11.3	12.3	10.6	10.1	10.3	9.0	1.6	-1.9	-1.2
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	3.0	2.2		-3.7	-1.4
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.3	6.8		-1.3	-1.1
CO ₂ Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.7	5.4	2.0	-2.6	-1.7
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.6	0.9	-0.9	-6.6	-2.6
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.5	0.0	-2.9	-3.7
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.3	6.5	-2.2	-2.6
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.5	2.1	-1.8	-2.6
Transport	2.2	3.2	3.5	3.4	3.3	3.3	3.1	4.9	-0.6	-0.6
CO ₂ Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.7	10.4	2.8	0.0
Non-CO2 GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.8	-0.1	-1.3	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.7	33.8	1.6	-1.9	-1.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.21	0.17	0.16	0.09	0.09	0.11	0.07	-2.2	-6.4	-2.4
Final energy demand (t of CO ₂ /toe)	1.29	1.37	1.45	1.30	1.23	1.19	1.16	1.1	-1.6	-0.6
Industry	1.80	1.55	1.34	0.85	0.78	0.71	0.54	-2.9	-5.2	-3.6
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.31	6.0	-1.5	-1.0
Tertiary	1.14	1.10	1.12	0.98	0.92	0.84	0.83	-0.2	-1.9	-1.1
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.70	0.0	-0.6	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.3	42.0	46.5			
RES-H&C share	40.1	43.0	40.9	51.2	51.7	55.4	61.0			
RES-E share	52.7	43.0	42.1	46.2	53.3	51.4	59.9			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.2	18.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	107	86	93	77	85	92	109	-1.4	-0.9	2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	57	66	107	102	115	125	133	6.5	0.7	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.8	6.8	10.0	0.1	2.8
as % of GDP	14.8	17.3	27.0	19.0	19.4	19.9	21.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
	Annual % Change									
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8
GDP (in 000 M€13)	19	27	29	35	40	42	43	4.4	3.3	0.7
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6565	6392	6301	-0.4	-0.3	0.5
Solids	91	185	213	254	197	138	96	8.8	-0.8	-6.9
Oil	2125	2710	2502	2432	2367	2256	1996	1.6	-0.6	-1.7
Natural gas	2064	2477	2492	2122	2092	2241	1565	1.9	-1.7	-2.9
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Renewable energy forms	675	881	1065	1249	1341	1363	1348	4.7	2.3	0.1
Energy Branch Consumption	610	853	743	680	612	595	577	2.0	-1.9	-0.6
Non-Energy Uses	662	804	714	717	793	788	759	0.8	1.1	-0.4
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	3269	3900	1318	1358	1472	1485	3479	-8.7	1.1	9.0
Solids	12	20	9	19	7	8	8	-3.0	-2.1	1.3
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.2
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Renewable energy sources	682	900	1185	1262	1388	1405	1393	5.7	1.6	0.0
Hydro	29	39	46	38	38	38	38	4.7	-2.0	0.0
Biomass & Waste	653	858	1114	1158	1276	1181	1147	5.5	1.4	-1.1
Wind	0	0	19	60	60	163	163	0.0	12.0	10.6
Solar and others	0	0	0	5	8	7	11	0.0	0.0	3.2
Geothermal	0	3	5	1	6	15	35	0.0	3.1	18.9
Net Imports (ktoe)	4247	5026	5668	5454	5257	5076	3592	2.9	-0.7	-3.7
Solids	80	174	196	235	190	131	88	9.4	-0.3	-7.4
Oil	2223	2622	2607	2516	2451	2345	2085	1.6	-0.6	-1.6
Crude oil and Feedstocks	4760	9029	9339	9639	9124	8588	7936	7.0	-0.2	-1.4
Oil products	-2537	-6408	-6732	-7123	-6672	-6242	-5851	10.3	-0.1	-1.3
Natural gas	2065	2493	2485	2122	2096	2249	1578	1.9	-1.7	-2.8
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Import Dependency (%)	59.4	56.8	81.8	80.1	78.1	77.4	50.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	5985	8078	13836	-7.7	1.8	8.7
Nuclear energy	8419	10337	0	0	0	0	9377	-100.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0
Gas (including derived gases)	1707	3217	3436	3028	4060	4896	1180	7.2	1.7	-11.6
Biomass-waste	0	7	147	657	725	782	880	0.0	17.3	1.9
Hydro (pumping excluded)	340	451	540	440	440	440	440	4.7	-2.0	0.0
Wind	0	2	224	695	695	1896	1896	0.0	12.0	10.6
Solar	0	0	0	64	64	64	64	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2422	2919	3850	-6.3	-1.7	4.7
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0
Renewable energy	103	118	249	614	614	1243	1243	9.2	9.4	7.3
Hydro (pumping excluded)	103	117	116	116	116	116	116	1.2	0.0	0.0
Wind	0	1	133	424	424	1053	1053	0.0	12.3	9.5
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2556	2577	2629	2829	1808	1676	1490	0.3	-3.7	-1.9
of which cogeneration units	650	1038	1100	1799	576	1093	744	5.4	-6.3	2.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	3	3	0	0	0	0	0	-100.0	0.0	0.0
Gas fired	1736	1781	1822	1992	1519	1519	1348	0.5	-1.8	-1.2
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4
Biomass-waste fired	0	0	37	67	90	109	142	0.0	9.3	4.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.4	29.9	38.9			
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	47.0	45.2	27.3			
% of gross electricity from CHP	15.5	15.5	34.6	45.5	51.0	44.0	10.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	32.2	39.4	91.5			
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	875	1081	650	3.3	-3.7	-2.9
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0
Gas (including derived gases)	723	1057	1117	725	712	860	377	4.4	-4.4	-6.2
Biomass & Waste	1	5	65	135	163	221	273	59.7	9.7	5.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	7911	12651	9987	10232	9878	9355	10602	2.4	-0.1	0.7
Refineries	5032	9415	9446	9704	9277	8810	8160	6.5	-0.2	-1.3
Biofuels and hydrogen production	0	3	45	59	113	101	93	0.0	9.7	-2.0
District heating	656	520	496	468	488	444	337	-2.7	-0.2	-3.6
Derived gases, cokeries etc.	2223	2713	0	0	0	1	2011	0.0	0.0	154.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Lithuania: EU030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.7
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.6
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.5
Inland navigation	0	0	0	0	0	0	0	0	0.4	1.4
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.5
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6
Inland navigation	0	0	0	0	0	0	0	0	0.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1630	1574	1473	3.7	0.7	-1.0
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4
Private cars and motorcycles	705	845	919	881	871	802	721	2.7	-0.5	-1.9
Heavy goods and light commercial vehicles	204	387	443	517	555	559	547	8.1	2.3	-0.1
Rail	76	79	65	67	78	80	80	-1.5	1.8	0.3
Aviation	27	46	49	69	79	85	78	6.1	4.9	-0.1
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5
By transport activity										
Passenger transport	777	947	1013	998	998	934	846	2.7	-0.2	-1.6
Freight transport	277	466	508	584	632	639	627	6.2	2.2	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.6	6.5			
ENERGY EFFICIENCY										
Primary energy consumption	6401	7907	6073	5934	5772	5603	6142	-0.5	-0.5	0.6
Final Energy Demand	3767	4601	4763	4996	5032	4786	4214	2.4	0.6	-1.8
by sector										
Industry	780	987	898	1172	1184	1192	1074	1.4	2.8	-1.0
Energy intensive industries	363	436	486	689	694	694	617	3.0	3.6	-1.2
Other industrial sectors	416	551	412	483	489	498	457	-0.1	1.7	-0.7
Residential	1368	1509	1599	1498	1436	1318	1082	1.6	-1.1	-2.8
Tertiary	563	672	720	718	757	677	564	2.5	0.5	-2.9
Transport ⁽⁵⁾	1057	1433	1546	1608	1656	1599	1494	3.9	0.7	-1.0
by fuel										
Solids	82	177	208	238	180	120	77	9.8	-1.4	-8.2
Oil	1356	1616	1613	1664	1693	1595	1428	1.7	0.5	-1.7
Gas	363	519	567	649	600	606	495	4.6	0.6	-1.9
Electricity	533	686	717	832	893	884	850	3.0	2.2	-0.5
Heat (from CHP and District Heating)	827	905	922	870	910	896	738	1.1	-0.1	-2.1
Renewable energy forms	605	698	738	743	757	683	624	2.0	0.3	-1.9
Other	0	0	0	0	0	1	3	0.0	0.0	30.5
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	374	317	234	191	164	151	161	-4.6	-3.5	-0.2
Industry (Energy on Value added, index 2000=100)	100	80	66	74	69	66	60	-4.1	0.4	-1.4
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	50	43	34	-2.7	-4.2	-3.6
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	54	45	-1.3	-2.9	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	19	0.3	-1.2	-2.3
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	18.9	16.0	1.5	-1.6	-1.9
of which ETS sectors (2013 scope) GHG emissions		11.7	9.4	7.8	7.0	7.2	5.1		-2.9	-3.1
of which ESD sectors (2013 scope) GHG emissions		13.2	13.6	13.4	12.5	11.7	10.9		-0.8	-1.3
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.5	8.0	1.8	-1.4	-2.9
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.5	1.1	-0.8	-5.4	-6.3
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.0
Industry	1.1	1.3	1.2	1.5	1.4	1.4	1.0	0.7	2.2	-3.6
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.4	3.7	-2.6	-4.8
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.3	2.2	-0.6	-5.8
Transport	3.1	4.2	4.5	4.6	4.6	4.4	4.1	3.7	0.2	-1.2
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.3	2.1	6.0	-1.4	-1.5
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	6.2	6.0	0.0	-2.1	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.4	39.3	33.2	1.5	-1.6	-1.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.13	0.05	2.3	-5.5	-8.8
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.40	1.37	0.6	-0.3	-0.5
Industry	1.38	1.35	1.29	1.31	1.21	1.19	0.93	-0.7	-0.6	-2.6
Residential	0.40	0.43	0.50	0.51	0.42	0.33	0.34	2.1	-1.6	-2.1
Tertiary	0.88	0.84	0.86	0.82	0.77	0.64	0.56	-0.3	-1.1	-3.0
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.72	-0.2	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.1	25.4	27.9			
RES-H&C share	26.1	30.4	33.2	36.7	38.3	37.1	43.4			
RES-E share	4.0	3.8	7.4	15.6	15.4	25.5	26.5			
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.2	10.9	11.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	110	110	112	8.7	-4.5	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	120	137	159	5.7	0.6	2.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	7.9	8.5	7.6	2.5	1.8
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.6	20.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Luxembourg: EUCO30			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2
GDP (in 000 M€13)	32	38	41	45	52	60	68	2.6	2.3	2.8
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4725	4770	4745	2.4	0.2	0.0
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.2
Oil	2320	3160	2869	2908	2862	2793	2838	2.2	0.0	-0.1
Natural gas	671	1176	1197	1031	1044	1141	1033	6.0	-1.4	-0.1
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Renewable energy forms	64	106	160	245	391	417	436	9.6	9.4	1.1
Energy Branch Consumption	26	30	50	51	55	60	72	6.9	0.9	2.7
Non-Energy Uses	55	29	33	39	42	45	47	-5.1	2.5	
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	64	111	122	148	265	294	306	6.7	8.1	1.5
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	64	111	122	148	265	294	306	6.7	8.1	1.5
Hydro	11	8	9	9	9	10	13	-1.4	0.2	3.0
Biomass & Waste	51	97	105	119	186	205	178	7.5	5.9	-0.4
Wind	2	5	5	7	43	42	48	7.4	24.8	1.1
Solar and others	0	2	3	13	27	37	67	0.0	25.2	9.7
Geothermal	0	0	0	0	0	0	0	0.0	0.0	14.9
Net Imports (ktoe)	3639	4671	4503	4468	4461	4476	4439	2.2	-0.1	0.0
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.2
Oil	2368	3141	2852	2908	2862	2793	2838	1.9	0.0	-0.1
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil products	2368	3141	2852	2908	2862	2793	2838	1.9	0.0	-0.1
Natural gas	671	1176	1197	1031	1044	1141	1033	6.0	-1.4	-0.1
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.8	93.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3276	3886	4139	22.6	0.1	2.4
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0
Gas (including derived gases)	215	3107	2916	2304	2365	2948	2846	29.8	-2.1	1.9
Biomass-waste	56	76	129	158	175	210	235	8.7	3.1	3.0
Hydro (pumping excluded)	124	94	108	110	110	114	149	-1.4	0.2	3.0
Wind	27	52	55	78	501	491	560	7.4	24.7	1.1
Solar	0	17	21	112	121	121	346	0.0	19.2	11.0
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	163	574	597	702	971	949	1239	13.8	5.0	2.5
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	47	93	107	212	467	454	759	8.6	15.9	5.0
Hydro (pumping excluded)	33	34	34	34	34	35	46	0.3	0.0	3.1
Wind	14	35	44	58	302	288	323	12.1	21.2	0.7
Solar	0	24	29	120	131	131	390	0.0	16.2	11.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	116	481	490	490	504	496	481	15.5	0.3	-0.5
of which cogeneration units	63	101	121	229	181	128	152	6.7	4.1	-1.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	103	468	469	469	469	457	442	16.4	0.0	-0.6
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0
Biomass-waste fired	9	9	17	20	34	37	37	7.1	7.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	38.0	46.1	37.6			
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.5	49.1			
% of gross electricity from CHP	17.7	10.1	9.6	23.3	16.0	8.0	8.6			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.7	24.1	31.2			
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	438	561	540	19.1	-2.3	2.1
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0
Gas (including derived gases)	66	544	520	383	392	503	484	22.8	-2.8	2.1
Biomass & Waste	29	32	33	36	46	57	56	1.5	3.2	2.2
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1	3	46	113	152	152	167	57.2	12.7	0.9
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	1	42	108	147	146	161	0.0	13.4	0.9
District heating	1	2	4	5	5	5	5	23.1	2.3	-0.8
Derived gases, cokeries etc.	0	0	0	0	0	1	2	0.0	0.0	16.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Luxembourg, EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.2
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.3
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.2
Rail	0	0	0	0	0	1	1	0.4	3.1	2.8
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	3	3	3	3	4	5	5	0.8	3.6	1.9
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.7
Rail	1	0	0	0	0	0	1	-6.5	1.9	3.2
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2759	2725	2827	3.1	0.6	0.2
Public road transport	60	92	106	115	122	123	127	5.9	1.4	0.4
Private cars and motorcycles	1153	1521	1341	1311	1216	1124	1172	1.5	-1.0	-0.4
Heavy goods and light commercial vehicles	364	721	709	818	956	975	985	6.9	3.0	0.3
Rail	12	11	13	14	16	18	20	0.8	1.9	2.2
Aviation	321	432	431	435	445	482	520	3.0	0.3	1.6
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.5
By transport activity										
Passenger transport	1535	2046	1880	1863	1785	1731	1821	2.0	-0.5	0.2
Freight transport	379	735	724	834	974	994	1006	6.7	3.0	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.4	5.4			
ENERGY EFFICIENCY										
Primary energy consumption	3599	4771	4609	4576	4683	4725	4698	2.5	0.2	0.0
Final Energy Demand	3505	4477	4327	4382	4468	4436	4400	2.1	0.3	-0.2
by sector										
Industry	714	754	739	585	589	559	495	0.4	-2.2	-1.7
Energy intensive industries	583	598	601	438	432	396	332	0.3	-3.2	-2.6
Other industrial sectors	130	156	139	148	157	163	163	0.6	1.3	0.3
Residential	468	525	508	498	521	546	501	0.8	0.3	-0.4
Tertiary	409	418	477	601	599	606	577	1.5	2.3	-0.4
Transport ⁽⁵⁾	1914	2781	2604	2697	2759	2725	2827	3.1	0.6	0.2
by fuel										
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.2
Oil	2261	3106	2835	2869	2820	2749	2791	2.3	-0.1	-0.1
Gas	605	631	675	645	652	637	549	1.1	-0.4	-1.7
Electricity	497	529	568	557	599	647	677	1.4	0.5	1.2
Heat (from CHP and District Heating)	13	75	74	80	75	78	70	19.2	0.2	-0.7
Renewable energy forms	22	59	108	181	277	290	283	17.2	9.9	0.2
Other	0	0	0	0	1	3	12	0.0	0.0	34.7
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	115	126	113	103	91	80	70	-0.1	-2.1	-2.7
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	63	2.9	-3.7	-3.7
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	76	61	-0.7	-1.1	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	74	61	-1.5	-0.1	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	161	139	132	0.3	-2.5	-2.0
Freight transport (toe/Mtkm)	139	268	247	245	234	218	201	5.9	-0.5	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.7	14.1	13.3	12.9	12.8	12.7	12.5	2.2	-0.4	-0.3
of which ETS sectors (2013 scope) GHG emissions		4.2	3.8	3.5	3.4	3.7	3.5		-1.0	0.3
of which ESD sectors (2013 scope) GHG emissions		9.9	9.5	9.5	9.4	9.0	8.9		-0.2	-0.5
CO ₂ Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	11.2	11.0	2.9	-0.4	-0.2
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.2	1.1	22.6	-2.8	2.1
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.5	-2.0	-2.8	-4.8
Residential	1.1	1.2	1.1	1.1	1.0	1.0	0.9	0.5	-1.1	-0.9
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.5	-0.6	0.6	-2.8
Transport	5.8	8.4	7.8	7.9	7.9	7.8	8.0	3.1	0.2	0.1
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.4	-2.1	-1.1	-1.7
Non-CO2 GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	1.0	-0.9	0.1	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.3	95.6	93.7	2.2	-0.4	-0.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.28	0.30	0.30	0.25	0.22	0.25	0.23	0.7	-2.9	0.3
Final energy demand (t of CO ₂ /toe)	2.49	2.52	2.43	2.40	2.32	2.26	2.25	-0.2	-0.5	-0.3
Industry	1.71	1.47	1.36	1.39	1.28	1.14	0.93	-2.3	-0.6	-3.1
Residential	2.29	2.28	2.22	2.14	1.93	1.85	1.84	-0.3	-1.4	-0.5
Tertiary	1.59	1.25	1.28	1.23	1.08	0.98	0.85	-2.1	-1.6	-2.4
Transport	3.01	3.04	2.99	2.92	2.88	2.86	2.84	-0.1	-0.4	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	8.9	9.3			
RES-H&C share	1.4	3.6	4.8	6.4	12.3	14.7	15.0			
RES-E share	2.1	3.2	3.8	6.1	12.0	11.4	15.0			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.8	11.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	96	95	100	-1.1	2.1	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	122	132	138	0.1	1.1	1.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.4	7.4	4.3	2.5	2.4
as % of GDP	9.5	11.5	11.2	10.4	11.4	10.8	10.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Malta: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	0	0	0	0	0	0	0	0	0.9	0.6	0.4	
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9		
Gross Inland Consumption (ktoe)	802	972	908	675	744	720	677	1.3	-2.0	-0.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.4		
Oil	802	972	903	579	342	332	313	1.2	-9.3	-0.9		
Natural gas	0	0	0	0	338	314	281	0.0	0.0	-1.8		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Renewable energy forms	0	1	5	21	49	57	66	0.0	25.7	2.9		
Energy Branch Consumption	10	2	10	6	5	4	4	0.5	-7.2	-3.3		
Non-Energy Uses	0	20	9	11	12	12	12	0.0	3.4	-0.2		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	0	1	4	16	38	46	59	0.0	24.3	4.6		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	0	1	4	16	38	46	59	0.0	24.3	4.6		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	0	0	1	3	1	2	3	0.0	9.5	8.5		
Wind	0	0	0	0	0	0	1	0.0	0.0	0.0		
Solar and others	0	1	4	13	36	44	55	0.0	25.6	4.3		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	3.0		
Net Imports (ktoe)	1458	1630	2362	2099	2095	2097	2091	4.9	-1.2	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.4		
Oil	1458	1630	2361	2019	1719	1730	1669	4.9	-3.1	-0.3		
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil products	1458	1630	2361	2019	1719	1730	1669	4.9	-3.1	-0.3		
Natural gas	0	0	0	0	349	340	398	0.0	0.0	1.3		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.8	97.2					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2477	2600	2475	1.0	1.6	0.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	1917	2240	2113	1293	0	0	0	1.0	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	2143	2224	1992	0.0	0.0	-0.7		
Biomass-waste	0	0	0	6	8	11	18	0.0	0.0	8.3		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	6	0.0	0.0	0.0		
Solar	0	0	0	103	326	366	459	0.0	0.0	3.5		
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	577	577	579	541	786	945	894	0.0	3.1	1.3		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	2	60	185	212	268	0.0	57.2	3.8		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	4	0.0	0.0	0.0		
Solar	0	0	2	60	185	212	264	0.0	57.2	3.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	577	577	577	481	601	733	626	0.0	0.4	0.4		
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-5.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	238	478	478	0.0	0.0	7.2		
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8		
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	4.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.1	30.8	31.1					
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.6	60.9	61.2					
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.5	14.5	19.5					
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	339	315	282	2.1	-5.1	-1.8		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	337	314	281	0.0	0.0	-1.8		
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	0.3		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	0	0	1	3	7	7	6	0.0	23.3	-2.6		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	1	3	7	7	6	0.0	23.3	-2.6		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	21.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUO30		
	2000	2005	2010	2015	2020	2025	2030	00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.2	1.2
Public road transport	0	0	1	1	1	1	1	1	0.8	0.5
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0	0.3	1.3
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0	0.3	1.3
Rail	0	0	0	0	0	0	0	0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	268	264	-0.5	0.6	-0.2
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.7
Private cars and motorcycles	97	105	110	109	102	90	83	1.2	-0.7	-2.1
Heavy goods and light commercial vehicles	36	37	31	31	34	35	37	-1.5	0.7	0.9
Rail	0	0	0	0	0	0	0	0	0.0	0.0
Aviation	122	87	102	105	122	131	134	-1.8	1.8	0.9
Inland navigation	0	0	0	0	0	0	0	0	0.0	0.0
By transport activity										
Passenger transport	232	205	224	225	236	233	227	-0.4	0.5	-0.4
Freight transport	36	37	31	31	34	35	37	-1.5	0.7	0.9
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.1			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	732	707	665	1.2	-2.0	-1.0
Final Energy Demand	483	478	476	501	546	551	525	-0.1	1.4	-0.4
by sector										
Industry	83	74	48	51	52	52	53	-5.4	0.8	0.3
Energy intensive industries	13	19	8	8	8	8	8	-4.8	-0.1	0.0
Other industrial sectors	70	55	40	44	44	44	45	-5.5	0.9	0.4
Residential	76	77	80	85	101	103	95	0.5	2.4	-0.6
Tertiary	55	85	94	108	124	128	114	5.4	2.8	-0.9
Transport ⁽⁵⁾	268	242	255	256	270	268	264	-0.5	0.6	-0.2
by fuel										
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.4
Oil	348	309	316	323	330	319	301	-1.0	0.4	-0.9
Gas	0	0	0	0	0	0	0	0.0	0.0	9.3
Electricity	135	168	155	166	196	207	199	1.4	2.4	0.2
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-0.8
Renewable energy forms	0	1	5	11	20	24	24	0.0	14.2	2.0
Other	0	0	0	0	0	0	0	0.0	0.0	32.6
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	142	162	134	89	89	78	67	-0.6	-4.0	-2.8
Industry (Energy on Value added, index 2000=100)	100	116	74	73	67	63	60	-2.9	-1.0	-1.2
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	88	73	-1.1	0.9	-2.8
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	130	121	97	2.1	0.5	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.6
Freight transport (toe/Mtkm)	139	135	116	113	110	107	102	-1.7	-0.6	-0.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	2.8	3.3	3.1	2.1	2.1	2.0	1.8	1.0	-3.9	-1.6
of which ETS sectors (2013 scope) GHG emissions		2.4	2.1	1.1	1.2	1.1	1.1		-6.0	-0.9
of which ESD sectors (2013 scope) GHG emissions		1.0	1.0	1.0	0.9	0.8	0.7		-0.4	-2.5
CO ₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.7	1.6	0.9	-4.4	-1.3
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.7	0.7	2.1	-8.1	-1.8
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.3	-5.1
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-1.2	2.4	-3.9
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.0	6.2	-0.7	-2.5
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.3
CO ₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO2 GHG emissions	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.6	-0.5	-3.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	94.6	88.9	80.9	1.0	-3.9	-1.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.28	0.27	1.1	-9.6	-1.8
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.74	1.72	-0.9	-1.0	-0.5
Industry	1.55	1.43	0.97	1.00	0.93	0.83	0.53	-4.6	-0.4	-5.4
Residential	1.02	0.80	0.86	0.91	0.86	0.71	0.62	-1.7	0.0	-3.3
Tertiary	0.67	0.40	0.72	0.73	0.51	0.46	0.43	0.7	-3.4	-1.6
Transport	3.00	3.00	2.99	2.96	2.92	2.92	2.91	0.0	-0.2	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.7	13.6	16.3			
RES-H&C share	0.0	1.0	7.0	17.5	23.9	30.7	36.3			
RES-E share	0.0	0.0	0.1	4.8	12.5	13.5	18.1			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.6	10.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	78	111	173	117	90	96	99	8.4	-6.3	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	75	84	201	177	170	165	161	10.4	-1.7	-0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.3	8.2	2.3	2.0
as % of GDP	6.8	8.9	12.5	11.2	12.7	13.0	12.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Netherlands: EUCO30				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
	Annual % Change										
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2	
GDP (in 000 M€13)	537	573	613	620	668	706	738	1.3	0.9	1.0	
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83464	80879	75268	1.4	-0.4	-1.0	
Solids	7852	8195	7596	9274	7935	7821	6519	-0.3	0.4	-1.9	
Oil	28245	32464	34649	34892	34337	33320	31835	2.1	-0.1	-0.8	
Natural gas	35009	35334	39309	33859	30925	30591	27288	1.2	-2.4	-1.2	
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4	
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0	
Renewable energy forms	1827	2872	3796	3906	9236	8903	9235	7.6	9.3	0.0	
Energy Branch Consumption	5353	6336	5088	5606	5436	5000	4729	-0.5	0.7	-1.4	
Non-Energy Uses	10491	13013	17582	13895	14823	15341	15345	5.3	-1.7	0.3	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	57555	62220	70219	51471	52976	45575	38024	2.0	-2.8	-3.3	
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0	
Oil	2405	2328	1985	1381	1414	956	738	-1.9	-3.3	-6.3	
Natural gas	52203	56276	63534	44126	40614	33886	26025	2.0	-4.4	-4.4	
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4	
Renewable energy sources	1926	2577	3671	5009	9993	9742	10271	6.7	10.5	0.3	
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1	
Biomass & Waste	1831	2371	3282	4236	7003	6617	6912	6.0	7.9	-0.1	
Wind	71	178	343	618	2394	2416	2416	17.0	21.4	0.1	
Solar and others	11	21	29	123	546	623	783	9.8	34.1	3.7	
Geothermal	0	0	8	24	41	77	150	0.0	18.2	14.0	
Net Imports (ktoe)	33759	37076	30549	47678	45866	51372	54431	-1.0	4.1	1.7	
Solids	7998	8312	9228	9274	7935	7821	6519	1.4	-1.5	-1.9	
Oil	41425	47836	45167	48901	48021	47838	46841	0.9	0.6	-0.2	
Crude oil and Feedstocks	61018	61724	60676	53468	50689	48102	45600	-0.1	-1.8	-1.1	
Oil products	-19594	-13888	-15508	-4567	-2668	-264	1241	-2.3	-16.1	0.0	
Natural gas	-17191	-20941	-24211	-10267	-9410	-2702	2686	3.5	-9.0	0.0	
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0	
Import Dependency (%)	38.0	37.7	30.4	48.1	46.4	53.0	58.9				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107587	123368	133670	129824	2.8	0.4	0.5	
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4	
Solids	24276	23500	22588	29437	23818	25280	21904	-0.7	0.5	-0.8	
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0	
Gas (including derived gases)	54606	61588	77566	56701	46790	58795	56342	3.6	-4.9	1.9	
Biomass-waste	3203	6683	8606	8343	15903	12286	13969	10.4	6.3	-1.3	
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1	
Wind	829	2067	3993	7185	27842	28096	28096	17.0	21.4	0.1	
Solar	8	34	60	1113	5003	5003	5304	22.2	55.5	0.6	
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	21048	21728	25072	30866	38388	37228	34253	1.8	4.4	-1.1	
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0	
Renewable energy	497	1312	2362	4706	15781	15858	16205	16.9	20.9	0.3	
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0	
Wind	447	1224	2237	3431	10158	10235	10235	17.5	16.3	0.1	
Solar	13	51	88	1238	5586	5586	5933	21.1	51.4	0.6	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	20066	19931	22225	25674	22122	20885	17563	1.0	0.0	-2.3	
of which cogeneration units	7372	7162	9300	8515	2413	5275	6599	2.4	-12.6	10.6	
of which CCS units	0	0	0	0	0	250	250	0.0	0.0	0.0	
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9	
Gas fired	14667	14529	16575	17356	14403	13497	10812	1.2	-1.4	-2.8	
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6	
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	35.5	39.5	41.8				
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.6	44.2	44.9				
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.9	24.1	33.5				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.4	1.6				
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	42.8	37.1	39.7				
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17050	18754	17688	1.9	-2.2	0.4	
Solids	4998	4958	4669	6490	4858	5156	4423	-0.7	0.4	-0.9	
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4	
Gas (including derived gases)	10671	11953	13773	9489	7746	9966	9647	2.6	-5.6	2.2	
Biomass & Waste	1213	2052	2460	1892	4446	3612	3599	7.3	6.1	-2.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	86454	91417	68924	63771	61735	59430	56823	-2.2	-1.1	-0.8	
Refineries	82233	86869	64188	58847	56691	55012	52681	-2.4	-1.2	-0.7	
Biofuels and hydrogen production	0	0	230	579	484	474	507	0.0	7.7	0.5	
District heating	398	436	499	366	338	320	299	2.3	-3.8	-1.2	
Derived gases, cokeries etc.	3824	4113	4007	3979	4222	3624	3336	0.5	0.5	-2.3	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Netherlands: EU CO ₂		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	184	195	183	191	200	210	219	-0.1	0.9	0.9
Public road transport	11	12	12	13	13	14	14	0.8	0.9	0.6
Private cars and motorcycles	143	152	138	141	146	152	157	-0.4	0.6	0.7
Rail	16	17	17	19	21	23	24	0.5	2.1	1.6
Aviation ⁽³⁾	13	14	15	17	18	21	22	1.1	2.4	1.9
Inland navigation	1	1	1	1	1	1	1	0.1	1.1	1.3
Freight transport activity (Gtkm)	94	100	106	111	121	129	135	1.3	1.3	1.1
Heavy goods and light commercial vehicles	48	51	54	55	61	64	66	1.2	1.3	0.8
Rail	5	6	6	6	7	8	8	2.7	1.5	1.8
Inland navigation	41	42	47	50	53	57	61	1.2	1.3	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14205	13472	12810	0.5	-0.5	-1.0
Public road transport	212	224	260	267	270	267	261	2.1	0.4	-0.3
Private cars and motorcycles	8007	8288	8206	7708	6904	6165	5704	0.2	-1.7	-1.9
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2740	2740	2700	2.2	0.1	-0.1
Rail	184	172	182	189	204	216	224	-0.1	1.1	0.9
Aviation	3382	3712	3463	3821	3834	3812	3633	0.2	1.0	-0.5
Inland navigation	328	207	159	239	253	271	287	-7.0	4.8	1.3
By transport activity										
Passenger transport	11703	12265	11985	11861	11077	10319	9677	0.2	-0.8	-1.3
Freight transport	2594	2933	3001	2957	3128	3153	3133	1.5	0.4	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	0.9	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.0	4.4			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68642	65538	59943	0.6	-0.1	-1.3
Final Energy Demand	50505	51654	51835	50854	50361	47144	42872	0.3	-0.3	-1.6
by sector										
Industry	14804	14814	12208	12815	13613	12452	11910	-1.9	1.1	-1.3
Energy intensive industries	10277	10532	8224	8734	9332	8542	8272	-2.2	1.3	-1.2
Other industrial sectors	4527	4281	3984	4082	4281	3909	3639	-1.3	0.7	-1.6
Residential	10299	10143	11518	10892	10520	10259	8844	1.1	-0.9	-1.7
Tertiary	11104	11499	13124	12329	12022	10961	9309	1.7	-0.9	-2.5
Transport ⁽⁵⁾	14297	15198	14985	14817	14205	13472	12810	0.5	-0.5	-1.0
by fuel										
Solids	1330	1515	1270	1402	1592	1558	1054	-0.5	2.3	-4.0
Oil	16505	17382	16113	15746	14870	13631	12457	-0.2	-0.8	-1.8
Gas	21011	20346	22378	21405	20317	17783	15041	0.6	-1.0	-3.0
Electricity	8408	8986	9189	9034	9568	9679	9400	0.9	0.4	-0.2
Heat (from CHP and District Heating)	2893	2981	2106	2038	2150	2270	2300	-3.1	0.2	0.7
Renewable energy forms	358	444	780	1223	1836	2127	2452	8.1	8.9	2.9
Other	0	0	0	8	27	95	168	-100.0	0.0	20.0
Energy intensity indicators										
Gross Int. Cons./GDP (toe/€13)	141	142	141	135	125	115	102	0.0	-1.2	-2.0
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	64	59	-2.9	-0.2	-2.3
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	79	64	0.6	-1.9	-3.0
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	73	59	0.1	-1.7	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	27	24	-0.4	-2.4	-2.7
Freight transport (toe/Mtkm)	28	29	28	27	26	25	23	0.2	-0.9	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO ₂ eq.)	222.8	221.6	216.9	209.7	193.0	183.9	166.4	-0.3	-1.2	-1.5
of which ETS sectors (2013 scope) GHG emissions		103.3	95.6	95.8	85.0	84.5	76.3		-1.2	-1.1
of which ESD sectors (2013 scope) GHG emissions		118.2	121.4	113.8	107.9	99.4	90.1		-1.2	-1.8
CO ₂ Emissions (energy related)	168.5	175.7	175.0	171.3	155.8	147.5	130.3	0.4	-1.2	-1.8
Power generation/District heating	51.9	55.5	57.7	54.3	43.6	47.5	43.3	1.1	-2.8	-0.1
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.7	7.9	-2.3	1.2	-2.2
Industry	26.6	26.5	22.9	26.6	27.6	22.7	18.7	-1.5	1.9	-3.8
Residential	18.9	17.9	20.6	19.1	17.5	16.5	13.4	0.9	-1.6	-2.6
Tertiary	17.5	18.3	21.1	18.7	16.6	14.1	11.4	1.9	-2.4	-3.7
Transport	42.4	45.3	43.9	42.3	40.6	38.1	35.6	0.4	-0.8	-1.3
CO ₂ Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.8	8.9	8.8	2.0	0.3	0.0
Non-CO ₂ GHG emissions	47.3	37.0	33.3	29.9	28.3	27.5	27.2	-3.4	-1.6	-0.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	85.7	81.7	73.9	-0.3	-1.2	-1.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.40	0.38	0.37	0.38	0.28	0.28	0.26	-0.6	-3.0	-0.6
Final energy demand (t of CO ₂ /toe)	2.09	2.09	2.09	2.10	2.03	1.94	1.85	0.0	-0.3	-0.9
Industry	1.80	1.79	1.87	2.07	2.03	1.83	1.57	0.4	0.8	-2.6
Residential	1.84	1.77	1.79	1.75	1.66	1.61	1.52	-0.2	-0.8	-0.9
Tertiary	1.58	1.59	1.61	1.51	1.38	1.28	1.23	0.2	-1.5	-1.2
Transport	2.97	2.98	2.93	2.86	2.86	2.83	2.78	-0.1	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	13.1	14.0	16.2			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.4	11.6			
RES-E share	2.6	6.3	9.7	12.9	38.1	34.8	37.3			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.8	13.2	16.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	84	90	93	2.7	2.5	1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	137	145	152	0.9	0.6	1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	77.8	83.5	91.0	3.5	1.5	1.6
as % of GDP	8.9	10.6	11.0	10.5	11.6	11.8	12.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Poland: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2		
GDP (in 000 M€13)	253	294	371	425	492	559	623	3.9	2.9	-2.4		
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	105480	104097	99116	1.3	0.5	-0.6		
Solids	56291	54612	54608	53011	50223	44582	40284	-0.3	-0.8	-2.2		
Oil	19037	21696	25747	25895	26611	25397	24097	3.1	0.3	-1.0		
Natural gas	9964	12237	12807	13159	16188	17565	18759	2.5	2.4	1.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-548	-962	-116	6	64	167	79	-14.4	0.0	2.3		
Renewable energy forms	3905	4643	7684	9863	12394	15056	15897	7.0	4.9	2.5		
Energy Branch Consumption	6664	6104	6095	6243	6141	5446	5203	-0.9	0.1	-1.6		
Non-Energy Uses	4357	4573	4961	5545	6359	7000	7377	1.3	2.5	1.5		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	79590	78592	67394	70900	70324	65973	61456	-1.6	0.4	-1.3		
Solids	71299	68857	55381	55586	51984	44588	36878	-2.5	-0.6	-3.4		
Oil	1062	1143	1063	1539	1581	1535	1489	0.0	4.0	-0.6		
Natural gas	3317	3887	3696	3947	4585	4871	7250	1.1	2.2	4.7		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3912	4705	7254	9829	12173	14979	15838	6.4	5.3	2.7		
Hydro	181	189	251	206	209	217	252	3.3	-1.8	1.9		
Biomass & Waste	3728	4493	6838	8749	10861	12451	12262	6.3	4.7	1.2		
Wind	0	12	143	832	984	2060	2665	80.0	21.3	10.5		
Solar and others	0	0	8	22	82	203	328	0.0	25.5	14.9		
Geothermal	3	11	13	21	38	48	331	16.1	11.0	24.1		
Net Imports (ktoe)	8773	15932	31567	31285	35447	38443	38003	13.7	1.2	0.7		
Solids	-16353	-13039	-2814	-2575	-1761	1323	3406	-16.1	-4.6	0.0		
Oil	19067	21466	25187	24607	25318	24173	22927	2.8	0.1	-1.0		
Crude oil and Feedstocks	17616	17893	22965	24633	24826	23369	21793	2.7	0.8	-1.3		
Oil products	1451	3573	2222	-26	491	805	1133	4.4	-14.0	8.7		
Natural gas	6607	8531	8874	9213	11607	12703	11533	3.0	2.7	-0.1		
Electricity	-548	-962	-116	6	64	167	79	-14.4	0.0	2.3		
Import Dependency (%)	9.9	17.2	31.3	30.6	33.5	36.8	38.2					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	177172	187448	197979	0.9	1.2	1.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	135888	142161	136592	137628	142011	132047	123305	0.1	0.4	-1.4		
Oil (including refinery gas)	1916	2757	2892	9	0	470	470	4.2	-100.0	0.0		
Gas (including derived gases)	2961	6573	6689	2968	9780	15868	21657	8.5	3.9	8.3		
Biomass-waste	298	1532	6332	9667	11450	12519	17637	35.7	6.1	4.4		
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2523	2929	3.3	-1.8	1.9		
Wind	5	135	1664	9669	11437	23954	30992	78.7	21.3	10.5		
Solar	0	0	0	29	67	67	988	0.0	0.0	30.9		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	30310	31721	33411	38260	33674	38105	42936	1.0	0.1	2.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	821	1036	2044	6084	6756	12458	16553	9.6	12.7	9.4		
Hydro (pumping excluded)	817	915	936	949	949	981	1079	1.4	0.1	1.3		
Wind	4	121	1108	5100	5728	11398	14328	75.5	17.9	9.6		
Solar	0	0	0	35	79	79	1146	0.0	0.0	30.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	29489	30685	31367	32176	26918	25647	26383	0.6	-1.5	-0.2		
of which cogeneration units	9354	8313	8693	6564	6346	7883	7947	-0.7	-3.1	2.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	28214	28608	29158	28543	23058	20775	19347	0.3	-2.3	-1.7		
Gas fired	764	1548	1592	1659	1710	2635	4663	7.6	0.7	10.6		
Oil fired	396	396	396	398	171	162	155	0.0	-8.1	-0.9		
Biomass-waste fired	115	133	221	1574	1980	2074	2217	6.8	24.5	1.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.2	52.1	49.1					
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.4	37.1	38.3					
% of gross electricity from CHP	16.1	16.8	17.6	18.2	20.8	18.9	17.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	14.3	20.8	26.5					
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	37537	37281	36613	0.5	-0.2	-0.2		
Solids	35247	36349	34345	33735	33116	31259	29306	-0.3	-0.4	-1.2		
Oil (including refinery gas)	245	184	171	2	0	154	154	-3.5	-74.4	286.6		
Gas (including derived gases)	1032	1805	2179	913	1961	2945	3631	7.8	-1.0	6.4		
Biomass & Waste	102	434	1645	2046	2460	2923	3523	32.1	4.1	3.7		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	32964	31279	38702	40301	40617	37734	34031	1.6	0.5	-1.8		
Refineries	18969	18975	24192	27120	27440	25986	24376	2.5	1.3	-1.2		
Biofuels and hydrogen production	0	49	887	1100	1396	1380	1304	0.0	4.6	-0.7		
District heating	4179	3465	3716	3183	3579	3269	3139	-1.2	-0.4	-1.3		
Derived gases, cokeries etc.	9816	8789	9908	8898	8203	7098	5212	0.1	-1.9	-4.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	225	233	268	302	344	373	406	1.7	2.6	1.7
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.6
Private cars and motorcycles	134	156	194	223	254	270	290	3.8	2.7	1.3
Rail	29	23	22	24	31	38	46	-2.5	3.2	4.3
Aviation ⁽¹⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.0
Freight transport activity (Gtkm)	114	140	170	201	228	258	287	4.0	3.0	2.4
Heavy goods and light commercial vehicles	59	90	121	150	167	188	208	7.4	3.3	2.3
Rail	54	50	49	51	61	70	79	-1.0	2.2	2.6
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.1
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19785	19373	19215	5.9	1.3	-0.3
Public road transport	654	581	610	632	668	681	674	-0.7	0.9	0.1
Private cars and motorcycles	6314	7213	9660	10120	10620	9780	9362	4.3	1.0	-1.3
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7373	7667	7767	11.9	1.6	0.5
Rail	541	469	372	366	426	470	524	-3.7	1.4	2.1
Aviation	274	319	508	613	693	771	884	6.4	3.1	2.5
Inland navigation	6	5	3	3	4	4	4	-7.4	2.3	2.3
By transport activity										
Passenger transport	7317	8170	10823	11407	12035	11298	10998	4.0	1.1	-0.9
Freight transport	2514	4095	6636	7283	7750	8075	8217	10.2	1.6	0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99120	97098	91740	1.3	0.3	-0.8
Final Energy Demand	55260	58986	67070	68144	71648	70399	66656	2.0	0.7	-0.7
by sector										
Industry	18504	16147	14193	16600	17433	18038	17627	-2.6	2.1	0.1
Energy intensive industries	13031	10951	9372	10814	11127	11092	10321	-3.2	1.7	-0.7
Other industrial sectors	5473	5196	4821	5786	6306	6946	7305	-1.3	2.7	1.5
Residential	17193	19454	22501	20556	21377	20471	18271	2.7	-0.5	-1.6
Tertiary	9644	10846	12664	12057	12781	12244	11273	2.8	0.1	-1.2
Transport ⁽⁵⁾	9919	12539	17712	18930	20058	19646	19485	6.0	1.3	-0.3
by fuel										
Solids	13215	12285	14494	13387	11200	9625	7178	0.9	-2.5	-4.4
Oil	15500	17844	20727	21289	21511	19984	18646	2.9	0.4	-1.4
Gas	7574	8780	9468	9673	11129	11242	11342	2.3	1.6	0.2
Electricity	8482	9064	10238	11011	12270	13362	14121	1.9	1.8	1.4
Heat (from CHP and District Heating)	6886	7056	6547	6063	6917	6626	6905	-0.5	0.6	0.0
Renewable energy forms	3602	3957	5596	6721	8620	9549	8413	4.5	4.4	-0.2
Other	0	0	0	1	1	11	51	0.0	0.0	44.5
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	350	313	272	240	214	186	159	-2.5	-2.4	-2.9
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	28	25	-9.7	-1.3	-2.5
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	55	44	-0.8	-3.4	-4.0
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	76	64	53	0.0	-2.7	-3.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	29	26	2.0	-1.5	-2.6
Freight transport (toe/Mtkm)	22	29	39	36	34	31	29	5.9	-1.4	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	400.5	403.1	411.9	407.8	399.7	377.3	350.3	0.3	-0.3	-1.3
of which ETS sectors (2013 scope) GHG emissions		222.2	210.3	208.8	206.0	195.3	180.2		-0.2	-1.3
of which ESD sectors (2013 scope) GHG emissions		180.9	201.6	199.0	193.8	182.0	170.1		-0.4	-1.3
CO ₂ Emissions (energy related)	303.3	307.5	320.7	311.8	306.8	286.6	261.5	0.6	-0.4	-1.6
Power generation/District heating	167.4	171.0	165.6	157.9	158.3	151.8	141.5	-0.1	-0.5	-1.1
Energy Branch	10.2	7.7	8.5	9.7	9.1	7.8	7.4	-1.8	0.7	-2.1
Industry	51.9	36.9	30.4	34.9	31.8	28.4	22.8	-5.2	0.4	-3.3
Residential	27.4	35.5	44.9	37.8	34.7	30.6	25.8	5.1	-2.6	-2.9
Tertiary	18.4	20.7	21.9	19.1	18.1	14.7	11.8	1.7	-1.9	-4.2
Transport	28.0	35.8	49.3	52.4	54.8	53.3	52.3	5.8	1.1	-0.5
CO ₂ Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.4	26.1	26.8	-1.0	2.3	0.5
Non-CO2 GHG emissions	75.0	74.7	71.0	73.2	67.5	64.6	62.1	-0.5	-0.5	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	84.2	79.5	73.8	0.3	-0.3	-1.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.71	0.69	0.67	0.65	0.59	0.55	0.49	-0.6	-1.2	-1.8
Final energy demand (t of CO ₂ /toe)	2.27	2.18	2.19	2.12	1.95	1.80	1.69	-0.4	-1.2	-1.4
Industry	2.81	2.28	2.14	2.10	1.83	1.57	1.29	-2.6	-1.6	-3.4
Residential	1.59	1.83	2.00	1.84	1.62	1.50	1.41	2.3	-2.1	-1.4
Tertiary	1.91	1.91	1.73	1.59	1.42	1.20	1.05	-1.0	-2.0	-3.0
Transport	2.82	2.85	2.79	2.77	2.73	2.71	2.68	-0.1	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.1	18.3	19.5			
RES-H&C share	9.6	10.2	11.6	13.8	19.1	22.4	22.6			
RES-E share	1.6	2.7	6.6	13.4	14.3	20.7	26.5			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.7	11.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	73	82	86	2.6	4.1	1.6
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	132	142	144	5.2	0.3	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	92.9	108.4	123.0	6.9	3.5	2.9
as % of GDP	13.4	15.7	17.8	16.7	18.9	19.4	19.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Portugal: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4
GDP (in 000 M€13)	169	176	181	174	187	204	217	0.7	0.4	1.5
Gross Inland Consumption (ktoe)	25285	27475	24205	22983	21351	20729	18437	-0.4	-1.2	-1.5
Solids	3805	3349	1658	3347	808	9	4	-8.0	-6.9	-41.7
Oil	15475	16174	12215	10669	10383	9920	9212	-2.3	-1.6	-1.2
Natural gas	2078	3751	4489	3446	3421	3651	1879	8.0	-2.7	-5.8
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3
Renewable energy forms	3846	3615	5618	5327	6288	6648	6905	3.9	1.1	0.9
Energy Branch Consumption	1028	1235	1195	1416	1210	1227	1160	1.5	0.1	-0.4
Non-Energy Uses	2393	2587	1728	1470	1485	1525	1509	-3.2	-1.5	0.2
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5216	6157	6525	6764	4.1	0.6	0.9
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	3846	3615	5800	5216	6157	6525	6764	4.2	0.6	0.9
Hydro	974	407	1389	820	1597	1563	1623	3.6	1.4	0.2
Biomass & Waste	2770	2967	3375	3181	3274	3467	3030	2.0	-0.3	-0.8
Wind	14	153	790	1004	1012	1013	1498	49.2	2.5	4.0
Solar and others	19	23	66	136	199	405	533	13.6	11.6	10.4
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4
Net Imports (ktoe)	22072	24845	18588	18330	15747	14743	12198	-1.7	-1.6	-2.5
Solids	3914	3225	1629	3347	808	9	4	-8.4	-6.8	-41.7
Oil	16039	17140	12436	11231	10931	10446	9703	-2.5	-1.3	-1.2
Crude oil and Feedstocks	12316	13795	11875	14608	14070	13381	12493	-0.4	1.7	-1.2
Oil products	3723	3345	561	-3376	-3138	-2935	-2790	-17.2	0.0	-1.2
Natural gas	2039	3893	4505	3446	3426	3663	1912	8.2	-2.7	-5.7
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3
Import Dependency (%)	85.1	88.6	75.1	77.8	71.9	69.3	64.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50192	48537	48049	45178	2.2	-1.0	-0.7
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	14595	15226	7100	14862	3500	0	0	-7.0	-6.8	-100.0
Oil (including refinery gas)	8421	8791	3008	769	1967	1252	610	-9.8	-4.2	-11.1
Gas (including derived gases)	7231	13606	14900	9528	8663	9622	682	7.5	-5.3	-22.4
Biomass-waste	1553	1987	2942	2936	3074	4026	3329	6.6	0.4	0.8
Hydro (pumping excluded)	11323	4731	16148	9533	18569	18170	18870	3.6	1.4	0.2
Wind	168	1773	9182	11676	11767	11781	17424	49.2	2.5	4.0
Solar	1	3	212	680	789	2990	4055	68.3	14.1	17.8
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21849	21674	24407	5.6	1.4	1.1
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	4619	6083	9036	12611	14827	16149	18974	6.9	5.1	2.5
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8
Wind	83	1064	3796	5079	5113	5113	6876	46.6	3.0	3.0
Solar	1	2	134	467	531	1628	2127	63.2	14.8	14.9
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	6370	7378	9885	8484	7022	5525	5432	4.5	-3.4	-2.5
of which cogeneration units	1676	1079	1310	1491	1783	1393	1221	-2.4	3.1	-3.7
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0
Gas fired	1542	2477	4799	5062	4989	4131	4055	12.0	0.4	-2.1
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6
Biomass-waste fired	221	244	343	521	643	671	679	4.5	6.5	0.5
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	24.9	24.9	20.9			
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.6	41.0	28.8			
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.6	13.9	10.2			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.9	77.4	97.1			
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3431	3172	1440	-1.2	-5.1	-8.3
Solids	3198	3319	1597	3329	793	0	0	-6.7	-6.8	-100.0
Oil (including refinery gas)	1683	1793	574	185	466	296	144	-10.2	-2.1	-11.1
Gas (including derived gases)	1215	2309	2775	1560	1433	1748	193	8.6	-6.4	-18.2
Biomass & Waste	356	428	662	621	664	1053	1029	6.4	0.0	4.5
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	13004	13953	12457	15231	14686	13981	13053	-0.4	1.7	-1.2
Refineries	12555	13953	12148	14807	14260	13562	12653	-0.3	1.6	-1.2
Biofuels and hydrogen production	0	0	309	422	423	396	371	0.0	3.2	-1.3
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	449	0	0	1	4	23	29	0.0	0.0	21.8

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	105	115	116	121	125	136	145	1.0	0.8	1.5
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.1
Private cars and motorcycles	73	87	86	86	86	93	98	1.7	0.1	1.3
Rail	5	5	5	5	6	7	8	1.4	1.7	2.3
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	2.0
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.3
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.4
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.3
Rail	2	2	2	2	3	3	3	0.6	1.5	2.4
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6637	6463	6303	0.9	-0.8	-0.5
Public road transport	237	135	129	129	128	133	142	-5.9	0.0	1.0
Private cars and motorcycles	4590	5056	5149	4730	4385	4040	3818	1.2	-1.6	-1.4
Heavy goods and light commercial vehicles	891	1026	835	797	844	877	872	-0.6	0.1	0.3
Rail	89	67	57	50	56	57	62	-4.3	-0.3	1.1
Aviation	784	888	1012	1124	1185	1314	1366	2.6	1.6	1.4
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.1
By transport activity										
Passenger transport	5689	6109	6318	6007	5725	5514	5353	1.1	-1.0	-0.7
Freight transport	947	1079	908	860	911	949	949	-0.4	0.0	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.5	6.4			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21513	19866	19205	16928	-0.2	-1.2	-1.6
Final Energy Demand	17919	19009	18022	16789	16804	16146	14950	0.1	-0.7	-1.2
by sector										
Industry	6323	5796	5453	5066	5136	4934	4604	-1.5	-0.6	-1.1
Energy intensive industries	4179	3889	3634	3613	3663	3516	3220	-1.4	0.1	-1.3
Other industrial sectors	2144	1907	1819	1452	1473	1418	1384	-1.6	-2.1	-0.6
Residential	2804	3224	2976	2632	2764	2604	2247	0.6	-0.7	-2.1
Tertiary	2157	2801	2368	2224	2267	2146	1797	0.9	-0.4	-2.3
Transport ⁽⁵⁾	6636	7188	7226	6867	6637	6463	6303	0.9	-0.8	-0.5
by fuel										
Solids	466	17	50	17	15	9	4	-20.0	-11.4	-13.1
Oil	10713	10812	9199	8142	7702	7323	6818	-1.5	-1.8	-1.2
Gas	873	1307	1564	1691	1800	1725	1521	6.0	1.4	-1.7
Electricity	3300	3983	4290	3865	4051	4104	3858	2.7	-0.6	-0.5
Heat (from CHP and District Heating)	134	328	338	325	363	297	411	9.7	0.7	1.2
Renewable energy forms	2434	2563	2581	2748	2868	2665	2303	0.6	1.1	-2.2
Other	0	0	0	1	4	24	35	0.0	0.0	24.2
Energy intensity indicators										
Gross Int. Cons./GDP (toe/ME13)	150	156	134	132	114	101	85	-1.1	-1.6	-2.9
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	74	67	-1.2	-0.8	-2.0
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	86	74	60	-0.6	-0.9	-3.6
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	74	58	-0.6	-0.9	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	32	29	-0.3	-2.2	-2.3
Freight transport (toe/Mtkm)	36	33	33	31	30	29	28	-0.9	-0.8	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.9	90.7	73.4	73.2	59.6	55.0	47.1	-1.7	-2.1	-2.3
of which ETS sectors (2013 scope) GHG emissions		40.6	27.7	32.3	22.0	19.3	14.6		-2.3	-4.0
of which ESD sectors (2013 scope) GHG emissions		50.1	45.7	40.9	37.7	35.6	32.5		-1.9	-1.5
CO ₂ Emissions (energy related)	61.0	64.6	49.6	50.1	38.7	34.5	28.1	-2.1	-2.4	-3.2
Power generation/District heating	21.7	24.9	14.9	18.0	8.1	5.1	0.9	-3.6	-5.9	-19.6
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.8	2.6	-0.2	0.6	0.0
Industry	11.6	8.2	6.3	5.7	5.5	5.1	4.2	-5.9	-1.4	-2.7
Residential	2.0	2.3	2.6	2.0	2.0	1.8	1.6	2.5	-2.4	-2.5
Tertiary	3.4	4.4	2.4	2.0	1.7	1.5	1.2	-3.2	-3.3	-3.7
Transport	19.9	21.7	20.9	19.5	18.8	18.2	17.6	0.5	-1.1	-0.6
CO ₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.0	6.2	6.2	-2.0	1.1	0.2
Non-CO2 GHG emissions	19.3	19.1	18.4	16.9	14.8	14.3	12.8	-0.4	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	95.9	88.4	75.7	-1.7	-2.1	-2.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.15	0.09	0.02	-6.3	-5.1	-19.1
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.65	1.64	-1.4	-0.7	-0.1
Industry	1.83	1.42	1.15	1.12	1.07	1.04	0.90	-4.5	-0.8	-1.6
Residential	0.71	0.72	0.86	0.75	0.73	0.67	0.70	1.9	-1.7	-0.4
Tertiary	1.55	1.56	1.02	0.88	0.76	0.72	0.66	-4.1	-2.9	-1.4
Transport	3.00	3.01	2.89	2.84	2.83	2.82	2.79	-0.4	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.4	35.8	40.8			
RES-H&C share	30.4	32.1	33.9	36.8	38.7	39.7	39.7			
RES-E share	28.3	27.7	40.7	47.4	63.8	68.8	87.3			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	13.4	19.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	113	117	106	1.6	3.7	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	140	145	148	-1.3	3.0	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 ME13)	16.8	22.3	24.4	23.5	28.5	30.9	33.9	3.8	1.6	1.7
as % of GDP	10.0	12.7	13.5	13.5	15.3	15.1	15.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Romania: EUO30			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
	Annual % Change									
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4
GDP (in 000 M€13)	87	114	130	145	163	181	195	4.1	2.3	1.8
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	34988	35466	32444	-0.2	-0.2	-0.8
Solids	7493	8788	7008	6207	6462	5013	3409	-0.7	-0.8	-6.2
Oil	9992	10286	9310	8775	8530	8397	7888	-0.7	-0.9	-0.8
Natural gas	13680	13923	10788	9688	10761	10068	7891	-2.3	0.0	-3.1
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1
Renewable energy forms	4137	5026	5891	6299	6989	7132	8457	3.6	1.7	2.0
Energy Branch Consumption	3675	4105	2839	2480	2444	2322	2100	-2.5	-1.5	-1.5
Non-Energy Uses	1883	2467	1473	1754	2001	2202	2347	-2.4	3.1	1.6
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	28465	28224	27824	26642	28345	30143	29829	-0.2	0.2	0.5
Solids	5604	5795	5904	5042	5111	3839	2416	0.5	-1.4	-7.2
Oil	6355	6226	4565	3643	3646	3657	3651	-3.3	-2.2	0.0
Natural gas	10968	9701	8619	8848	9958	9932	9730	-2.4	1.5	-0.2
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3
Renewable energy sources	4131	5070	5739	6271	6784	6966	8284	3.3	1.7	2.0
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0
Biomass & Waste	2854	3314	3980	4135	4557	4567	4663	3.4	1.4	0.2
Wind	0	0	26	557	560	636	1555	0.0	35.8	10.8
Solar and others	0	0	0	163	183	250	433	0.0	111.9	9.0
Geothermal	7	18	23	30	45	70	190	13.1	7.1	15.3
Net Imports (ktoe)	8009	10867	7827	6473	6674	5360	2656	-0.2	-1.6	-8.8
Solids	1920	2939	1234	1165	1350	1174	993	-4.3	0.9	-3.0
Oil	3437	3988	4838	5156	4915	4776	4275	3.5	0.2	-1.4
Crude oil and Feedstocks	4801	8857	6233	5504	4995	4629	4056	2.6	-2.2	-2.1
Oil products	-1364	-4870	-1395	-348	-80	147	220	0.2	-24.9	0.0
Natural gas	2712	4190	1816	839	802	136	-1837	-3.9	-7.8	0.0
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1
Import Dependency (%)	21.8	27.7	21.9	19.5	19.1	15.1	8.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67528	70607	75043	75231	1.6	1.5	0.6
Nuclear energy	5456	5555	11623	11890	11922	23792	23606	7.9	0.3	7.1
Solids	18926	21916	20681	21982	22416	16312	9804	0.9	0.8	-7.9
Oil (including refinery gas)	3399	1894	692	625	406	230	207	-14.7	-5.2	-6.5
Gas (including derived gases)	9001	9834	7323	8032	9915	7109	848	-2.0	3.1	-21.8
Biomass-waste	0	7	111	522	763	974	1726	0.0	21.3	8.5
Hydro (pumping excluded)	14778	20207	19883	16112	16723	16778	16779	3.0	-1.7	0.0
Wind	0	0	306	6473	6512	7397	18087	0.0	35.8	10.8
Solar	0	0	0	1891	1950	2452	4175	0.0	0.0	7.9
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	20197	19153	20120	24896	23882	23033	26066	0.0	1.7	0.9
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2
Renewable energy	6242	6289	6863	11413	11457	12108	16588	1.0	5.3	3.8
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0
Wind	0	0	389	2976	2989	3390	6730	0.0	22.6	8.5
Solar	0	0	0	1792	1824	2074	3214	0.0	0.0	5.8
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	13283	12192	11913	12070	11011	8096	6649	-1.1	-0.8	-4.9
of which cogeneration units	3431	5246	4582	4234	4098	2609	2851	2.9	-1.1	-3.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2
Gas fired	3728	3439	3488	4173	4114	4062	3852	-0.7	1.7	-0.7
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0
Biomass-waste fired	147	5	23	96	139	169	213	-16.9	19.7	4.3
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.2	34.8	31.5			
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	38.9	38.7	34.1			
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.4	10.0	7.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.6	68.5	85.6			
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7400	5470	3174	-2.2	-1.6	-8.1
Solids	5462	6085	5929	5216	5337	3980	2550	0.8	-1.0	-7.1
Oil (including refinery gas)	1736	799	327	176	130	73	66	-15.4	-8.8	-6.5
Gas (including derived gases)	3579	3437	2399	1331	1764	1197	176	-3.9	-3.0	-20.6
Biomass & Waste	12	9	21	113	169	219	382	6.1	23.3	8.5
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	16275	19666	15568	13664	13413	15845	15132	-0.4	-1.5	1.2
Refineries	11250	15219	11480	9680	9159	8781	8192	0.2	-2.2	-1.1
Biofuels and hydrogen production	0	0	115	273	558	521	495	0.0	17.1	-1.2
District heating	1738	825	749	702	679	623	529	-8.1	-1.0	-2.5
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5920	5916	-0.2	-0.7	7.0

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	85	93	110	118	130	144	159	2.6	1.7	2.0
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.7
Private cars and motorcycles	54	63	78	85	92	102	112	3.9	1.7	2.0
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.6
Freight transport activity (Gtkm)	27	56	43	51	61	70	77	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.6
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5725	5854	5883	4.3	1.2	0.3
Public road transport	293	260	359	373	378	379	377	2.0	0.5	0.0
Private cars and motorcycles	2082	2416	3214	3381	3371	3277	3178	4.4	0.5	-0.6
Heavy goods and light commercial vehicles	363	1182	946	1142	1356	1481	1524	10.1	3.7	1.2
Rail	357	159	222	245	274	303	322	-4.6	2.1	1.6
Aviation	128	128	272	265	298	362	426	7.8	0.9	3.6
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.8
By transport activity										
Passenger transport	2648	2855	3921	4091	4130	4110	4076	4.0	0.5	-0.1
Freight transport	689	1331	1152	1356	1595	1744	1806	5.3	3.3	1.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	8.8			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	32987	33263	30097	-0.1	-0.4	-0.9
Final Energy Demand	22772	24714	22591	23117	24597	24475	22862	-0.1	0.9	-0.7
by sector										
Industry	9296	10007	6876	7316	8142	8285	7820	-3.0	1.7	-0.4
Energy intensive industries	6510	7208	4759	4794	5392	5364	4869	-3.1	1.3	-1.0
Other industrial sectors	2787	2799	2117	2522	2750	2921	2952	-2.7	2.7	0.7
Residential	8409	7990	8102	7825	8138	7790	6883	-0.4	0.0	-1.7
Tertiary	1606	2441	2489	2468	2529	2479	2208	4.5	0.2	-1.3
Transport ⁽⁵⁾	3460	4276	5124	5507	5788	5921	5951	4.0	1.2	0.3
by fuel										
Solids	1046	1611	939	815	939	849	676	-1.1	0.0	-3.2
Oil	5526	6628	6184	6765	6596	6526	6083	1.1	0.6	-0.8
Gas	6910	7754	6189	6337	6835	6747	5753	-1.1	1.0	-1.7
Electricity	2918	3341	3553	3683	4075	4244	4391	2.0	1.4	0.7
Heat (from CHP and District Heating)	3570	2136	1650	1493	1622	1688	1608	-7.4	-0.2	-0.1
Renewable energy forms	2802	3244	4077	4023	4530	4416	4341	3.8	1.1	-0.4
Other	0	0	0	0	1	4	10	-100.0	0.0	27.2
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	423	343	275	229	215	196	166	-4.2	-2.5	-2.5
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	32	-7.8	-1.0	-2.2
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	34	27	-6.9	-2.1	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	81	66	1.4	-2.1	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	25	1.3	-1.2	-2.2
Freight transport (toe/Mtkm)	25	24	27	27	26	25	24	0.5	-0.2	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.5	109.3	93.9	-1.5	-0.6	-2.3
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	48.7	40.3	29.3		-1.3	-5.0	
of which ESD sectors (2013 scope) GHG emissions	76.5	69.6	71.8	69.7	69.0	64.6		0.0	-0.8	
CO ₂ Emissions (energy related)	88.8	95.8	77.4	71.5	73.8	65.2	51.5	-1.4	-0.5	-3.5
Power generation/District heating	42.0	39.0	33.6	27.2	28.6	21.0	11.9	-2.2	-1.6	-8.4
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.4	-2.8	-2.9	-1.1
Industry	21.6	25.2	14.4	14.7	15.6	14.7	11.9	-4.0	0.9	-2.7
Residential	6.6	7.3	5.8	6.5	6.9	6.9	6.0	-1.2	1.7	-1.4
Tertiary	1.9	4.2	3.6	3.5	3.5	3.3	2.6	6.7	-0.4	-2.9
Transport	9.9	12.4	14.8	15.5	15.4	15.8	15.7	4.1	0.4	0.2
CO ₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.6	7.5	-6.1	0.8	-0.4
Non-CO2 GHG emissions	43.8	46.7	40.9	39.8	36.9	36.5	34.9	-0.7	-1.0	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.6	43.0	36.9	-1.5	-0.6	-2.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.21	0.12	-0.6	-2.5	-8.8
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.66	1.58	-0.3	-0.2	-0.6
Industry	2.33	2.52	2.09	2.01	1.92	1.77	1.52	-1.1	-0.8	-2.3
Residential	0.79	0.92	0.72	0.83	0.85	0.88	0.87	-0.8	1.6	0.3
Tertiary	1.17	1.70	1.44	1.42	1.37	1.31	1.17	2.2	-0.5	-1.6
Transport	2.86	2.90	2.89	2.81	2.67	2.67	2.64	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.2	27.1	34.3			
RES-H&C share	16.1	17.9	27.4	25.9	26.4	27.6	32.2			
RES-E share	30.2	28.8	30.4	42.3	40.7	42.8	63.6			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.6	15.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	75	76	74	5.0	0.7	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	109	119	126	5.7	1.9	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.5	37.0	42.8	8.8	3.5	2.8
as % of GDP	11.5	16.8	17.7	18.4	19.9	20.5	21.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
	Annual % Change									
Population (In million)	5	5	5	5	5	5	5	0.0	0.0	-0.2
GDP (in 000 M€13)	43	55	69	76	89	102	117	4.8	2.6	2.7
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18304	18567	18260	-0.2	0.2	0.0
Solids	4278	4231	3897	3247	3103	2778	2068	-0.9	-2.3	-4.0
Oil	3415	3711	3692	3346	3437	3414	3448	0.8	-0.7	0.0
Natural gas	5777	5884	5007	4939	4977	5096	4315	-1.4	-0.1	-1.4
Nuclear	4255	4626	3819	3569	4953	5375	6616	-1.1	2.6	2.9
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Renewable energy forms	810	859	1360	1551	2037	2133	2051	5.3	4.1	0.1
Energy Branch Consumption	623	1297	963	942	936	852	823	4.5	-0.3	-1.3
Non-Energy Uses	1365	1279	1053	1597	1738	1886	2026	-2.6	5.1	1.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	6389	6684	6345	6192	7956	8089	9022	-0.1	2.3	1.3
Solids	1018	637	613	593	512	431	209	-4.9	-1.8	-8.6
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0
Natural gas	133	126	88	120	107	73	74	-4.0	1.9	-3.6
Nuclear	4255	4626	3819	3569	4953	5375	6616	-1.1	2.6	2.9
Renewable energy sources	818	912	1438	1613	2121	2209	2123	5.8	4.0	0.0
Hydro	397	399	452	407	469	432	431	1.3	0.4	-0.8
Biomass & Waste	421	505	972	1148	1574	1644	1525	8.7	4.9	-0.3
Wind	0	1	1	1	2	36	36	0.0	16.2	31.9
Solar and others	0	0	6	51	63	70	78	0.0	26.8	2.3
Geothermal	0	8	8	6	14	28	53	0.0	5.4	14.3
Net Imports (ktoe)	11997	12428	11230	10675	10348	10478	9238	-0.7	-0.8	-1.1
Solids	3432	3739	2951	2654	2591	2347	1859	-1.5	-1.3	-3.3
Oil	3090	3274	3266	3048	3174	3414	3448	0.6	-0.3	0.8
Crude oil and Feedstocks	5720	5429	5282	5716	5602	5625	5441	-0.8	0.6	-0.3
Oil products	-2630	-2155	-2015	-2667	-2429	-2212	-1993	-2.6	1.9	-2.0
Natural gas	5707	5735	5003	4819	4871	5023	4241	-1.3	-0.3	-1.4
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Import Dependency (%)	65.5	65.3	62.9	63.3	56.5	56.4	50.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34016	36286	37567	-1.1	2.2	1.0
Nuclear energy	16494	17727	14574	14662	20320	22049	28276	-1.2	3.4	3.4
Solids	5584	5535	3570	4121	4615	3623	1697	-4.4	2.6	-9.5
Oil (including refinery gas)	202	741	600	163	8	91	91	11.5	-34.7	26.8
Gas (including derived gases)	3871	2629	2716	1730	911	2745	230	-3.5	-10.3	-12.8
Biomass-waste	32	76	726	1129	2154	1811	1224	36.6	11.5	-5.5
Hydro (pumping excluded)	4615	4638	5255	4738	5448	5021	5017	1.3	0.4	-0.8
Wind	0	6	6	6	26	414	414	0.0	15.8	31.9
Solar	0	0	17	520	532	532	619	0.0	40.8	1.5
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7733	8014	8792	-0.3	1.4	1.3
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6
Renewable energy	1685	1601	1624	2220	2357	2712	2772	-0.4	3.8	1.6
Hydro (pumping excluded)	1685	1596	1600	1607	1719	1719	1719	-0.5	0.7	0.0
Wind	0	5	5	5	19	374	374	0.0	14.3	34.6
Solar	0	0	19	608	620	620	680	0.0	41.7	0.9
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2526	2795	3246	3337	2555	2482	1999	2.5	-2.4	-2.4
of which cogeneration units	618	5411	2821	1020	871	913	787	16.4	-11.1	-1.0
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4
Gas fired	821	1067	1674	1738	1325	1327	1103	7.4	-2.3	-1.8
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0
Biomass-waste fired	7	30	177	241	354	359	359	38.2	7.2	0.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	47.3	48.9	46.4			
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	36.9	36.5	29.1			
% of gross electricity from CHP	18.4	15.3	15.9	25.6	21.9	19.6	8.6			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	83.7	82.2	94.6			
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1790	1948	957	-0.4	-3.5	-6.1
Solids	1619	1677	1205	1089	1132	981	487	-2.9	-0.6	-8.1
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.8
Gas (including derived gases)	1002	847	793	314	171	496	105	-2.3	-14.2	-4.8
Biomass & Waste	4	40	264	255	484	441	335	51.0	6.2	-3.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12901	13989	12558	12416	13516	13503	14398	-0.3	0.7	0.6
Refineries	5959	6398	6011	6450	6334	6123	5967	0.1	0.5	-0.6
Biofuels and hydrogen production	0	11	98	118	176	170	173	0.0	6.0	-0.1
District heating	674	718	497	367	376	378	321	-3.0	-2.8	-1.6
Derived gases, cokeries etc.	6268	6862	5952	5481	6630	6832	7937	-0.5	1.1	1.8

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovakia: EU CO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	37	39	36	38	45	51	57	-0.2	2.2	2.4
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	2.2
Private cars and motorcycles	24	26	27	28	34	38	43	1.2	2.1	2.3
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.2
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	18	6.0	1.9	1.6
Rail	11	9	8	8	10	11	13	-3.2	1.8	3.0
Inland navigation	1	1	1	1	1	1	2	-1.5	1.1	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2346	2321	2373	4.4	0.5	0.1
Public road transport	193	185	132	141	154	165	174	-3.7	1.5	1.2
Private cars and motorcycles	830	992	1194	1155	1208	1146	1161	3.7	0.1	-0.4
Heavy goods and light commercial vehicles	308	527	821	814	872	883	892	10.3	0.6	0.2
Rail	83	42	40	41	48	54	61	-7.1	1.8	2.6
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.4
By transport activity										
Passenger transport	1064	1223	1374	1346	1423	1381	1416	2.6	0.4	0.0
Freight transport	390	570	867	859	924	941	957	8.3	0.6	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	7.9	8.0			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16566	16681	16234	-0.1	-0.1	-0.2
Final Energy Demand	10980	11561	11546	11225	11660	11481	10868	0.5	0.1	-0.7
by sector										
Industry	4532	4713	4361	4420	4554	4558	4445	-0.4	0.4	-0.2
Energy intensive industries	3678	3887	3637	3655	3725	3690	3536	-0.1	0.2	-0.5
Other industrial sectors	854	826	723	765	829	868	909	-1.7	1.4	0.9
Residential	2586	2540	2312	2176	2215	2178	1899	-1.1	-0.4	-1.5
Tertiary	2407	1916	2240	2038	2160	2042	1802	-0.7	-0.4	-1.8
Transport ⁽⁵⁾	1455	2392	2633	2591	2730	2704	2723	6.1	0.4	0.0
by fuel										
Solids	1747	1572	1637	1294	1236	1171	1000	-0.6	-2.8	-2.1
Oil	1703	2184	2301	2230	2287	2204	2178	3.1	-0.1	-0.5
Gas	4698	4540	4119	4011	4082	3797	3388	-1.3	-0.1	-1.8
Electricity	1893	1965	2075	2219	2345	2507	2584	0.9	1.2	1.0
Heat (from CHP and District Heating)	619	951	851	726	813	817	701	3.2	-0.5	-1.5
Renewable energy forms	320	349	562	745	894	977	1005	5.8	4.8	1.2
Other	0	0	0	0	2	8	13	0.0	0.0	23.5
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	424	347	259	221	206	182	157	-4.8	-2.3	-2.7
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	30	26	-8.9	-1.5	-2.6
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	37	28	-5.1	-2.9	-4.4
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	40	31	-3.8	-3.2	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	27	24	2.7	-1.8	-2.5
Freight transport (toe/Mtkm)	20	27	40	37	35	32	30	7.2	-1.1	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	54.1	54.7	50.8	45.0	42.2	39.7	34.1	-0.6	-1.8	-2.1
of which ETS sectors (2013 scope) GHG emissions		29.2	24.7	20.4	18.8	17.5	13.4		-2.7	-3.3
of which ESD sectors (2013 scope) GHG emissions		25.5	26.1	24.6	23.4	22.2	20.7		-1.1	-1.2
CO ₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.2	29.9	24.6	0.0	-1.8	-2.7
Power generation/District heating	11.1	11.2	9.2	6.3	5.8	6.1	3.0	-1.8	-4.6	-6.5
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.7	1.6	4.4	-2.0	-2.1
Industry	13.3	14.1	12.8	12.0	11.3	9.7	8.7	-0.4	-1.3	-2.6
Residential	4.1	3.6	3.4	2.8	2.7	2.5	2.2	-2.0	-2.2	-2.2
Tertiary	4.5	2.7	3.5	3.1	3.1	2.6	2.0	-2.5	-1.0	-4.5
Transport	4.1	6.6	7.3	7.1	7.3	7.2	7.2	5.9	0.1	-0.2
CO ₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.5	-7.0	0.9	-0.1
Non-CO2 GHG emissions	8.7	9.1	8.9	7.8	6.4	6.3	6.0	0.2	-3.2	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	55.8	52.5	45.1	-0.6	-1.8	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.13	0.06	-1.4	-5.9	-6.8
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.10	1.92	1.84	-0.2	-1.1	-1.3
Industry	2.94	2.99	2.94	2.72	2.48	2.13	1.95	0.0	-1.7	-2.4
Residential	1.60	1.40	1.47	1.30	1.22	1.17	1.14	-0.9	-1.8	-0.7
Tertiary	1.85	1.43	1.55	1.54	1.45	1.26	1.10	-1.8	-0.7	-2.7
Transport	2.82	2.77	2.77	2.74	2.69	2.67	2.64	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.7	14.2	15.5	16.5			
RES-H&C share	1.2	4.9	7.8	10.3	12.2	15.4	18.2			
RES-E share	11.9	13.5	17.8	21.7	25.9	23.2	21.0			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	10.9	11.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	82	75	84	1.2	1.6	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	133	140	144	4.3	-0.7	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.7	15.6	17.8	4.9	1.8	2.7
as % of GDP	16.4	15.6	16.6	14.7	15.4	15.3	15.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (In million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 M€13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6776	7001	6765	6422	1.1	-0.3	-0.9
Solids	1305	1539	1451	1268	1353	1062	1087	1.1	-0.7	-2.2
Oil	2419	2580	2579	2360	2275	2076	1851	0.6	-1.2	-2.0
Natural gas	826	929	863	681	689	750	670	0.4	-2.2	-0.3
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Renewable energy forms	788	787	1054	1182	1394	1496	1527	3.0	2.8	0.9
Energy Branch Consumption	107	100	112	99	105	86	92	0.5	-0.6	-1.3
Non-Energy Uses	238	310	209	114	120	126	126	-1.3	-5.4	0.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	3085	3492	3687	3441	3763	3629	3767	1.8	0.2	0.0
Solids	1062	1184	1196	1023	1127	832	941	1.2	-0.6	-1.8
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	11	15	0.0	-3.9	14.1
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1259	1358	1382	2.7	2.1	0.9
Hydro	330	298	388	380	391	407	435	1.6	0.1	1.1
Biomass & Waste	458	489	601	632	724	742	664	2.7	1.9	-0.9
Wind	0	0	0	0	24	26	42	0.0	0.0	5.6
Solar and others	0	0	9	36	54	127	185	0.0	19.2	13.0
Geothermal	0	0	27	45	66	55	56	0.0	9.4	-1.7
Net Imports (ktoe)	3415	3855	3581	3356	3259	3157	2675	0.5	-0.9	-2.0
Solids	244	323	279	245	226	231	146	1.4	-2.1	-4.3
Oil	2466	2634	2596	2380	2295	2097	1871	0.5	-1.2	-2.0
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2295	2097	1871	1.2	-1.2	-2.0
Natural gas	820	925	857	678	685	740	656	0.4	-2.2	-0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Import Dependency (%)	52.9	52.5	49.4	49.4	46.4	46.5	41.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15128	16437	16765	18105	1.8	0.1	1.0
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5182	3907	3929	1.4	-0.2	-2.7
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	110	436	356	6.5	-14.8	12.5
Biomass-waste	70	120	222	111	300	422	589	12.2	3.0	7.0
Hydro (pumping excluded)	3834	3461	4512	4424	4542	4735	5058	1.6	0.1	1.1
Wind	0	0	0	5	284	302	488	0.0	0.0	5.6
Solar	0	0	13	295	391	1163	1884	0.0	40.8	17.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3886	4416	5018	0.8	2.0	2.6
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2506	3376	2.6	5.0	6.7
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1296	2.5	1.3	0.6
Wind	0	0	0	4	200	212	337	0.0	0.0	5.3
Solar	0	0	12	262	352	1074	1743	0.0	40.2	17.3
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1414	1210	942	-0.1	0.1	-4.0
of which cogeneration units	648	336	333	228	213	241	238	-6.4	-4.4	1.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	469	391	176	3.0	2.3	-9.3
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	124	118	3.9	9.3	-0.5
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.3	41.4	39.5			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.5	33.2	32.8			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.5	6.2	5.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.8	74.1	76.3			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1393	1234	1278	1.8	-1.1	-0.9
Solids	1215	1412	1381	1217	1301	1020	1063	1.3	-0.6	-2.0
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	19	93	76	6.7	-16.2	14.7
Biomass & Waste	15	30	65	27	73	121	138	15.5	1.2	6.5
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1627	1623	0.6	0.1	0.3
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	141	145	0.0	12.3	0.0
District heating	80	89	57	61	62	56	46	-3.2	0.8	-2.8
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1431	1431	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovenia: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	25	27	30	31	34	35	37	2.0	1.0	0.9
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.3
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.8
Rail	1	1	1	1	1	1	2	1.4	4.1	3.8
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.8
Heavy goods and light commercial vehicles	4	8	8	8	10	12	13	7.9	3.1	2.1
Rail	3	3	3	4	5	6	7	1.8	3.6	4.2
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1906	1850	1773	3.8	0.5	-0.7
Public road transport	78	71	92	94	96	95	92	1.8	0.3	-0.4
Private cars and motorcycles	1025	1047	1304	1319	1300	1191	1091	2.4	0.0	-1.7
Heavy goods and light commercial vehicles	98	323	355	370	444	487	507	13.8	2.3	1.3
Rail	24	28	26	27	33	38	43	1.0	2.2	2.7
Aviation	25	23	28	28	34	38	41	1.3	2.1	1.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	1132	1146	1430	1447	1437	1332	1233	2.4	0.1	-1.5
Freight transport	117	346	376	391	469	517	541	12.4	2.2	1.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.1	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.8	8.4			
ENERGY EFFICIENCY										
Primary energy consumption	6214	7016	7017	6662	6881	6640	6296	1.2	-0.2	-0.9
Final Energy Demand	4457	4897	4927	4954	5046	4874	4483	1.0	0.2	-1.2
by sector										
Industry	1424	1644	1273	1332	1411	1429	1329	-1.1	1.0	-0.6
Energy intensive industries	836	1028	788	890	944	944	843	-0.6	1.8	-1.1
Other industrial sectors	588	616	485	442	467	484	486	-1.9	-0.4	0.4
Residential	1077	1140	1191	1145	1100	1030	886	1.0	-0.8	-2.1
Tertiary	697	620	657	638	628	565	493	-0.6	-0.4	-2.4
Transport ⁽⁵⁾	1259	1493	1806	1839	1907	1851	1774	3.7	0.5	-0.7
by fuel										
Solids	90	80	47	51	52	42	24	-6.3	1.1	-7.6
Oil	2264	2409	2447	2239	2155	1952	1726	0.8	-1.3	-2.2
Gas	569	665	620	635	645	625	577	0.9	0.4	-1.1
Electricity	905	1096	1029	1098	1157	1243	1259	1.3	1.2	0.8
Heat (from CHP and District Heating)	195	196	192	197	204	204	187	-0.2	0.6	-0.9
Renewable energy forms	435	452	592	735	833	806	704	3.1	3.5	-1.7
Other	0	0	0	0	0	2	6	0.0	0.0	32.6
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	227	215	195	181	171	151	134	-1.5	-1.3	-2.4
Industry (Energy on Value added, index 2000=100)	100	93	70	74	72	65	56	-3.6	0.3	-2.3
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	65	51	-1.6	-1.1	-3.9
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	48	39	-3.5	-1.6	-4.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	37	33	0.3	-1.0	-2.4
Freight transport (toe/Mtkm)	18	32	34	33	31	29	27	6.4	-1.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.0	20.2	19.2	17.5	17.4	15.5	14.7	0.1	-1.0	-1.7
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.5	6.4	6.2		-0.8	-2.0
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	9.2	8.5		-1.1	-1.5
CO ₂ Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	12.2	11.4	0.9	-1.0	-1.9
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	4.6	4.7	1.3	-1.1	-1.8
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.9	14.1
Industry	2.4	2.3	1.7	1.7	1.7	1.5	1.1	-3.0	-0.5	-3.9
Residential	1.3	1.5	1.2	0.9	0.8	0.7	0.6	-1.0	-4.0	-3.4
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.3	-3.0	-4.1	-5.4
Transport	3.7	4.4	5.3	5.2	5.3	5.0	4.7	3.8	0.0	-1.1
CO ₂ Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.8	-1.7	-1.1	0.2
Non-CO2 GHG emissions	3.9	3.5	3.0	3.0	2.7	2.6	2.5	-2.6	-1.0	-1.0
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.3	83.5	78.7	0.1	-1.0	-1.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.34	0.35	0.33	0.30	0.29	0.24	0.23	-0.3	-1.2	-2.4
Final energy demand (t of CO ₂ /toe)	1.91	1.88	1.85	1.72	1.64	1.56	1.50	-0.4	-1.2	-0.9
Industry	1.66	1.41	1.37	1.29	1.18	1.02	0.84	-1.9	-1.5	-3.3
Residential	1.24	1.28	1.01	0.79	0.73	0.65	0.64	-2.0	-3.2	-1.3
Tertiary	1.68	1.63	1.32	1.03	0.91	0.77	0.67	-2.4	-3.6	-3.0
Transport	2.90	2.97	2.93	2.85	2.76	2.72	2.65	0.1	-0.6	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	27.9	30.7			
RES-H&C share	18.9	19.0	25.5	29.8	34.4	37.6	38.4			
RES-E share	30.9	28.7	32.2	33.0	35.8	41.0	49.0			
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.3	17.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	70	60	63	-0.7	4.5	-1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	108	114	115	0.2	-0.3	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.1	8.6	5.0	2.0	1.4
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.2	17.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Spain: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3
GDP (in 000 M€13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8
Gross Inland Consumption (ktoe)	123642	144223	129868	124583	125110	114904	104565	0.5	-0.4	-1.8
Solids	20938	20566	7906	15768	15746	10156	4551	-9.3	7.1	-11.7
Oil	63967	70457	60436	53990	50052	46986	43437	-0.6	-1.9	-1.4
Natural gas	15305	29886	31162	25155	25416	19834	16204	7.4	-2.0	-4.4
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Renewable energy forms	7005	8587	15090	15611	19345	23209	25834	8.0	2.5	2.9
Energy Branch Consumption	6259	6666	7878	7994	7430	6496	5960	2.3	-0.6	-2.2
Non-Energy Uses	9407	8362	7046	5744	6094	6369	6379	-2.8	-1.4	0.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33101	36683	38669	40745	0.8	0.7	1.1
Solids	7966	6265	3296	2973	2889	1054	396	-8.4	-1.3	-18.0
Oil	228	167	124	377	365	345	360	-5.9	11.4	-0.1
Natural gas	234	185	78	42	47	53	58	-10.4	-4.9	2.0
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Renewable energy sources	7005	8587	14677	15536	19210	23044	25759	7.7	2.7	3.0
Hydro	2430	1582	3638	2853	2862	2877	2883	4.1	-2.4	0.1
Biomass & Waste	4131	5113	6183	6934	9585	9498	9176	4.1	4.5	-0.4
Wind	406	1821	3807	4443	4844	5622	7472	25.1	2.4	4.4
Solar and others	33	65	1035	1288	1895	4987	6153	41.3	6.2	12.5
Geothermal	5	7	16	18	24	58	76	11.5	4.3	12.1
Net Imports (ktoe)	99342	123832	106804	100729	97777	85568	73249	0.7	-0.8	-2.8
Solids	12840	14418	6726	12795	12856	9102	4156	-6.3	6.7	-10.7
Oil	70653	79281	68704	62860	58954	55793	52015	-0.3	-1.5	-1.2
Crude oil and Feedstocks	59023	60650	56496	66666	63004	59592	55783	-0.4	1.1	-1.2
Oil products	11631	18630	12208	-3806	-4050	-3800	-3769	0.5	0.0	-0.7
Natural gas	15467	30248	30950	25113	25451	19962	16637	7.2	-1.9	-4.2
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	68.9	64.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275295	284460	280646	277028	3.0	-0.5	-0.3
Nuclear energy	62206	57539	61990	58066	58066	57757	57521	0.0	-0.7	-0.1
Solids	79094	84047	25493	57621	57873	34087	13082	-10.7	8.5	-13.8
Oil (including refinery gas)	22578	24420	16562	4988	566	1702	1600	-3.1	-28.7	11.0
Gas (including derived gases)	21942	80725	95840	53218	56376	29581	11437	15.9	-5.2	-14.7
Biomass-waste	2100	3104	4674	4514	5972	7982	10156	8.3	2.5	5.5
Hydro (pumping excluded)	28256	18393	42304	33177	33274	33455	33517	4.1	-2.4	0.1
Wind	4727	21176	44271	51665	56322	65378	86885	25.1	2.4	4.4
Solar	17	41	6423	12046	16011	50704	62829	80.6	9.6	14.6
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104566	120988	127673	6.6	0.5	2.0
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0
Renewable energy	17760	25774	41432	46783	51047	71195	83361	8.8	2.1	5.0
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0
Wind	2206	9918	20693	23025	24977	27875	34597	25.1	1.9	3.3
Solar	12	60	4653	7126	9275	26525	31968	81.5	7.1	13.2
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	26776	39924	49994	50333	46121	42394	36914	6.4	-0.8	-2.2
of which cogeneration units	4570	6597	3382	6808	2989	5355	5683	-3.0	-1.2	6.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	11556	11359	10389	10316	9333	7378	3968	-1.1	-1.1	-8.2
Gas fired	4713	17647	29569	31333	30271	29749	28097	20.2	0.2	-0.7
Oil fired	10028	10043	8964	7496	4752	3422	2951	-1.1	-6.1	-4.7
Biomass-waste fired	478	876	1072	1188	1765	1845	1899	8.4	5.1	0.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	29.9	25.8	24.3			
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.6	40.1	37.9			
% of gross electricity from CHP	9.2	4.0	7.4	9.8	4.7	6.0	6.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.6	76.7	90.6			
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24380	15736	8228	-0.5	-0.3	-10.3
Solids	18245	17623	5561	13703	13680	8128	3139	-11.2	9.4	-13.7
Oil (including refinery gas)	4455	5249	3391	948	133	403	379	-2.7	-27.7	11.0
Gas (including derived gases)	3075	11140	14839	8684	9266	5249	2424	17.0	-4.6	-12.5
Biomass & Waste	697	1391	1435	994	1300	1956	2285	7.5	-1.0	5.8
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	79871	79435	78129	80766	79028	75897	72214	-0.2	0.1	-0.9
Refineries	60685	61323	58480	63161	60960	58106	54654	-0.4	0.4	-1.1
Biofuels and hydrogen production	70	256	1412	1419	2062	1912	1964	35.0	3.9	-0.5
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	19115	17857	18237	16187	16006	15878	15596	-0.5	-1.3	-0.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	476	535	542	561	609	661	714	1.3	1.2	1.6
Public road transport	50	53	51	52	53	55	56	0.1	0.5	0.4
Private cars and motorcycles	310	346	352	354	372	397	425	1.3	0.5	1.3
Rail	25	28	29	29	37	44	51	1.2	2.5	3.4
Aviation ⁽¹⁾	89	106	109	124	145	164	180	2.1	2.9	2.2
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.4
Freight transport activity (Gtkm)	180	265	227	228	247	264	281	2.3	0.9	1.3
Heavy goods and light commercial vehicles	138	217	190	191	206	219	232	3.2	0.8	1.2
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.5
Inland navigation	31	36	28	28	30	32	34	-1.1	0.6	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34459	33256	32755	1.2	-0.8	-0.5
Public road transport	1354	1408	1319	1329	1326	1308	1280	-0.3	0.1	-0.4
Private cars and motorcycles	18655	20608	19876	18098	16536	14788	14107	0.6	-1.8	-1.6
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8353	8319	8481	2.9	-0.3	0.2
Rail	708	1029	899	772	874	975	1049	2.4	-0.3	1.8
Aviation	4486	5323	5389	6005	6612	7052	6978	1.9	2.1	0.5
Inland navigation	1395	1555	1057	707	757	813	859	-2.7	-3.3	1.3
<i>By transport activity</i>										
Passenger transport	25151	27727	26960	25730	24830	23558	22813	0.7	-0.8	-0.8
Freight transport	7933	12069	10220	9303	9629	9698	9942	2.6	-0.6	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	6.0	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119017	108535	98186	0.7	-0.3	-1.9
Final Energy Demand	79885	97754	89072	85314	86239	81585	76561	1.1	-0.3	-1.2
<i>by sector</i>										
Industry	25368	30967	21435	21275	22232	21411	20596	-1.7	0.4	-0.8
Energy intensive industries	17349	20338	13379	13268	14005	13229	12527	-2.6	0.5	-1.1
Other industrial sectors	8020	10628	8056	8007	8227	8182	8069	0.0	0.2	-0.2
Residential	12000	15132	16920	15550	15515	14303	12264	3.5	-0.9	-2.3
Tertiary	9287	11712	13526	13441	14017	12599	10928	3.8	0.4	-2.5
Transport ⁽⁵⁾	33230	39944	37192	35048	34475	33273	32773	1.1	-0.8	-0.5
<i>by fuel</i>										
Solids	1775	1712	1261	1123	1307	1294	719	-3.4	0.4	-5.8
Oil	46297	53449	46775	43129	40251	37130	33881	0.1	-1.5	-1.7
Gas	12141	17978	14645	14743	14323	12988	12287	1.9	-0.2	-1.5
Electricity	16205	20827	21049	20057	21307	21505	21284	2.7	0.1	0.0
Heat (from CHP and District Heating)	0	0	0	8	117	296	567	0.0	0.0	17.1
Renewable energy forms	3469	3788	5343	6252	8924	8322	7690	4.4	5.3	-1.5
Other	0	0	0	3	10	50	133	0.0	1431.1	29.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/€13)	139	138	119	114	104	87	72	-1.5	-1.4	-3.5
Industry (Energy on Value added, index 2000=100)	100	114	87	87	83	74	66	-1.4	-0.5	-2.3
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	94	78	61	1.4	-2.1	-4.1
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	82	65	1.0	-0.9	-4.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	29	26	-1.1	-2.2	-2.6
Freight transport (toe/Mtkm)	44	46	45	41	39	37	35	0.3	-1.5	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	398.8	447.7	364.3	356.5	341.5	291.9	245.7	-0.9	-0.6	-3.2
of which ETS sectors (2013 scope) GHG emissions		216.2	146.4	157.9	157.4	122.4	89.8		0.7	-5.5
of which ESD sectors (2013 scope) GHG emissions		231.5	218.0	198.6	184.1	169.5	155.9		-1.7	-1.7
CO₂ Emissions (energy related)	291.6	347.3	272.6	271.0	258.8	212.8	170.2	-0.7	-0.5	-4.1
Power generation/District heating	98.8	117.7	70.3	81.2	79.8	48.8	21.6	-3.4	1.3	-12.2
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.5	11.6	1.9	-1.3	-2.1
Industry	50.4	59.2	42.3	39.8	39.5	35.4	30.0	-1.7	-0.7	-2.7
Residential	17.1	20.9	20.5	16.5	13.6	11.7	8.0	1.9	-4.0	-5.2
Tertiary	13.2	16.5	15.0	15.5	13.9	10.6	8.3	1.3	-0.7	-5.1
Transport	98.7	119.5	108.3	101.9	97.7	93.7	90.7	0.9	-1.0	-0.7
CO₂ Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	18.8	18.7	18.4	-1.8	-1.5	-0.2
Non-CO₂ GHG emissions	81.1	71.0	69.9	67.7	64.0	60.5	57.1	-1.5	-0.9	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.3	98.5	82.9	-0.9	-0.6	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.45	0.41	0.24	0.29	0.28	0.17	0.08	-6.2	1.7	-12.2
Final energy demand (t of CO ₂ /toe)	2.25	2.21	2.09	2.04	1.91	1.86	1.79	-0.7	-0.9	-0.7
Industry	1.99	1.91	1.97	1.87	1.77	1.66	1.46	-0.1	-1.1	-1.9
Residential	1.42	1.38	1.21	1.06	0.88	0.81	0.65	-1.6	-3.2	-3.0
Tertiary	1.43	1.41	1.11	1.15	0.99	0.85	0.76	-2.5	-1.1	-2.7
Transport	2.97	2.99	2.91	2.91	2.83	2.82	2.77	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	26.6	32.0			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	24.0	26.3			
RES-E share	16.6	19.1	29.8	36.9	38.5	54.9	68.8			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.1	12.7	18.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	98	91	82	2.5	2.7	-1.8
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	173	167	165	3.5	1.5	-0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.7	144.8	151.9	164.8	4.9	1.9	1.3
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.5	11.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EUCO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (In million)	9	9	9	10	10	11	11	0.5	0.9	0.8
GDP (in 000 M€13)	296	337	366	404	448	497	552	2.2	2.1	2.1
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45916	45083	43705	0.4	-1.0	-0.5
Solids	2452	2629	2492	2263	1980	1739	1284	0.2	-2.3	-4.2
Oil	15377	14136	14199	11663	10830	9709	8712	-0.8	-2.7	-2.2
Natural gas	816	886	1484	679	3063	2502	1605	6.2	7.5	-6.3
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9
Renewable energy forms	15066	15308	17512	19146	19606	20655	21840	1.5	1.1	1.1
Energy Branch Consumption	1141	1326	1469	1414	1366	1317	1313	2.6	-0.7	-0.4
Non-Energy Uses	3143	2460	2113	2183	2281	2398	2436	-3.9	0.8	0.7
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	30052	34233	32685	33372	31494	32473	33524	0.8	-0.4	0.6
Solids	162	211	238	210	86	93	0	4.0	-9.7	-100.0
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0
Renewable energy sources	15066	15308	17512	18801	19215	20189	21332	1.5	0.9	1.1
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1
Biomass & Waste	8264	8961	11490	11434	11777	11651	11900	3.4	0.2	0.1
Wind	39	81	301	1147	1249	2398	3249	22.6	15.3	10.0
Solar and others	5	6	11	17	31	54	98	7.4	10.9	12.2
Geothermal	0	0	0	0	0	2	6	0.0	0.0	34.5
Net Imports (ktoe)	20436	19460	19294	15820	16741	15039	12730	-0.6	-1.4	-2.7
Solids	2409	2556	2548	2054	1894	1647	1284	0.6	-2.9	-3.8
Oil	16849	16698	15102	13853	13100	12030	10882	-1.1	-1.4	-1.8
Crude oil and Feedstocks	21606	19369	19139	15905	15015	13864	12773	-1.2	-2.4	-1.6
Oil products	-4757	-2671	-4038	-2502	-1915	-1833	-1891	-1.6	-7.2	-0.1
Natural gas	776	843	1466	679	3111	2610	1984	6.6	7.8	-4.4
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	31.7	27.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	173114	178929	186314	0.2	1.5	0.7
Nuclear energy	57316	72377	57828	57851	49379	49379	49738	0.1	-1.6	0.1
Solids	1706	1169	1770	1540	1118	740	638	0.4	-4.5	-5.5
Oil (including refinery gas)	1533	1379	1774	249	326	190	44	1.5	-15.6	-18.2
Gas (including derived gases)	1292	1342	3782	471	15529	11256	5565	11.3	15.2	-9.8
Biomass-waste	4342	8357	13397	14846	20560	18668	21792	11.9	4.4	0.6
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1
Wind	457	936	3502	13335	14526	27884	37776	22.6	15.3	10.0
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37489	41963	45170	0.7	0.1	1.9
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0
Renewable energy	16718	16799	18654	22501	23533	27851	30941	1.1	2.4	2.8
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0
Wind	209	493	2019	6025	6507	10825	13915	25.5	12.4	7.9
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	7754	7256	8761	7643	7007	7163	7280	1.2	-2.2	0.4
of which cogeneration units	4940	3488	5100	4504	6272	6041	5510	0.3	2.1	-1.3
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6
Gas fired	547	469	1168	1168	3222	3268	3267	7.9	10.7	0.1
Oil fired	4472	3974	3963	2958	836	836	836	-1.2	-14.4	0.0
Biomass-waste fired	2398	2465	3274	3161	2814	2924	3049	3.2	-1.5	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.4	47.6	45.9			
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	37.4	36.2			
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.3	15.5	12.0			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.2	93.2	96.6			
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7865	7088	6668	6.2	1.9	-1.6
Solids	462	508	597	566	266	189	163	2.6	-7.8	-4.8
Oil (including refinery gas)	530	317	431	70	93	61	13	-2.0	-14.3	-17.9
Gas (including derived gases)	508	591	998	225	2489	1863	969	7.0	9.6	-9.0
Biomass & Waste	2084	3158	4491	4886	5018	4974	5523	8.0	1.1	1.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	40980	42243	39786	34628	31697	30730	29500	-0.3	-2.2	-0.7
Refineries	22901	20082	21039	16927	16155	15219	14185	-0.8	-2.6	-1.3
Biofuels and hydrogen production	0	134	376	733	816	874	1070	0.0	8.1	2.7
District heating	1564	1525	1735	1424	1349	1250	992	1.0	-2.5	-3.0
Derived gases, cokeries etc.	16516	20501	16636	15543	13377	13386	13253	0.1	-2.2	-0.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUO30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	142	148	151	160	167	175	186	0.7	1.0	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.2
Private cars and motorcycles	102	108	109	114	116	119	125	0.7	0.7	0.7
Rail	10	11	13	15	16	18	20	2.8	2.1	1.9
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.2	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.4
Freight transport activity (Gtkm)	70	78	81	81	90	98	105	1.5	1.1	1.6
Heavy goods and light commercial vehicles	43	47	45	46	49	52	54	0.4	1.1	1.0
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7890	7300	6942	0.5	-0.9	-1.3
Public road transport	189	179	184	187	193	204	211	-0.3	0.5	0.9
Private cars and motorcycles	4879	5236	5250	4890	4394	3727	3334	0.7	-1.8	-2.7
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1939	1901	1893	1.2	-0.1	-0.2
Rail	299	246	208	232	264	286	309	-3.6	2.4	1.6
Aviation	928	846	840	945	1001	1077	1080	-1.0	1.8	0.8
Inland navigation	156	142	188	85	98	106	115	1.8	-6.3	1.6
By transport activity										
Passenger transport	6165	6361	6387	6089	5666	5090	4711	0.4	-1.2	-1.8
Freight transport	2027	2248	2234	2171	2225	2211	2231	1.0	0.0	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.6	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.7	12.4	15.0			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43635	42685	41269	0.6	-1.1	-0.6
Final Energy Demand	33561	33492	34077	31885	31918	30952	29194	0.2	-0.7	-0.9
by sector										
Industry	12854	12464	12205	11531	12072	12057	11787	-0.5	-0.1	-0.2
Energy intensive industries	9198	9252	9141	8370	8742	8582	8243	-0.1	-0.4	-0.6
Other industrial sectors	3656	3212	3064	3161	3329	3475	3544	-1.8	0.8	0.6
Residential	7300	7305	7557	7197	7048	6789	6019	0.3	-0.7	-1.6
Tertiary	5214	5114	5720	4897	4908	4805	4446	0.9	-1.5	-1.0
Transport ⁽⁵⁾	8192	8609	8595	8260	7890	7300	6942	0.5	-0.9	-1.3
by fuel										
Solids	1114	1346	1202	1122	1128	933	563	0.8	-0.6	-6.7
Oil	11861	11256	10038	8856	8001	6828	5882	-1.7	-2.2	-3.0
Gas	673	765	728	677	798	887	898	0.8	0.9	1.2
Electricity	11068	11238	11283	11102	11599	12121	12391	0.2	0.3	0.7
Heat (from CHP and District Heating)	3550	4174	5141	4420	4454	4127	3339	3.8	-1.4	-2.8
Renewable energy forms	5294	4714	5685	5705	5936	6043	6027	0.7	0.4	0.2
Other	0	0	0	3	3	13	93	0.0	0.0	39.6
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	165	151	139	116	102	91	79	-1.7	-3.0	-2.5
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	54	49	-3.5	-1.7	-1.9
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	53	42	-1.7	-3.0	-3.9
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	55	45	-0.9	-3.7	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	26	23	-0.5	-2.2	-3.0
Freight transport (toe/Mtkm)	29	29	28	27	25	23	21	-0.5	-1.2	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.7	49.7	41.9	-0.9	-1.4	-3.0
of which ETS sectors (2013 scope) GHG emissions		25.9	25.6	19.9	23.7	20.6	16.0		-0.8	-3.9
of which ESD sectors (2013 scope) GHG emissions		43.0	39.5	35.8	32.9	29.1	25.9		-1.8	-2.4
CO ₂ Emissions (energy related)	52.2	52.1	49.0	40.6	42.2	35.9	28.7	-0.6	-1.5	-3.8
Power generation/District heating	7.7	7.7	9.1	4.4	8.6	7.0	4.4	1.7	-0.5	-6.5
Energy Branch	2.0	1.9	2.0	2.2	1.8	1.8	1.7	0.4	-1.0	-0.8
Industry	11.9	13.3	10.5	10.0	9.5	7.6	5.2	-1.2	-1.0	-5.8
Residential	3.0	1.5	0.4	0.2	0.2	0.2	0.1	-17.9	-6.6	-5.6
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.7	-4.2	-6.8	-7.5
Transport	23.2	24.6	24.1	22.0	20.5	18.5	16.6	0.4	-1.6	-2.1
CO ₂ Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.4	3.3	3.2	1.5	-0.8	-0.7
Non-CO2 GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	10.1	-2.7	-1.1	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.5	67.9	57.3	-0.9	-1.4	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.04	0.04	0.04	0.02	0.04	0.03	0.02	0.6	-1.2	-6.5
Final energy demand (t of CO ₂ /toe)	1.27	1.27	1.11	1.07	0.99	0.88	0.77	-1.3	-1.1	-2.5
Industry	0.93	1.07	0.86	0.87	0.79	0.63	0.44	-0.7	-0.9	-5.6
Residential	0.41	0.20	0.05	0.03	0.03	0.02	0.02	-18.2	-5.9	-4.1
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.15	-5.1	-5.4	-6.6
Transport	2.83	2.86	2.80	2.66	2.60	2.53	2.38	-0.1	-0.7	-0.9
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.7	61.8	67.3			
RES-H&C share	48.7	52.4	60.9	72.7	68.9	74.7	80.5			
RES-E share	51.7	51.6	56.6	67.3	69.2	73.2	78.9			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.2	39.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	62	56	58	-0.1	0.9	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	141	141	145	5.7	-0.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.1	52.5	58.3	3.9	0.6	1.7
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.6	10.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EUO30				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 M€13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	186123	175696	164152	-0.8	-1.3	-1.2	
Solids	36516	37737	30761	30896	13027	8226	4796	-1.7	-8.2	-9.5	
Oil	81031	84449	72986	71030	65581	59873	54622	-1.0	-1.1	-1.8	
Natural gas	87399	85473	85050	67578	64711	60962	45838	-0.3	-2.7	-3.4	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	26090	31608	34102	11.3	13.8	2.7	
Energy Branch Consumption	14909	16092	13761	10879	9614	8696	7927	-0.8	-3.5	-1.9	
Non-Energy Uses	11330	11213	7524	8461	8861	8961	8839	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	108554	98685	96306	-5.8	-3.0	-1.2	
Solids	18658	11899	10751	6067	3611	3114	1981	-5.4	-10.3	-5.8	
Oil	127939	87930	63788	48199	40955	32876	26195	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26824	22629	15715	-6.2	-6.3	-5.2	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10759	21790	26205	28641	8.6	14.6	2.8	
Hydro	437	423	307	477	453	457	458	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11789	15302	16528	8.4	10.6	3.4	
Wind	81	250	875	2969	8204	8822	9990	26.8	25.1	2.0	
Solar and others	11	30	101	878	1341	1612	1635	24.5	29.5	2.0	
Geothermal	1	1	1	1	3	11	29	0.0	13.3	26.6	
Net Imports (ktoe)	-39220	31596	61239	87711	80772	80172	71002	0.0	2.8	-1.3	
Solids	14454	27222	16045	24829	9416	5112	2817	1.0	-5.2	-11.4	
Oil	-45582	-2738	11181	25966	27793	30082	31384	0.0	9.5	1.2	
Crude oil and Feedstocks	-39093	4558	13213	20985	23616	26380	28305	0.0	6.0	1.8	
Oil products	-6489	-7296	-2032	4981	4177	3703	3079	-11.0	0.0	-3.0	
Natural gas	-9311	5973	32205	33331	37922	38410	30321	0.0	1.6	-2.2	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.7	44.8	42.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357130	372079	380461	389932	0.1	-0.2	0.5	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	29449	12099	3676	-1.1	-12.2	-18.8	
Oil (including refinery gas)	8446	5339	4804	4252	3297	2497	2471	-5.5	-3.7	-2.8	
Gas (including derived gases)	150427	154339	176759	117631	115487	120418	74629	1.6	-4.2	-4.3	
Biomass-waste	4455	11658	13373	26283	51006	68361	71379	11.6	14.3	3.4	
Hydro (pumping excluded)	5086	4922	3568	5550	5273	5318	5323	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	95394	102586	116159	26.8	25.1	2.0	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	120145	111927	115349	1.2	3.1	-0.4	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	46309	48652	52895	14.1	20.6	1.3	
Hydro (pumping excluded)	1485	1501	1637	1693	1744	1744	1744	1.0	0.6	0.0	
Wind	412	1565	5396	13603	33421	35745	39986	29.3	20.0	1.8	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64952	55465	49347	1.1	-0.9	-2.7	
of which cogeneration units	5794	5440	6102	5052	5518	5389	10846	0.5	-1.0	7.0	
of which CCS units	0	0	0	0	833	833	1233	0.0	0.0	4.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35329	34763	30559	3.1	0.6	-1.4	
Oil fired	9696	9323	9064	2227	1235	1135	1091	-0.7	-18.1	-1.2	
Biomass-waste fired	2403	2961	3335	3634	17238	17244	17196	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.0	37.3	37.0				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	45.0	46.1	44.4				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	5.0	4.2	4.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.5	2.5				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	60.2	64.5	79.3				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	38089	37910	29492	0.1	-4.4	-2.5	
Solids	28425	29812	23816	23961	7161	2974	779	-1.8	-11.3	-19.9	
Oil (including refinery gas)	1453	1060	789	920	737	559	553	-5.9	-0.7	-2.8	
Gas (including derived gases)	28139	28415	31452	20339	19239	19567	12393	1.1	-4.8	-4.3	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15767	10.9	11.5	3.7	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83350	77186	82057	-1.9	-1.6	-0.2	
Refineries	88821	88399	75162	65526	61253	56398	51937	-1.7	-2.0	-1.6	
Biofuels and hydrogen production	0	80	1130	1361	2131	1962	1949	0.0	6.6	-0.9	
District heating	15	14	13	13	11	15	9	-0.9	-2.2	-1.8	
Derived gases, cokeries etc.	29623	26714	21187	21212	19955	18792	28163	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUO30				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	822	872	849	878	935	969	1017	0.3	1.0	0.8	
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.3	
Private cars and motorcycles	644	673	649	659	702	722	754	0.1	0.8	0.7	
Rail	47	53	66	76	80	86	93	3.5	2.0	1.5	
Aviation ⁽³⁾	77	97	83	90	100	107	116	0.7	1.8	1.5	
Inland navigation	6	6	5	5	6	6	6	-0.3	0.8	1.0	
Freight transport activity (Gtkm)	237	248	216	242	252	263	275	-0.9	1.6	0.9	
Heavy goods and light commercial vehicles	183	183	164	187	194	203	211	-1.1	1.7	0.8	
Rail	18	21	19	22	23	24	26	0.3	2.1	1.3	
Inland navigation	36	43	33	34	35	37	39	-0.9	0.6	1.0	
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49572	46163	43910	-0.2	-0.4	-1.2	
Public road transport	559	499	515	511	505	495	478	-0.8	-0.2	-0.5	
Private cars and motorcycles	29150	30049	29058	27657	25098	21963	20524	0.0	-1.5	-2.0	
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9021	8973	8669	-1.5	0.7	-0.4	
Rail	821	988	966	1108	1158	1212	1263	1.6	1.8	0.9	
Aviation	11115	13069	11650	12400	12874	12572	11987	0.5	1.0	-0.7	
Inland navigation	933	1282	884	881	916	949	988	-0.5	0.4	0.8	
By transport activity											
Passenger transport	41504	44033	41640	40984	38919	35481	33456	0.0	-0.7	-1.5	
Freight transport	10882	11467	9830	11030	10653	10682	10454	-1.0	0.8	-0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.4	3.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.3	5.7				
ENERGY EFFICIENCY											
Primary energy consumption	219230	222779	204710	191181	177262	166734	155314	-0.7	-1.4	-1.3	
Final Energy Demand	153236	152728	142723	138484	135279	127622	115375	-0.7	-0.5	-1.6	
by sector											
Industry	36930	33388	26923	25432	25502	23380	20756	-3.1	-0.5	-2.0	
Energy intensive industries	19392	16472	12350	11464	11271	9747	7853	-4.4	-0.9	-3.5	
Other industrial sectors	17537	16916	14573	13968	14232	13633	12902	-1.8	-0.2	-1.0	
Residential	43034	44151	44715	40936	39869	38871	33703	0.4	-1.1	-1.7	
Tertiary	20377	19686	19633	20101	20336	19208	17007	-0.4	0.4	-1.8	
Transport ⁽⁵⁾	52895	55503	51452	52014	49572	46163	43910	-0.3	-0.4	-1.2	
by fuel											
Solids	5954	4530	4133	4583	3842	3117	1993	-3.6	-0.7	-6.4	
Oil	63674	65851	59524	58175	53004	47774	42959	-0.7	-1.2	-2.1	
Gas	52180	50380	47246	43853	42434	39094	31924	-1.0	-1.1	-2.8	
Electricity	28360	29998	28286	27707	28981	29477	29847	0.0	0.2	0.3	
Heat (from CHP and District Heating)	2439	1268	1266	1255	1339	1425	1459	-6.3	0.6	0.9	
Renewable energy forms	630	702	2268	2885	5582	6281	6493	13.7	9.4	1.5	
Other	0	0	0	26	97	454	701	-100.0	0.0	21.9	
Energy intensity indicators											
Gross Int. Cons./GDP (toe/ME13)	150	131	117	101	88	78	68	-2.4	-2.8	-2.6	
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	60	51	-2.3	-1.5	-2.8	
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	63	50	-1.4	-2.4	-3.1	
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	59	48	-2.6	-1.5	-3.2	
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.6	
Freight transport (toe/Mtkm)	46	46	46	46	42	41	38	-0.1	-0.8	-1.1	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	475.8	423.2	343.5	-1.2	-2.9	-3.2	
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	244.9	164.7	140.8	98.5		-5.0	-5.0	
of which ESD sectors (2013 scope) GHG emissions		413.6	362.5	341.0	311.1	282.4	245.0		-1.5	-2.4	
CO2 Emissions (energy related)	568.2	573.4	518.3	477.6	376.2	331.0	261.0	-0.9	-3.2	-3.6	
Power generation/District heating	194.2	199.6	178.4	155.5	78.7	62.7	31.4	-0.8	-7.9	-8.8	
Energy Branch	31.3	35.2	29.4	20.9	18.4	16.2	13.9	-0.6	-4.5	-2.8	
Industry	77.4	67.5	52.1	49.5	46.1	38.3	27.0	-3.9	-1.2	-5.2	
Residential	82.6	80.4	83.1	74.7	68.8	65.3	53.1	0.1	-1.9	-2.6	
Tertiary	27.0	25.3	24.8	25.3	22.6	18.5	14.4	-0.9	-0.9	-4.4	
Transport	155.6	165.4	150.6	151.7	141.5	130.0	121.2	-0.3	-0.6	-1.5	
CO2 Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	18.7	17.9	16.9	-2.8	1.8	-1.0	
Non-CO2 GHG emissions	131.6	133.2	102.5	90.5	80.9	74.3	65.6	-2.5	-2.3	-2.1	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	58.1	51.7	41.9	-1.2	-2.9	-3.2	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.48	0.49	0.45	0.42	0.20	0.16	0.08	-0.6	-7.8	-9.2	
Final energy demand (t of CO2/toe)	2.24	2.22	2.18	2.18	2.06	1.98	1.87	-0.3	-0.5	-1.0	
Industry	2.10	2.02	1.93	1.95	1.81	1.64	1.30	-0.8	-0.7	-3.2	
Residential	1.92	1.82	1.86	1.82	1.73	1.68	1.57	-0.3	-0.7	-0.9	
Tertiary	1.32	1.29	1.26	1.26	1.11	0.96	0.85	-0.5	-1.3	-2.7	
Transport	2.94	2.98	2.93	2.92	2.86	2.82	2.76	-0.1	-0.2	-0.3	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.7	17.8	21.2				
RES-H&C share	0.8	0.8	1.8	3.4	7.0	8.4	11.0				
RES-E share	2.6	4.1	7.4	19.3	41.1	46.7	49.9				
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	16.9	22.6				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	114	115	114	3.4	6.9	0.0	
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	170	179	179	0.3	2.8	0.6	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	230.9	252.2	276.9	1.5	2.5	1.8	
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.2	11.4				

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances and disutilities (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively. For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix I.c: EUCO+33 scenario - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 M€13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	1726888	1824722	1760315	1666601	1644380	1545470	1373204	0.2	-0.7	-1.8
Solids	321292	318127	282994	277891	258285	221091	168842	-1.3	-0.9	-4.2
Oil	660025	677021	612954	579805	545059	499749	451115	-0.7	-1.2	-1.9
Natural gas	396144	445263	447394	387731	382499	361889	275523	1.2	-1.6	-3.2
Nuclear	243841	257516	236562	213043	188974	174739	184165	-0.3	-2.2	-0.3
Electricity	2030	1412	712	1761	1247	523	41	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206371	268317	287478	293599	5.7	4.1	0.9
Energy Branch Consumption	86261	91922	86455	81626	76037	69491	63148	0.0	-1.3	-1.8
Non-Energy Uses	113106	116080	110230	106709	112514	116512	116926	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	944996	903986	835772	758585	760208	722181	684654	-1.2	-0.9	-1.0
Solids	214596	196030	164837	148196	137596	122292	95313	-2.6	-1.8	-3.6
Oil	173901	135553	100408	78529	69713	57596	47403	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106173	91555	74861	-2.7	-4.0	-3.4
Nuclear	243841	257516	236562	213043	188974	174739	184165	-0.3	-2.2	-0.3
Renewable energy sources	103222	124116	174017	200379	257751	275998	282912	5.4	4.0	0.9
Hydro	30703	26859	32312	31168	32355	32383	32689	0.5	0.0	0.1
Biomass & Waste	65583	85060	119573	132613	164822	164018	150419	6.2	3.3	-0.9
Wind	1913	6058	12836	23588	39612	47675	60982	21.0	11.9	4.4
Solar and others	436	827	3775	11001	17748	28205	32929	24.1	16.7	6.4
Geothermal	4587	5312	5521	2009	3215	3716	5893	1.9	-5.3	6.2
Net imports (ktoe)	826349	979676	955004	962880	940374	881002	748479	1.5	-0.2	-2.3
Solids	98320	125363	111814	129695	120688	98799	73529	1.3	0.8	-4.8
Oil	532226	597491	558847	556140	530798	497876	458417	0.5	-0.5	-1.5
Crude oil and Feedstocks	514686	578712	537586	515210	492828	464552	432882	0.4	-0.9	-1.3
Oil products	17540	18779	21261	40930	37970	33323	25535	1.9	6.0	-3.9
Natural gas	193432	254054	278015	269292	277075	272324	205886	3.7	0.0	-2.9
Electricity	2030	1412	712	1761	1247	523	41	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	55.0	52.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251328	3375731	3509548	3416684	1.0	0.1	0.1
Nuclear energy	944993	997699	916610	867402	772986	717746	764511	-0.3	-1.7	-0.1
Solids	933855	965565	830393	846834	796066	677357	516165	-1.2	-0.4	-4.2
Oil (including refinery gas)	181296	142772	86899	34609	21433	19663	13617	-7.1	-13.1	-4.4
Gas (including derived gases)	514267	705961	798645	566087	570633	632021	431069	4.5	-3.3	-2.8
Biomass-waste	46401	87831	145814	188817	214612	265743	286040	12.1	3.9	2.9
Hydro (pumping excluded)	357072	312372	375785	362416	376219	376549	380104	0.5	0.0	0.1
Wind	22254	70455	149278	274278	460600	554361	709097	21.0	11.9	4.4
Solar	117	1458	22502	103798	154722	257191	305860	69.1	21.3	7.1
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	10220	2.6	2.1	1.9
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1030711	1076650	1133607	2.3	1.8	1.0
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	474644	571021	662192	6.3	7.1	3.4
Hydro (pumping excluded)	115841	119177	122922	127470	131607	132231	133442	0.6	0.7	0.1
Wind	12730	40485	85701	141580	206552	235450	290663	21.0	9.2	3.5
Solar	178	2292	29774	97443	135999	202650	237052	66.9	16.4	5.7
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	441863	400578	361510	1.6	-1.0	-2.0
of which cogeneration units	92439	107819	107430	111905	86523	88267	83415	1.5	-2.1	-0.4
of which CCS units	0	0	0	0	833	1083	1083	0.0	0.0	2.7
Solids fired	194525	185353	180110	176559	146313	117810	99546	-0.8	-2.1	-3.8
Gas fired	123821	163333	215485	219628	211274	208408	191947	5.7	-0.2	-1.0
Oil fired	83315	74582	69295	53085	31451	20835	15407	-1.8	-7.6	-6.9
Biomass-waste fired	12657	16610	21719	27908	51782	52483	53483	5.5	9.1	0.3
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1115	2.4	3.1	0.8
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.7	35.7	33.1			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.3	41.0	40.4			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	10.5	10.1	9.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.3			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	58.9	62.1	71.9			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	343496	336276	267166	0.7	-1.9	-2.5
Solids	223608	229335	197694	200223	184184	155000	117517	-1.2	-0.7	-4.4
Oil (including refinery gas)	40868	32485	20566	7340	4926	4854	3784	-6.6	-13.3	-2.6
Gas (including derived gases)	105105	137667	151968	100069	96851	107944	74971	3.8	-4.4	-2.5
Biomass & Waste	14651	26766	41420	43077	55603	66546	68543	11.0	3.0	2.1
Geothermal heat	4114	4645	4828	1184	1932	1932	2351	1.6	-8.8	2.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997991	908897	859692	801287	760606	-0.7	-1.5	-1.2
Refineries	735106	756042	667606	609584	582735	545155	503714	-1.0	-1.4	-1.4
Biofuels and hydrogen production	709	3279	13086	16149	20791	19365	19307	33.8	4.7	-0.7
District heating	15899	17445	19101	16261	16231	13791	10921	1.9	-1.6	-3.9
Derived gases, cokeries etc.	316179	324441	298197	266904	239934	222976	226684	-0.6	-2.2	-0.6

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28: EUOQ+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7158	7450	7809	0.8	1.0	0.9
Public road transport	549	541	528	546	569	586	602	-0.4	0.8	0.6
Private cars and motorcycles	4466	4721	4843	5001	5254	5372	5559	0.8	0.8	0.6
Rail	450	464	499	540	599	672	741	1.0	1.8	2.2
Aviation ⁽³⁾	458	528	539	608	693	773	858	1.7	2.5	2.2
Inland navigation	42	42	40	40	43	46	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2982	3176	3425	1.1	1.6	1.4
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2110	2202	2369	1.3	1.6	1.2
Rail	405	416	394	428	482	545	602	-0.3	2.0	2.2
Inland navigation	300	343	354	361	389	428	455	1.7	1.0	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350360	330567	319280	0.5	-0.3	-0.9
Public road transport	8775	8725	8834	9040	9256	9267	9175	0.1	0.5	-0.1
Private cars and motorcycles	206270	212102	211618	204765	189781	168280	156327	0.3	-1.1	-1.9
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81620	80747	81571	1.3	0.6	0.0
Rail	8168	7668	7129	7395	7894	8527	8974	-1.4	1.0	1.3
Aviation	44876	49959	49230	53303	56466	58020	57250	0.9	1.4	0.1
Inland navigation	6156	6798	5673	5051	5342	5726	5983	-0.8	-0.6	1.1
<i>By transport activity</i>										
Passenger transport	266294	275041	273897	271237	259811	240151	227500	0.3	-0.5	-1.3
Freight transport	75231	89484	85505	86825	90548	90417	91780	1.3	0.6	0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.0	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.5	6.6			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559892	1531866	1428958	1256278	0.2	-0.7	-2.0
Final Energy Demand	1129427	1186370	1155879	1133457	1135043	1054514	919167	0.2	-0.2	-2.1
<i>by sector</i>										
Industry	330627	327576	283437	284538	294720	283958	260761	-1.5	0.4	-1.2
Energy intensive industries	215899	215115	182721	182407	188674	179411	161298	-1.7	0.3	-1.6
Other industrial sectors	114728	112461	100716	102131	106046	104547	99463	-1.3	0.5	-0.6
Residential	288564	307594	313829	299747	298969	267673	203825	0.8	-0.5	-3.8
Tertiary	166677	183368	196770	188333	188105	169423	132521	1.7	-0.4	-3.4
Transport ⁽⁵⁾	343558	367831	361842	360838	353249	333460	322061	0.5	-0.2	-0.9
<i>by fuel</i>										
Solids	61977	53988	50512	47694	45747	40592	28475	-2.0	-1.0	-4.6
Oil	487065	502509	455207	437598	404642	359831	315849	-0.7	-1.2	-2.4
Gas	267588	281191	273366	265878	264087	234472	183934	0.2	-0.3	-3.6
Electricity	217644	239548	244471	241010	251721	262995	256117	1.2	0.3	0.2
Heat (from CHP and District Heating)	46044	52425	52875	49062	50719	47284	39013	1.4	-0.4	-2.6
Renewable energy forms	49109	56708	79448	92104	117753	107688	92901	4.9	4.0	-2.3
Other	0	0	0	111	375	1652	2878	0.0	0.0	22.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	154	148	137	124	113	99	82	-1.2	-1.9	-3.1
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	68	60	-2.2	-0.6	-2.3
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	66	47	-0.6	-1.7	-5.2
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	83	70	51	0.0	-1.8	-4.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	26	23	-0.8	-1.8	-2.4
Freight transport (toe/Mtkm)	33	34	33	32	30	28	27	0.2	-1.0	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4296.3	3900.3	3284.2	-0.9	-1.3	-2.7
of which ETS sectors (2013 scope) GHG emissions	2501.2	2175.1	2016.7	1909.0	1752.8	1424.7		-1.3	-2.9	
of which ESD sectors (2013 scope) GHG emissions	2847.9	2699.9	2566.6	2387.4	2147.4	1859.5		-1.2	-2.5	
CO₂ Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3302.0	2945.4	2377.6	-0.5	-1.3	-3.2
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1085.8	984.4	736.0	-0.5	-2.1	-3.8
Energy Branch	167.3	170.7	155.2	148.8	132.7	118.1	106.3	-0.7	-1.6	-2.2
Industry	691.0	634.1	511.8	505.4	494.9	434.5	347.8	-3.0	-0.3	-3.5
Residential	468.0	484.2	466.9	422.7	385.0	317.7	200.1	0.0	-1.9	-6.3
Tertiary	257.9	271.6	267.9	245.8	221.6	175.2	120.7	0.4	-1.9	-5.9
Transport	1001.7	1079.8	1036.6	1023.4	981.9	915.5	866.7	0.3	-0.5	-1.2
CO₂ Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	248.2	247.9	243.0	-1.5	0.5	-0.2
Non-CO₂ GHG emissions	1057.0	939.6	855.4	820.5	746.1	706.9	663.6	-2.1	-1.4	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	74.6	67.7	57.0	-0.9	-1.3	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.39	0.37	0.33	0.30	0.27	0.24	0.19	-1.6	-2.1	-3.5
Final energy demand (t of CO ₂ /toe)	2.14	2.08	1.98	1.94	1.84	1.75	1.67	-0.8	-0.7	-0.9
Industry	2.09	1.94	1.81	1.78	1.68	1.53	1.33	-1.5	-0.7	-2.3
Residential	1.62	1.57	1.49	1.41	1.29	1.19	0.98	-0.9	-1.4	-2.7
Tertiary	1.55	1.48	1.36	1.31	1.18	1.03	0.91	-1.3	-1.4	-2.5
Transport	2.92	2.94	2.86	2.84	2.78	2.75	2.69	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.1	24.1	28.4			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.5	29.0			
RES-E share	13.3	14.8	19.7	28.2	35.4	41.2	49.1			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	14.4	19.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	93	91	88	2.1	3.7	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	153	157	161	0.0	1.1	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1795.9	1933.8	2208.6	3.4	2.0	2.1
as % of GDP	9.4	10.4	11.4	11.2	12.3	12.4	13.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Austria: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5		
GDP (in 000 ME13)	257	279	298	316	345	373	400	1.5	1.5	1.5		
Gross Inland Consumption (ktoe)	28996	34373	34604	32933	33437	31745	28419	1.8	-0.3	-1.6		
Solids	3597	4000	3365	3333	3407	2999	2607	-0.7	0.1	-2.6		
Oil	12173	14448	12833	12275	11719	10680	9555	0.5	-0.9	-2.0		
Natural gas	6519	8159	8215	6454	7662	6976	5138	2.3	-0.7	-3.9		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Renewable energy forms	6825	7537	9991	9810	10210	10756	10817	3.9	0.2	0.8		
Energy Branch Consumption	1306	1666	1504	1593	1501	1379	1270	1.4	0.0	-1.7		
Non-Energy Uses	1718	1717	1850	2037	2202	2331	2362	0.7	1.8	0.7		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	9776	10012	12114	11277	11474	11248	10899	2.2	-0.5	-0.5		
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0		
Oil	1092	1003	1036	813	673	342	111	-0.5	-4.2	-16.5		
Natural gas	1533	1404	1486	1270	1141	665	436	-0.3	-2.6	-9.2		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	6859	7605	9592	9195	9661	10241	10351	3.4	0.1	0.7		
Hydro	3597	3154	3299	3527	3698	3812	3854	-0.9	1.1	0.4		
Biomass & Waste	3169	4214	5914	5018	5158	4846	4236	6.4	-1.4	-2.0		
Wind	6	114	178	340	382	726	1161	40.8	8.0	11.8		
Solar and others	63	93	168	260	359	772	975	10.3	7.9	10.5		
Geothermal	25	30	35	49	64	84	125	3.4	6.3	7.0		
Net Imports (ktoe)	18970	24517	21577	21656	21962	20497	17521	1.3	0.2	-2.2		
Solids	3019	3971	3358	3333	3407	2999	2607	1.1	0.1	-2.6		
Oil	10850	13204	11510	11462	11045	10338	9444	0.6	-0.4	-1.6		
Crude oil and Feedstocks	7791	8100	7011	8001	7806	7553	7123	-1.1	1.1	-0.9		
Oil products	3059	5104	4499	3461	3239	2785	2321	3.9	-3.2	-3.3		
Natural gas	5253	7153	6115	5184	6522	6311	4702	1.5	0.6	-3.2		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Import Dependency (%)	65.4	71.3	62.4	65.8	65.7	64.6	61.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59619	71891	78122	80256	1.3	0.6	1.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	5727	7165	4918	4194	4935	3263	3029	-1.5	0.0	-4.8		
Oil (including refinery gas)	1702	1641	1273	208	215	71	67	-2.9	-16.3	-11.1		
Gas (including derived gases)	8864	14347	16137	6774	14548	12149	6589	6.2	-1.0	-7.6		
Biomass-waste	1675	2882	5088	2592	3566	4391	4374	11.8	-3.5	2.1		
Hydro (pumping excluded)	41836	36677	38363	41011	42997	44323	44811	-0.9	1.1	0.4		
Wind	67	1331	2064	3958	4443	8443	13502	40.9	8.0	11.8		
Solar	3	21	88	871	1174	5472	7873	38.2	29.5	21.0		
Geothermal and other renewables	0	2	2	11	11	11	11	0.0	21.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23328	28404	32056	1.8	0.8	3.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	11668	12440	13841	16437	17371	22973	26965	1.7	2.3	4.5		
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13702	13820	0.9	0.8	0.1		
Wind	50	778	981	2412	2583	4384	6075	34.7	10.2	8.9		
Solar	5	30	154	876	1090	4887	7070	40.9	21.6	20.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6243	6652	7662	6552	5956	5430	5091	2.1	-2.5	-1.6		
of which cogeneration units	2632	3253	3157	3005	3053	2899	2697	1.8	-0.3	-1.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1887	1660	1359	873	803	777	777	-3.2	-5.1	-0.3		
Gas fired	2816	3389	4512	4074	3559	3311	2985	4.8	-2.3	-1.7		
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4		
Biomass-waste fired	280	456	650	633	778	858	903	8.8	1.8	1.5		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	2	1	2	2	2	2	0.0	7.2	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	33.8	30.4	27.8					
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	43.9	40.0	36.4					
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.8	17.2	10.5					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.6	80.2	87.9					
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4560	4278	3320	4.0	-2.2	-3.1		
Solids	1216	1507	1019	908	1071	726	643	-1.8	0.5	-5.0		
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.9		
Gas (including derived gases)	1961	2836	2868	1406	2577	2399	1418	3.9	-1.1	-5.8		
Biomass & Waste	421	814	1649	604	834	1120	1228	14.6	-6.6	3.9		
Geothermal heat	0	2	1	10	10	10	10	0.0	23.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	11349	11946	11472	12554	11802	10936	9863	0.1	0.3	-1.8		
Refineries	8865	9275	8040	9141	8769	8142	7434	-1.0	0.9	-1.6		
Biofuels and hydrogen production	16	50	495	571	445	416	412	41.2	-1.1	-0.8		
District heating	558	613	869	678	635	561	405	4.5	-3.1	-4.4		
Derived gases, cokeries etc.	1910	2009	2068	2164	1953	1818	1612	0.8	-0.6	-1.9		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	96	101	107	112	119	126	130	1.1	1.1	0.9
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.7
Private cars and motorcycles	68	72	75	78	80	83	85	1.0	0.7	0.5
Rail	12	13	15	16	18	20	22	1.9	2.2	1.8
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.4
Freight transport activity (Gtkm)	50	54	61	65	70	74	79	2.0	1.3	1.2
Heavy goods and light commercial vehicles	31	33	39	43	46	48	50	2.3	1.6	0.9
Rail	17	19	20	20	22	24	26	1.8	0.9	1.8
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8017	7454	7151	2.3	-0.6	-1.1
Public road transport	92	97	101	103	106	107	107	0.9	0.5	0.1
Private cars and motorcycles	4520	5616	5043	4708	4260	3754	3432	1.1	-1.7	-2.1
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2589	2491	2469	6.3	0.8	-0.5
Rail	267	242	247	249	264	275	282	-0.8	0.7	0.7
Aviation	591	679	707	776	773	800	834	1.8	0.9	0.8
Inland navigation	28	45	22	23	24	26	27	-2.1	0.8	1.0
<i>By transport activity</i>										
Passenger transport	5260	6438	5894	5634	5192	4718	4432	1.1	-1.3	-1.6
Freight transport	1527	2377	2613	2846	2825	2736	2719	5.5	0.8	-0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.1	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30896	31234	29413	26057	1.8	-0.5	-1.8
Final Energy Demand	23692	28185	28423	28425	28030	26312	23216	1.8	-0.1	-1.9
<i>by sector</i>										
Industry	7283	8825	9195	9724	9951	9644	9050	2.4	0.8	-0.9
Energy intensive industries	5321	6148	6212	6588	6656	6346	5843	1.6	0.7	-1.3
Other industrial sectors	1962	2676	2983	3137	3295	3299	3207	4.3	1.0	-0.3
Residential	6332	6828	6797	6669	6512	5865	4319	0.7	-0.4	-4.0
Tertiary	3070	3449	3686	3285	3265	3069	2434	1.8	-1.2	-2.9
Transport ⁽⁵⁾	7007	9082	8744	8746	8302	7734	7413	2.2	-0.5	-1.1
<i>by fuel</i>										
Solids	1403	1466	1169	1135	1188	1231	984	-1.8	0.2	-1.9
Oil	9818	12084	10539	9934	9319	8265	7206	0.7	-1.2	-2.5
Gas	4464	5125	5259	5142	5131	4551	3682	1.7	-0.2	-3.3
Electricity	4432	5013	5358	5436	5794	6173	6376	1.9	0.8	1.0
Heat (from CHP and District Heating)	1020	1353	1832	2008	1904	1833	1363	6.0	0.4	-3.3
Renewable energy forms	2555	3145	4266	4769	4689	4235	3562	5.3	0.9	-2.7
Other	0	0	0	2	5	24	44	0.0	0.0	23.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	113	123	116	104	97	85	71	0.3	-1.8	-3.1
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	95	84	0.8	-0.3	-2.1
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	76	64	43	-0.7	-1.9	-5.5
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	66	49	0.1	-2.7	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	31	28	0.1	-2.6	-2.7
Freight transport (toe/Mtkm)	30	44	43	44	40	37	34	3.4	-0.5	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.1	96.8	89.0	82.8	82.2	74.1	63.2	0.3	-0.8	-2.6
of which ETS sectors (2013 scope) GHG emissions	38.3	35.2	32.8	34.4	30.8	25.7			-0.2	-2.8
of which ESD sectors (2013 scope) GHG emissions	58.4	53.7	50.0	47.8	43.3	37.4			-1.2	-2.4
CO₂ Emissions (energy related)	65.6	78.6	71.5	65.7	65.8	58.3	48.6	0.9	-0.8	-3.0
Power generation/District heating	12.5	17.0	15.1	11.2	14.0	12.3	9.6	1.9	-0.7	-3.7
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.3	2.9	1.3	-0.3	-2.1
Industry	16.8	18.5	17.6	17.7	17.2	15.5	12.7	0.5	-0.2	-3.0
Residential	8.9	8.6	7.7	6.8	6.4	4.9	2.7	-1.5	-1.9	-8.2
Tertiary	3.9	4.4	3.2	2.0	1.8	1.5	0.9	-1.8	-5.8	-6.4
Transport	20.2	26.5	24.1	23.9	22.8	20.9	19.7	1.8	-0.6	-1.4
CO₂ Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.2	5.2	1.6	-0.3	-0.2
Non-CO₂ GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.5	-2.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.3	93.1	79.4	0.3	-0.8	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.21	0.17	0.13	0.15	0.12	0.10	-0.3	-1.2	-3.9
Final energy demand (t of CO ₂ /toe)	2.10	2.06	1.85	1.77	1.72	1.63	1.55	-1.3	-0.7	-1.0
Industry	2.31	2.10	1.92	1.83	1.73	1.60	1.40	-1.9	-1.0	-2.1
Residential	1.41	1.26	1.13	1.02	0.98	0.83	0.63	-2.2	-1.4	-4.4
Tertiary	1.26	1.27	0.88	0.60	0.54	0.48	0.38	-3.6	-4.7	-3.6
Transport	2.88	2.91	2.76	2.73	2.74	2.71	2.66	-0.4	0.0	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.2	38.1	43.0			
RES-H&C share	20.4	22.0	29.7	37.0	36.4	35.3	38.7			
RES-E share	66.9	62.4	65.7	68.0	68.5	77.3	85.3			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.6	16.5	22.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	65	71	72	0.0	-0.5	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	140	150	151	0.9	-0.2	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.6	42.7	48.5	4.2	1.6	2.3
as % of GDP	8.5	10.2	11.0	10.2	11.2	11.5	12.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Belgium: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	10	10	11	11	12	12	13	0.8	0.9	0.9		
GDP (in 000 M€13)	324	350	372	385	414	443	479	1.4	1.1	1.5		
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54709	49392	43853	0.3	-1.1	-2.2		
Solids	7922	5081	3673	3205	2007	2039	1734	-7.4	-5.9	-1.5		
Oil	24136	24721	24699	23472	21995	20599	18808	0.2	-1.2	-1.6		
Natural gas	13369	14728	16999	14941	14127	16683	13902	2.4	-1.8	-0.2		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Renewable energy forms	1081	1658	3560	4242	6207	6661	6954	12.7	5.7	1.1		
Energy Branch Consumption	2366	2403	2246	2406	2216	2128	2043	-0.5	-0.1	-0.8		
Non-Energy Uses	6739	7516	8541	8464	8523	8620	8528	2.4	0.0	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14087	7214	6384	1.2	-0.9	-7.6		
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0		
Oil	0	6	-7	-14	-14	-13	-13	1692.2	7.2	-0.5		
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Renewable energy sources	977	1377	2996	3725	5469	5987	6397	11.9	6.2	1.6		
Hydro	40	25	27	31	32	32	49	-3.8	1.7	4.5		
Biomass & Waste	931	1327	2793	2944	3957	3845	3646	11.6	3.5	-0.8		
Wind	1	20	111	431	1032	1523	1881	54.9	25.0	6.2		
Solar and others	1	3	60	313	441	576	795	50.7	22.0	6.1		
Geothermal	3	3	4	6	8	11	26	3.0	5.8	13.0		
Net Imports (ktoe)	50502	53396	53753	52611	49701	51602	47258	0.6	-0.8	-0.5		
Solids	7220	5150	3591	3205	2007	2039	1734	-6.7	-5.7	-1.5		
Oil	29527	32605	32752	32035	31041	29580	27407	1.0	-0.5	-1.2		
Crude oil and Feedstocks	34177	32251	31004	27409	27195	26665	25688	-1.0	-1.3	-0.6		
Oil products	-4650	354	1749	4626	3847	2915	1718	0.0	8.2	-7.7		
Natural gas	13278	14817	16791	14941	14174	17139	15105	2.4	-1.7	0.6		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.7	88.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	73847	73972	74614	1.3	-2.4	0.1		
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0		
Solids	12916	8199	4190	2975	195	288	56	-10.6	-26.4	-11.8		
Oil (including refinery gas)	797	1740	406	96	674	697	719	-6.5	5.2	0.6		
Gas (including derived gases)	19091	25143	33178	23812	18154	40277	38455	5.7	-5.9	7.8		
Biomass-waste	1336	2516	5882	5914	3238	4226	5419	16.0	-5.8	5.3		
Hydro (pumping excluded)	460	288	312	365	368	371	571	-3.8	1.7	4.5		
Wind	16	227	1292	5009	11998	17704	21868	55.1	25.0	6.2		
Solar	0	1	560	3376	4013	5336	7527	0.0	21.8	6.5		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	14674	14867	17071	18515	20996	23242	26959	1.5	2.1	2.5		
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0		
Renewable energy	117	274	1934	5560	8494	11496	15154	32.4	15.9	6.0		
Hydro (pumping excluded)	103	105	118	119	119	119	177	1.4	0.1	4.1		
Wind	14	167	912	2229	4558	6322	7893	51.8	17.5	5.6		
Solar	0	2	904	3212	3818	5056	7083	0.0	15.5	6.4		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	8636	8672	9216	9048	7447	8704	11805	0.7	-2.1	4.7		
of which cogeneration units	1112	1893	2575	1552	656	1334	1285	8.8	-12.8	7.0		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2290	1450	1184	825	43	43	16	-6.4	-28.2	-9.7		
Gas fired	4392	5201	6468	6799	6270	7625	10713	3.9	-0.3	5.5		
Oil fired	1581	1494	836	646	266	266	235	-6.2	-10.8	-1.2		
Biomass-waste fired	373	527	727	777	868	769	841	6.9	1.8	-0.3		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.7	35.5	31.0					
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.3	48.3	51.9					
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.0	16.4	15.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.2	44.2	47.4					
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4321	8106	7393	1.7	-6.4	5.5		
Solids	2629	1833	936	761	47	66	11	-9.8	-25.8	-13.3		
Oil (including refinery gas)	180	411	57	29	223	231	238	-10.8	14.6	0.6		
Gas (including derived gases)	3790	4612	5671	4111	2930	6495	5614	4.1	-6.4	6.7		
Biomass & Waste	492	821	1722	1414	1120	1314	1530	13.4	-4.2	3.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	54711	52964	50595	41255	42571	34813	32348	-0.8	-1.7	-2.7		
Refineries	38602	37483	35454	31882	31697	31200	30142	-0.8	-1.1	-0.5		
Biofuels and hydrogen production	0	0	352	341	871	784	753	0.0	9.5	-1.5		
District heating	45	29	6	15	19	17	19	-18.1	11.8	0.4		
Derived gases, cokeries etc.	16064	15452	14782	9016	9983	2813	1434	-0.8	-3.8	-17.6		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Belgium: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	137	145	154	158	169	175	184	1.2	1.0	0.8
Public road transport	13	18	17	18	18	18	18	2.7	0.2	0.2
Private cars and motorcycles	107	109	115	117	126	128	133	0.8	0.9	0.5
Rail	9	10	12	12	13	15	17	3.1	1.2	2.4
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.5
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.6
Freight transport activity (Gtkm)	70	65	63	66	76	84	92	-1.1	1.8	1.9
Heavy goods and light commercial vehicles	55	48	46	47	54	59	64	-1.7	1.6	1.6
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.5
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	10009	9706	9654	0.8	-0.6	-0.4
Public road transport	158	204	292	290	287	282	273	6.4	-0.2	-0.5
Private cars and motorcycles	4815	4463	5177	4757	4252	3766	3575	0.7	-1.9	-1.7
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3642	3687	3782	1.8	0.7	0.4
Rail	184	186	177	181	210	238	264	-0.4	1.7	2.3
Aviation	1530	1281	1382	1389	1443	1540	1550	-1.0	0.4	0.7
Inland navigation	204	219	152	164	175	192	210	-2.9	1.4	1.8
<i>By transport activity</i>										
Passenger transport	6608	6016	6932	6518	6070	5688	5506	0.5	-1.3	-1.0
Freight transport	3139	3956	3661	3660	3938	4018	4148	1.6	0.7	0.5
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.0	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.3	9.2			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46185	40772	35324	0.0	-1.3	-2.6
Final Energy Demand	37766	36705	37534	36239	36435	34152	30235	-0.1	-0.3	-1.8
<i>by sector</i>										
Industry	14218	11775	11688	11055	11229	10686	9928	-1.9	-0.4	-1.2
Energy intensive industries	10700	9088	8641	8013	8020	7676	7056	-2.1	-0.7	-1.3
Other industrial sectors	3518	2686	3047	3042	3209	3010	2872	-1.4	0.5	-1.1
Residential	8974	9299	9266	9230	9323	8572	6331	0.3	0.1	-3.8
Tertiary	4827	5658	5982	5722	5825	5136	4275	2.2	-0.3	-3.0
Transport ⁽⁵⁾	9747	9973	10598	10232	10059	9758	9701	0.8	-0.5	-0.4
<i>by fuel</i>										
Solids	3403	2019	1621	1505	1358	1273	1050	-7.2	-1.8	-2.5
Oil	16661	16586	15314	14610	13009	11575	9961	-0.8	-1.6	-2.6
Gas	10010	10009	11147	10465	10567	9612	7672	1.1	-0.5	-3.2
Electricity	6667	6896	7163	7033	7235	7711	8033	0.7	0.1	1.1
Heat (from CHP and District Heating)	492	428	640	567	607	664	678	2.7	-0.5	1.1
Renewable energy forms	533	767	1650	2058	3637	3223	2711	12.0	8.2	-2.9
Other	0	0	0	3	23	95	131	0.0	0.0	19.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	183	168	165	142	132	111	91	-1.0	-2.2	-3.6
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	69	60	-1.3	-1.3	-2.4
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	66	45	-1.1	-1.4	-5.4
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	75	57	0.5	-1.4	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	27	24	-1.1	-2.5	-2.1
Freight transport (toe/Mtkm)	45	61	58	55	52	48	45	2.6	-1.1	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	154.0	148.3	136.1	127.3	112.0	112.5	97.7	-1.2	-1.9	-1.4
of which ETS sectors (2013 scope) GHG emissions	70.1	58.6	52.1	42.8	50.6	45.6	45.6		-3.1	0.7
of which ESD sectors (2013 scope) GHG emissions	78.3	77.6	75.2	69.3	61.9	52.0	52.0		-1.1	-2.8
CO₂ Emissions (energy related)	122.7	114.2	106.4	97.8	84.6	86.9	73.8	-1.4	-2.3	-1.4
Power generation/District heating	25.1	24.0	20.4	15.8	9.0	19.1	16.8	-2.0	-7.9	6.5
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.7	-2.3	0.4	-1.0
Industry	34.5	24.8	22.1	19.7	18.4	16.1	13.9	-4.4	-1.8	-2.7
Residential	20.3	20.5	18.9	18.4	16.9	14.3	8.3	-0.7	-1.1	-6.9
Tertiary	8.7	10.6	10.2	9.5	9.0	7.3	5.4	1.6	-1.3	-5.0
Transport	29.2	29.9	30.9	29.7	27.4	26.3	25.7	0.6	-1.2	-0.6
CO₂ Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.4	8.7	1.6	0.4	-1.3
Non-CO₂ GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	15.2	-1.3	-1.4	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	74.9	65.0	-1.2	-1.9	-1.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.28	0.26	0.20	0.20	0.11	0.23	0.20	-3.5	-5.8	6.3
Final energy demand (t of CO ₂ /toe)	2.45	2.34	2.19	2.14	1.97	1.87	1.76	-1.1	-1.1	-1.1
Industry	2.43	2.11	1.89	1.79	1.63	1.51	1.40	-2.5	-1.4	-1.5
Residential	2.26	2.21	2.04	2.00	1.81	1.67	1.31	-1.0	-1.2	-3.2
Tertiary	1.80	1.87	1.71	1.66	1.55	1.41	1.26	-0.5	-1.0	-2.0
Transport	2.99	3.00	2.91	2.91	2.72	2.69	2.65	-0.3	-0.7	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.0	15.9	18.5			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	13.9	14.7			
RES-E share	1.1	2.4	7.1	15.2	20.0	27.0	33.6			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	12.8	16.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	105	113	110	3.2	6.0	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	146	156	164	0.9	0.5	1.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	59.1	65.0	76.1	4.0	2.0	2.6
as % of GDP	10.2	10.3	13.1	12.3	14.3	14.7	15.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7
GDP (in 000 M€13)	25	33	38	40	45	50	53	4.1	1.8	1.7
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16338	15277	13936	-0.4	-0.8	-1.6
Solids	6433	6895	6887	5983	5647	4521	3634	0.7	-2.0	-4.3
Oil	4068	4725	3888	3732	3542	3440	3224	-0.5	-0.9	-0.9
Natural gas	2931	2804	2300	2118	2119	1826	1435	-2.4	-0.8	-3.8
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7
Renewable energy forms	788	1156	1465	1870	2168	2629	2720	6.4	4.0	2.3
Energy Branch Consumption	905	911	1032	907	859	762	714	1.3	-1.8	-1.8
Non-Energy Uses	980	881	422	427	498	571	605	-8.1	1.7	2.0
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	9867	10629	10531	9856	10686	10177	9977	0.7	0.1	-0.7
Solids	4295	4178	4942	4055	4630	3657	3377	1.4	-0.7	-3.1
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9
Natural gas	12	384	59	125	128	129	135	17.0	8.0	0.6
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0
Renewable energy sources	792	1182	1512	1883	2133	2589	2660	6.7	3.5	2.2
Hydro	230	373	435	349	373	364	363	6.6	-1.5	-0.3
Biomass & Waste	562	776	975	1283	1483	1404	1189	5.7	4.3	-2.2
Wind	0	0	59	98	102	409	635	0.0	5.7	20.1
Solar and others	0	0	12	118	139	386	453	0.0	28.3	12.5
Geothermal	0	33	33	34	36	26	20	0.0	0.9	-5.6
Net Imports (ktoe)	8544	9276	7075	6717	5798	5262	4134	-1.9	-2.0	-3.3
Solids	2258	2553	1700	1928	1017	864	257	-2.8	-5.0	-12.9
Oil	3944	4943	4025	3820	3668	3574	3357	0.2	-0.9	-0.9
Crude oil and Feedstocks	5228	6145	5916	6308	5990	5712	5367	1.2	0.1	-1.1
Oil products	-1284	-1202	-1891	-2489	-2322	-2138	-2010	3.9	2.1	-1.4
Natural gas	2742	2458	2131	1993	1992	1700	1311	-2.5	-0.7	-4.1
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7
Import Dependency (%)	46.0	46.7	39.6	40.5	35.2	34.1	29.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48845	48713	48510	46504	1.2	0.6	-0.5
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0
Solids	16941	18458	22606	23317	22623	17977	14495	2.9	0.0	-4.4
Oil (including refinery gas)	661	606	393	440	70	0	0	-5.1	-15.8	-100.0
Gas (including derived gases)	2178	1896	1967	3035	3861	2276	608	-1.0	7.0	-16.9
Biomass-waste	15	17	49	54	164	389	451	12.6	12.8	10.6
Hydro (pumping excluded)	2673	4337	5057	4063	4333	4235	4218	6.6	-1.5	-0.3
Wind	0	5	681	1144	1183	4754	7381	0.0	5.7	20.1
Solar	0	0	15	1129	1152	3553	4024	0.0	54.2	13.3
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11803	13437	14394	-0.5	1.7	2.0
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0
Renewable energy	1016	1992	2697	4081	4110	7052	8201	10.3	4.3	7.2
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0
Wind	0	8	488	691	703	1970	2794	0.0	3.7	14.8
Solar	0	0	25	1052	1069	2744	3069	0.0	45.6	11.1
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	5845	5878	5326	5967	5773	4466	4273	-0.9	0.8	-3.0
of which cogeneration units	1129	1191	1017	1814	1695	1587	1015	-1.0	5.2	-5.0
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5100	5100	4703	5313	4812	3494	3384	-0.8	0.2	-3.5
Gas fired	689	737	607	626	909	876	790	-1.3	4.1	-1.4
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0
Biomass-waste fired	0	0	3	15	51	94	98	0.0	32.3	6.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.3	38.5	34.7			
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	39.0	38.3	37.2			
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.6	8.8	8.0			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.1	45.5	58.3	67.5			
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7553	6282	5887	4630	3595	2.4	-2.5	-4.8
Solids	4928	5817	6610	5466	5208	4191	3391	3.0	-2.4	-4.2
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0
Gas (including derived gases)	884	697	720	692	625	348	101	-2.0	-1.4	-16.7
Biomass & Waste	3	2	4	15	38	91	103	1.4	26.0	10.4
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12213	13505	11285	10638	10377	10074	9691	-0.8	-0.8	-0.7
Refineries	5310	6421	6041	6617	6290	6010	5647	1.3	0.4	-1.1
Biofuels and hydrogen production	0	0	13	106	188	180	186	0.0	30.2	-0.1
District heating	324	368	304	96	98	95	74	-0.6	-10.7	-2.8
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3790	3784	-2.9	-2.6	0.0

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	48	56	65	72	76	80	84	3.2	1.4	1.0
Public road transport	15	14	11	11	11	12	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	57	58	5.7	1.3	0.6
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.9
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.4
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	1.9	2.5
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2879	2833	2803	4.0	0.6	-0.3
Public road transport	399	362	262	263	270	268	264	-4.1	0.3	-0.2
Private cars and motorcycles	956	1389	1581	1628	1559	1431	1361	5.2	-0.1	-1.3
Heavy goods and light commercial vehicles	305	652	590	646	699	715	705	6.8	1.7	0.1
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.4
Aviation	101	201	182	207	244	301	349	6.1	3.0	3.6
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
<i>By transport activity</i>										
Passenger transport	1473	1965	2034	2106	2082	2011	1985	3.3	0.2	-0.5
Freight transport	369	718	685	731	796	822	818	6.4	1.5	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.5	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	15841	14707	13333	-0.1	-0.9	-1.7
Final Energy Demand	9106	10184	8843	9205	9462	9157	8351	-0.3	0.7	-1.2
<i>by sector</i>										
Industry	3967	4037	2561	2709	2774	2803	2724	-4.3	0.8	-0.2
Energy intensive industries	3124	3161	1789	1929	1918	1898	1818	-5.4	0.7	-0.5
Other industrial sectors	843	876	772	780	856	906	906	-0.9	1.0	0.6
Residential	2155	2117	2246	2307	2373	2192	1718	0.4	0.6	-3.2
Tertiary	972	1128	1174	1179	1268	1173	966	1.9	0.8	-2.7
Transport ⁽⁵⁾	2013	2903	2862	3011	3046	2988	2943	3.6	0.6	-0.3
<i>by fuel</i>										
Solids	879	979	414	487	415	310	230	-7.3	0.0	-5.7
Oil	3026	3712	3125	3134	3045	2951	2751	0.3	-0.3	-1.0
Gas	1681	1565	1058	1052	1077	1027	906	-4.5	0.2	-1.7
Electricity	2085	2211	2331	2382	2506	2572	2524	1.1	0.7	0.1
Heat (from CHP and District Heating)	880	939	960	841	865	853	718	0.9	-1.0	-1.8
Renewable energy forms	555	778	956	1309	1554	1442	1215	5.6	5.0	-2.4
Other	0	0	0	0	0	2	6	0.0	0.0	32.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	733	599	472	415	362	306	261	-4.3	-2.6	-3.2
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	29	-9.4	-0.6	-1.9
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	48	35	-3.9	-1.4	-5.0
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	59	46	-2.1	-1.3	-4.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	24	22	0.0	-1.3	-1.6
Freight transport (toe/Mtkm)	35	44	37	37	36	33	31	0.7	-0.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	64.4	67.0	61.2	55.6	51.0	44.8	39.3	-0.5	-1.8	-2.6
of which ETS sectors (2013 scope) GHG emissions	39.4	35.6	30.0	28.3	23.2	18.8			-2.3	-4.0
of which ESD sectors (2013 scope) GHG emissions	27.6	25.6	25.6	22.7	21.6	20.5			-1.2	-1.0
CO₂ Emissions (energy related)	44.3	49.1	45.9	40.1	38.0	32.2	26.8	0.4	-1.9	-3.4
Power generation/District heating	24.6	27.9	31.2	25.1	23.7	18.7	14.7	2.4	-2.7	-4.7
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.7	0.8	-1.8	-1.4
Industry	10.6	9.8	3.7	4.0	3.9	3.6	2.9	-10.0	0.6	-2.8
Residential	1.4	1.2	1.0	1.0	0.7	0.4	0.2	-3.1	-4.0	-11.3
Tertiary	1.2	1.1	0.8	0.7	0.6	0.4	0.4	-4.0	-1.5	-5.7
Transport	5.7	8.3	8.3	8.4	8.3	8.2	8.0	3.7	0.1	-0.4
CO₂ Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.4
Non-CO₂ GHG emissions	16.7	14.0	12.3	12.5	9.8	9.4	9.3	-3.0	-2.2	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	46.3	40.7	35.7	-0.5	-1.8	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.46	0.49	0.51	0.41	0.39	0.31	0.26	1.2	-2.8	-4.0
Final energy demand (t of CO ₂ /toe)	2.07	2.01	1.55	1.53	1.44	1.39	1.37	-2.8	-0.8	-0.4
Industry	2.67	2.43	1.44	1.47	1.41	1.29	1.08	-6.0	-0.2	-2.6
Residential	0.63	0.58	0.44	0.41	0.28	0.19	0.12	-3.5	-4.5	-8.4
Tertiary	1.24	0.97	0.69	0.61	0.54	0.48	0.40	-5.8	-2.3	-3.1
Transport	2.85	2.88	2.88	2.80	2.73	2.73	2.70	0.1	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	21.0	26.2	29.6			
RES-H&C share	10.5	14.1	25.2	30.8	33.9	34.3	36.0			
RES-E share	4.0	8.5	12.3	17.4	18.1	34.5	44.3			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	10.8	13.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	68	73	75	0.8	1.7	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	105	124	127	5.4	3.4	1.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.5	17.3	6.2	3.1	3.0
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.1	32.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EUCC+33				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3		
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3		
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8275	7711	6706	0.9	-0.3	-2.1		
Solids	431	683	683	751	852	353	257	4.7	2.2	-11.3		
Oil	3929	4490	3699	3414	3230	3036	2727	-0.6	-1.3	-1.7		
Natural gas	2210	2370	2632	2144	2365	2451	1709	1.8	-1.1	-3.2		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1		
Renewable energy forms	880	906	1138	1195	1415	1522	1605	2.6	2.2	1.3		
Energy Branch Consumption	821	825	745	726	712	608	570	-1.0	-0.5	-2.2		
Non-Energy Uses	656	675	596	514	529	536	535	-0.9	-1.2	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3580	3799	4222	3368	3586	3429	3194	1.7	-1.6	-1.1		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	1345	1029	767	466	461	436	389	-5.5	-5.0	-1.7		
Natural gas	1355	1865	2215	1431	1476	1273	1055	5.0	-4.0	-3.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	880	906	1240	1471	1649	1720	1750	3.5	2.9	0.6		
Hydro	505	545	716	533	544	549	550	3.6	-2.7	0.1		
Biomass & Waste	375	360	500	859	1018	918	754	2.9	7.4	-3.0		
Wind	0	1	12	56	56	56	188	0.0	16.6	12.9		
Solar and others	0	0	5	16	23	190	245	0.0	16.0	26.7		
Geothermal	0	0	7	7	8	7	14	0.0	1.3	6.0		
Net Imports (ktoe)	4134	5208	4461	4657	4697	4289	3521	0.8	0.5	-2.8		
Solids	478	624	699	751	852	353	257	3.9	2.0	-11.3		
Oil	2406	3583	2980	2955	2776	2607	2344	2.2	-0.7	-1.7		
Crude oil and Feedstocks	3952	4334	3647	2979	2838	2734	2544	-0.8	-2.5	-1.1		
Oil products	-1546	-751	-667	-24	-62	-127	-200	-8.1	-21.1	12.4		
Natural gas	905	562	476	713	889	1178	655	-6.2	6.5	-3.0		
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1		
Import Dependency (%)	52.9	58.4	52.1	58.0	56.7	55.6	52.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14185	15166	14095	2.7	0.1	-0.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	1551	2328	2385	2671	3441	1156	868	4.4	3.7	-12.9		
Oil (including refinery gas)	1687	1855	560	77	24	279	212	-10.4	-27.0	24.3		
Gas (including derived gases)	1571	1814	2553	2232	3402	4553	1925	5.0	2.9	-5.5		
Biomass-waste	1	14	33	98	276	338	309	41.9	23.7	1.1		
Hydro (pumping excluded)	5874	6333	8329	6200	6324	6386	6393	3.6	-2.7	0.1		
Wind	0	10	139	650	650	650	2184	0.0	16.7	12.9		
Solar	0	0	0	68	68	1803	2204	0.0	0.0	41.6		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4890	5911	6829	1.1	1.5	3.4		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2079	2066	2220	2668	2668	3879	4945	0.7	1.9	6.4		
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2190	0.3	0.2	0.0		
Wind	0	6	79	423	423	423	1213	0.0	18.3	11.1		
Solar	0	0	0	55	55	1266	1542	0.0	0.0	39.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	1707	1879	1996	2216	2222	2032	1884	1.6	1.1	-1.6		
of which cogeneration units	558	515	486	298	648	858	527	-1.4	2.9	-2.0		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0		
Gas fired	781	919	1031	1706	1392	1192	1085	2.8	3.0	-2.5		
Oil fired	615	646	649	185	150	157	112	0.5	-13.6	-2.9		
Biomass-waste fired	0	3	5	13	24	27	32	0.0	17.3	2.9		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	32.1	28.8	23.3					
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	46.3	45.8	41.1					
% of gross electricity from CHP	16.8	0.0	14.3	15.5	17.4	16.2	14.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	51.6	60.5	78.7					
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1326	1187	693	0.2	0.4	-6.3		
Solids	357	537	532	612	725	251	194	4.1	3.1	-12.4		
Oil (including refinery gas)	395	447	120	14	8	78	63	-11.3	-23.7	23.0		
Gas (including derived gases)	497	490	611	350	540	793	373	2.1	-1.2	-3.6		
Biomass & Waste	0	4	7	17	53	65	63	36.6	22.8	1.7		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	5394	5327	4409	3555	3567	3417	3153	-2.0	-2.1	-1.2		
Refineries	5299	5210	4304	3414	3268	3141	2913	-2.1	-2.7	-1.1		
Biofuels and hydrogen production	0	0	3	70	223	201	180	0.0	56.1	-2.1		
District heating	83	104	97	70	74	65	47	1.6	-2.7	-4.3		
Derived gases, cokeries etc.	12	13	4	1	2	10	12	-10.0	-5.6	17.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	1.0
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.6
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.8
Rail	2	2	2	2	3	3	3	2.7	1.3	0.9
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.7	2.7
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.8
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.5
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.6
Rail	2	3	3	3	3	3	3	3.9	1.4	1.4
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2133	2054	2005	3.0	0.3	-0.6
Public road transport	41	39	61	63	66	66	65	3.9	0.8	-0.1
Private cars and motorcycles	1192	1192	1332	1324	1319	1220	1157	1.1	-0.1	-1.3
Heavy goods and light commercial vehicles	161	508	479	465	510	516	521	11.5	0.6	0.2
Rail	46	52	50	48	52	53	55	0.8	0.5	0.5
Aviation	76	98	108	134	144	154	161	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	1.0
<i>By transport activity</i>										
Passenger transport	1329	1340	1514	1535	1542	1454	1397	1.3	0.2	-1.0
Freight transport	215	581	554	540	591	600	608	9.9	0.7	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.5	9.9			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7746	7175	6173	1.1	-0.3	-2.2
Final Energy Demand	5371	6343	6347	6190	6301	5918	5189	1.7	-0.1	-1.9
<i>by sector</i>										
Industry	1378	1563	1366	1394	1390	1308	1204	-0.1	0.2	-1.4
Energy intensive industries	847	907	752	745	735	676	602	-1.2	-0.2	-2.0
Other industrial sectors	531	656	614	649	655	632	602	1.5	0.7	-0.8
Residential	1666	1922	1893	1784	1777	1627	1217	1.3	-0.6	-3.7
Tertiary	781	935	1018	934	997	925	760	2.7	-0.2	-2.7
Transport ⁽⁵⁾	1547	1923	2070	2078	2137	2058	2008	3.0	0.3	-0.6
<i>by fuel</i>										
Solids	74	146	150	139	128	102	63	7.3	-1.6	-6.8
Oil	2683	3108	2902	2755	2564	2350	2079	0.8	-1.2	-2.1
Gas	1009	1236	1288	1170	1227	1119	856	2.5	-0.5	-3.5
Electricity	1018	1240	1364	1317	1395	1433	1420	3.0	0.2	0.2
Heat (from CHP and District Heating)	213	258	246	226	239	232	182	1.4	-0.2	-2.7
Renewable energy forms	375	356	397	582	746	672	575	0.6	6.5	-2.6
Other	0	0	0	1	2	10	13	0.0	0.0	18.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	214	196	184	179	169	149	121	-1.5	-0.9	-3.3
Industry (Energy on Value added, index 2000=100)	100	97	88	93	87	78	69	-1.3	-0.2	-2.2
Residential (Energy on Private Income, index 2000=100)	100	91	88	84	76	65	45	-1.2	-1.6	-5.0
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	91	79	61	-0.1	-0.8	-4.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	34	31	-1.2	-1.3	-2.0
Freight transport (toe/Mtkm)	48	49	47	45	43	41	38	-0.2	-0.8	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	25.4	22.6	19.3	0.8	-1.2	-2.7
of which ETS sectors (2013 scope) GHG emissions	12.7	10.8	9.7	10.4	8.7	7.0			-0.4	-4.0
of which ESD sectors (2013 scope) GHG emissions	17.9	17.7	15.7	14.9	13.9	12.4			-1.7	-1.9
CO₂ Emissions (energy related)	17.0	20.2	18.6	17.0	17.4	14.9	11.9	0.9	-0.7	-3.8
Power generation/District heating	4.1	5.1	4.3	3.5	4.4	3.2	1.9	0.3	0.4	-8.1
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.5	1.4	-1.0	-0.5	-2.3
Industry	2.9	3.5	2.8	2.9	2.7	2.3	1.8	-0.2	-0.5	-4.1
Residential	1.9	2.4	2.1	1.7	1.7	1.4	0.8	1.0	-2.1	-7.7
Tertiary	1.5	1.5	1.4	1.2	1.2	1.0	0.8	-0.6	-1.6	-4.1
Transport	4.5	5.7	6.2	6.0	5.7	5.4	5.3	3.1	-0.8	-0.7
CO₂ Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.5	2.5	-0.3	0.0	-0.3
Non-CO₂ GHG emissions	6.7	7.4	7.4	5.9	5.4	5.2	5.0	0.9	-3.1	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	71.5	63.7	54.5	0.8	-1.2	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.30	0.32	0.25	0.23	0.25	0.18	0.11	-2.1	0.3	-7.7
Final energy demand (t of CO ₂ /toe)	2.01	2.06	1.97	1.90	1.79	1.73	1.66	-0.2	-1.0	-0.8
Industry	2.09	2.23	2.08	2.08	1.94	1.79	1.47	-0.1	-0.7	-2.7
Residential	1.15	1.24	1.12	0.95	0.96	0.87	0.63	-0.3	-1.5	-4.1
Tertiary	1.89	1.57	1.37	1.26	1.18	1.12	1.02	-3.2	-1.4	-1.4
Transport	2.94	2.97	2.97	2.88	2.65	2.64	2.62	0.1	-1.1	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.2	24.5	29.9			
RES-H&C share	13.0	10.9	13.1	18.0	18.7	20.2	25.2			
RES-E share	36.2	32.8	34.2	39.1	38.6	47.8	59.0			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.0	12.3	15.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	66	77	82	-2.1	-0.2	2.3
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	120	129	132	1.3	1.0	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.3	12.1	5.5	1.7	3.0
as % of GDP	12.2	12.9	16.4	16.8	18.4	19.9	21.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Cyprus: EUCo-33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3	
GDP (in 000 M€13)	14	16	18	16	19	21	22	2.8	0.2	1.9	
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2149	1997	1832	1.3	-2.4	-1.6	
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-13.3	
Oil	2334	2446	2611	1995	1345	1192	1103	1.1	-6.4	-2.0	
Natural gas	0	0	0	0	558	532	469	0.0	0.0	-1.7	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	-88.0	
Renewable energy forms	46	57	112	162	245	273	260	9.4	8.1	0.6	
Energy Branch Consumption	54	22	19	17	15	8	7	-9.7	-2.4	-7.9	
Non-Energy Uses	86	73	85	38	42	44	44	-0.1	-7.0	0.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	44	51	89	137	195	2090	2897	7.2	8.2	30.9	
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Natural gas	0	0	0	0	0	1864	2681	0.0	0.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	44	51	89	137	195	227	216	7.2	8.2	1.0	
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biomass & Waste	9	10	24	28	37	45	45	10.5	4.3	2.1	
Wind	0	0	3	21	36	36	40	0.0	29.7	0.9	
Solar and others	36	41	61	86	118	141	129	5.6	6.8	0.9	
Geothermal	0	0	1	2	4	5	3	0.0	18.7	-5.2	
Net Imports (ktoe)	2565	2843	2945	2243	2197	172	-781	1.4	-2.9	0.0	
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-13.3	
Oil	2531	2794	2910	2218	1586	1452	1363	1.4	-5.9	-1.5	
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0	
Oil products	1371	2794	2910	2218	1586	1452	1363	7.8	-5.9	-1.5	
Natural gas	0	0	0	0	561	-1326	-2188	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0	
Import Dependency (%)	98.6	100.7	100.8	94.3	91.8	7.6	-36.9				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4936	5213	4782	4.7	-0.8	-0.3	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	3370	4376	5249	4086	437	22	22	4.5	-22.0	-25.7	
Gas (including derived gases)	0	0	0	0	3441	3768	3248	0.0	0.0	-0.6	
Biomass-waste	0	0	35	45	59	102	122	0.0	5.4	7.5	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solar	0	0	31	248	422	422	462	0.0	29.8	0.9	
Geothermal and other renewables	0	0	6	195	576	899	928	0.0	58.4	4.9	
Other fuels (hydrogen, methanol)	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	2169	2196	4.3	2.8	1.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	0	0	89	292	554	715	741	0.0	20.1	3.0	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	82	158	216	216	229	0.0	10.2	0.6	
Solar	0	0	7	135	338	499	512	0.0	47.4	4.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	983	1119	1409	1462	1426	1455	1455	3.7	0.1	0.2	
of which cogeneration units	0	5	22	2	2	1	1	0.0	-21.7	-3.1	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0	
Gas fired	0	0	0	0	34	514	514	0.0	0.0	31.3	
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9	
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.2	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.4	26.9	24.5				
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.8	60.8	60.0				
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	0.8				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.4	27.3	31.6				
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	653	550	486	3.0	-5.8	-2.9	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	881	1077	1178	731	82	0	0	2.9	-23.4	-100.0	
Gas (including derived gases)	0	0	0	0	558	531	466	0.0	0.0	-1.8	
Biomass & Waste	0	0	4	10	13	19	20	0.0	12.6	4.2	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	1178	0	15	17	41	37	33	-35.4	10.5	-2.0	
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0	
Biofuels and hydrogen production	0	0	15	17	41	37	33	0.0	10.5	-2.1	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	15.8	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.3	1.9
Public road transport	1	1	1	1	1	1	1	1.4	0.8	0.3
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.3
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	963	946	935	2.0	-0.9	-0.3
Public road transport	32	35	37	37	38	37	36	1.5	0.3	-0.6
Private cars and motorcycles	373	444	577	490	483	428	384	4.5	-1.8	-2.3
Heavy goods and light commercial vehicles	173	197	152	125	126	126	127	-1.3	-1.8	0.1
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	316	355	389	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
<i>By transport activity</i>										
Passenger transport	687	785	898	791	836	820	808	2.7	-0.7	-0.3
Freight transport	173	197	152	125	126	126	127	-1.3	-1.8	0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.5	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.9	3.3			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2107	1953	1788	1.3	-2.3	-1.6
Final Energy Demand	1650	1834	1926	1700	1760	1710	1569	1.6	-0.9	-1.1
<i>by sector</i>										
Industry	445	320	235	202	203	199	191	-6.2	-1.4	-0.6
Energy intensive industries	240	221	171	141	145	146	146	-3.3	-1.7	0.1
Other industrial sectors	205	98	63	61	59	53	45	-11.1	-0.7	-2.6
Residential	211	322	333	323	315	285	222	4.7	-0.5	-3.4
Tertiary	134	209	309	259	279	280	220	8.7	-1.0	-2.3
Transport ⁽⁵⁾	860	983	1050	916	963	946	935	2.0	-0.9	-0.3
<i>by fuel</i>										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-13.3
Oil	1317	1403	1384	1226	1221	1148	1059	0.5	-1.2	-1.4
Gas	0	0	0	0	0	1	2	0.0	0.0	17.9
Electricity	258	341	420	360	391	420	383	5.0	-0.7	-0.2
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.5	-3.3
Renewable energy forms	42	54	105	114	146	140	120	9.6	3.4	-1.9
Other	0	0	0	0	0	1	3	-100.0	0.0	33.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	175	157	151	131	115	97	82	-1.5	-2.6	-3.4
Industry (Energy on Value added, index 2000=100)	100	70	56	57	52	48	43	-5.6	-0.7	-2.0
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	84	61	1.3	-1.1	-4.9
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	142	128	92	5.2	-1.5	-4.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	33	30	0.5	-3.2	-2.4
Freight transport (toe/Mtkm)	129	135	133	109	104	97	92	0.3	-2.5	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	11.3	10.4	10.3	8.2	7.3	6.8	6.5	-0.9	-3.4	-1.0
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.3	3.3		-4.9	-0.5
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.6	3.2		-1.8	-1.5
CO₂ Emissions (energy related)	7.2	8.0	8.1	6.1	5.3	4.8	4.4	1.2	-4.1	-2.0
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.2	1.1	2.9	-8.4	-3.6
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.4	0.4	-7.6	-1.7	-2.5
Residential	0.2	0.5	0.4	0.3	0.3	0.2	0.1	4.7	-2.4	-13.0
Tertiary	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	-1.9	-5.7
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.7	1.8	-1.2	-0.3
CO₂ Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.7	-3.5	-0.5	2.0
Non-CO₂ GHG emissions	3.2	1.5	1.6	1.6	1.4	1.4	1.5	-6.9	-1.5	0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	115.6	109.0	104.1	-0.9	-3.4	-1.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.85	0.80	0.71	0.52	0.32	0.24	0.23	-1.7	-7.7	-3.3
Final energy demand (t of CO ₂ /toe)	2.57	2.45	2.24	2.22	2.13	2.07	2.09	-1.3	-0.5	-0.2
Industry	3.16	3.11	2.70	2.73	2.63	2.46	2.17	-1.6	-0.3	-1.9
Residential	1.11	1.44	1.11	1.04	0.91	0.66	0.32	0.0	-1.9	-9.9
Tertiary	0.00	0.43	0.69	0.73	0.63	0.51	0.45	0.0	-0.9	-3.4
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.87	-0.2	-0.3	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.9	17.4	19.0			
RES-H&C share	7.9	10.0	18.2	21.8	24.4	27.4	31.4			
RES-E share	0.0	0.0	1.4	10.6	21.4	27.3	31.6			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	10.9	11.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	112	108	115	3.1	-3.2	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	198	182	190	3.2	0.9	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.5	3.1	3.3	3.8	8.1	2.1	2.2
as % of GDP	8.3	12.0	13.7	14.9	16.4	16.1	17.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EUCC+33				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
											Annual % Change
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1	
GDP (in 000 ME13)	112	137	157	165	181	197	216	3.4	1.4	1.8	
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	41105	40394	37968	0.8	-0.8	-0.8	
Solids	21643	20248	18364	15061	15071	14612	13660	-1.6	-2.0	-1.0	
Oil	7881	9899	9306	8965	8809	8470	8243	1.7	-0.5	-0.7	
Natural gas	7500	7703	8070	7797	7164	6755	4873	0.7	-1.2	-3.8	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Electricity	-861	-1086	-1285	-1020	-590	-614	-697	4.1	-7.5	1.7	
Renewable energy forms	1429	1955	2980	3521	3853	4372	5091	7.6	2.6	2.8	
Energy Branch Consumption	1768	1796	2068	1808	1777	1764	1716	1.6	-1.5	-0.3	
Non-Energy Uses	2093	2948	2783	2447	2583	2677	2727	2.9	-0.7	0.5	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	28011	28778	28213	0.3	-1.2	0.1	
Solids	25049	23570	20730	16524	17029	17273	16041	-1.9	-1.9	-0.6	
Oil	386	591	290	223	222	210	189	-2.8	-2.7	-1.6	
Natural gas	169	154	202	191	181	171	157	1.8	-1.1	-1.4	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Renewable energy sources	1426	2142	3101	3560	3781	4326	5027	8.1	2.0	2.9	
Hydro	151	205	240	208	218	212	232	4.7	-0.9	0.6	
Biomass & Waste	1275	1933	2770	3106	3230	3562	3474	8.1	1.5	0.7	
Wind	0	2	29	44	65	231	533	76.2	8.5	23.4	
Solar and others	0	3	62	202	266	319	312	0.0	15.7	1.6	
Geothermal	0	0	0	0	2	3	476	0.0	0.0	73.2	
Net Imports (ktoe)	9414	12641	11447	13826	13093	11616	9756	2.0	1.4	-2.9	
Solids	-4721	-3270	-2968	-1463	-1958	-2661	-2381	-4.5	-4.1	2.0	
Oil	7512	9649	8974	8742	8588	8260	8053	1.8	-0.4	-0.6	
Crude oil and Feedstocks	5596	7730	7837	6115	6049	5882	5795	3.4	-2.6	-0.4	
Oil products	1916	1919	1137	2627	2539	2378	2259	-5.1	8.4	-1.2	
Natural gas	7482	7535	6846	7606	6983	6584	4716	-0.9	0.2	-3.8	
Electricity	-861	-1086	-1285	-1020	-590	-614	-697	4.1	-7.5	1.7	
Import Dependency (%)	22.9	28.0	25.6	33.6	31.9	28.8	25.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	80432	84630	86917	1.6	-0.6	0.8	
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0	
Solids	52752	49522	47113	41095	42656	41270	39730	-1.1	-1.0	-0.7	
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0	
Gas (including derived gases)	3907	4215	4121	5848	3592	5425	3535	0.5	-1.4	-0.2	
Biomass-waste	531	739	2188	2219	1073	2725	4151	15.2	-6.9	14.5	
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2460	2698	4.7	-0.9	0.6	
Wind	1	21	335	508	759	2687	6201	78.9	8.5	23.4	
Solar	0	0	615	2149	2214	2466	2518	0.0	13.7	1.3	
Geothermal and other renewables	0	0	1	0	2	2	490	0.0	9.0	72.6	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18569	19719	20649	2.5	0.3	1.1	
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0	
Renewable energy	953	1043	2989	3628	3816	4766	6406	12.1	2.5	5.3	
Hydro (pumping excluded)	952	1020	1049	1080	1080	1087	1138	1.0	0.3	0.5	
Wind	1	22	213	282	408	1116	2651	70.9	6.7	20.6	
Solar	0	1	1727	2266	2328	2563	2617	0.0	3.0	1.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	11079	11265	11000	11182	10747	10947	10237	-0.1	-0.2	-0.5	
of which cogeneration units	3733	5199	4792	3850	3975	3088	2371	2.5	-1.9	-5.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9823	9935	9571	9656	9487	9414	8797	-0.3	-0.1	-0.8	
Gas fired	1097	1110	1176	1220	933	1210	824	0.7	-2.3	-1.2	
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2	
Biomass-waste fired	19	80	136	171	256	259	466	21.7	6.5	6.2	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	86	0.0	0.0	72.6	
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	45.9	45.6	44.9				
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	32.8	32.4	31.6				
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.3	14.9	12.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	42.5	44.8	50.2				
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12402	13119	13025	-0.3	-2.0	0.5	
Solids	13945	14025	13445	10677	11152	11102	10685	-0.4	-1.9	-0.4	
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0	
Gas (including derived gases)	1236	1292	1134	1938	970	1288	942	-0.9	-1.5	-0.3	
Biomass & Waste	253	224	562	626	278	727	977	8.3	-6.8	13.4	
Geothermal heat	0	0	0	0	2	2	421	0.0	0.0	72.6	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	15035	19758	20049	17183	17136	16812	16376	2.9	-1.6	-0.5	
Refineries	6151	8144	8337	6497	6444	6274	6166	3.1	-2.5	-0.4	
Biofuels and hydrogen production	62	3	231	285	594	527	517	14.1	9.9	-1.4	
District heating	975	916	787	650	693	646	480	-2.1	-1.3	-3.6	
Derived gases, cokeries etc.	7846	10696	10693	9751	9406	9365	9214	3.1	-1.3	-0.2	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Czech Republic: EUOQ+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	103	112	108	113	124	135	146	0.5	1.4	1.6
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.3
Private cars and motorcycles	67	72	67	68	75	81	86	0.0	1.1	1.4
Rail	15	15	16	18	20	22	24	0.1	2.6	2.0
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.5
Heavy goods and light commercial vehicles	29	34	34	35	38	40	43	1.7	1.1	1.3
Rail	17	15	14	15	17	19	21	-2.4	2.1	2.0
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.2
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6304	6018	5953	3.7	0.3	-0.6
Public road transport	233	296	379	385	401	409	415	5.0	0.6	0.4
Private cars and motorcycles	2563	3389	3394	3319	3295	2986	2831	2.8	-0.3	-1.5
Heavy goods and light commercial vehicles	1038	1753	1810	1914	1996	1964	1994	5.7	1.0	0.0
Rail	216	197	193	211	235	249	265	-1.1	2.0	1.2
Aviation	197	343	341	345	373	406	443	5.6	0.9	1.7
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	2.0
<i>By transport activity</i>										
Passenger transport	3107	4132	4229	4175	4214	3955	3855	3.1	0.0	-0.9
Freight transport	1145	1850	1892	2003	2090	2063	2099	5.1	1.0	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.2			
ENERGY EFFICIENCY										
Primary energy consumption	39004	42175	41899	38675	38522	37717	35242	0.7	-0.8	-0.9
Final Energy Demand	24798	26026	24853	24635	25353	24052	21331	0.0	0.2	-1.7
<i>by sector</i>										
Industry	10129	9681	7933	7883	8168	7989	7592	-2.4	0.3	-0.7
Energy intensive industries	6420	6748	5015	5079	5136	4981	4546	-2.4	0.2	-1.2
Other industrial sectors	3709	2934	2919	2804	3032	3008	3046	-2.4	0.4	0.0
Residential	6150	6345	6665	6340	6580	6088	4602	0.8	-0.1	-3.5
Tertiary	4151	3904	3979	4098	4148	3797	3022	-0.4	0.4	-3.1
Transport ⁽⁵⁾	4368	6095	6276	6315	6457	6177	6115	3.7	0.3	-0.5
<i>by fuel</i>										
Solids	5134	3769	2424	2616	2294	1894	1401	-7.2	-0.5	-4.8
Oil	5322	6817	6541	6366	6150	5730	5459	2.1	-0.6	-1.2
Gas	6491	6741	6662	6128	6321	5708	4508	0.3	-0.5	-3.3
Electricity	4246	4754	4919	5012	5293	5615	5736	1.5	0.7	0.8
Heat (from CHP and District Heating)	2624	2478	2249	2102	2277	2250	1791	-1.5	0.1	-2.4
Renewable energy forms	981	1467	2058	2411	3015	2838	2405	7.7	3.9	-2.2
Other	0	0	0	1	2	16	31	-100.0	0.0	30.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	366	329	285	250	227	205	176	-2.5	-2.2	-2.5
Industry (Energy on Value added, index 2000=100)	100	69	44	43	40	37	32	-7.8	-0.9	-2.3
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	58	39	-2.2	-1.4	-5.6
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	67	56	40	-2.7	-1.3	-5.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	27	24	2.2	-1.5	-2.6
Freight transport (toe/Mtkm)	25	38	40	40	38	35	33	4.8	-0.4	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	122.3	117.4	106.6	-0.8	-1.4	-1.4
of which ETS sectors (2013 scope) GHG emissions	87.1	79.4	68.7	66.6	66.4	61.9		-1.7	-0.7	
of which ESD sectors (2013 scope) GHG emissions	63.6	61.4	59.9	55.7	51.1	44.7		-1.0	-2.2	
CO₂ Emissions (energy related)	125.7	124.3	114.6	102.9	99.9	95.8	86.6	-0.9	-1.4	-1.4
Power generation/District heating	66.8	66.2	63.2	52.9	52.1	52.5	49.2	-0.6	-1.9	-0.6
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.6	2.5	1.6	-1.6	-0.5
Industry	28.3	24.7	17.5	17.0	16.1	14.8	12.6	-4.7	-0.8	-2.4
Residential	8.8	8.4	8.3	7.8	7.5	6.3	4.1	-0.6	-0.9	-6.0
Tertiary	6.8	4.9	4.9	4.8	4.7	3.5	2.4	-3.3	-0.4	-6.5
Transport	12.4	17.8	17.6	17.6	17.0	16.2	15.9	3.6	-0.4	-0.7
CO₂ Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.2	5.0	-1.7	1.1	-0.5
Non-CO₂ GHG emissions	21.7	21.1	21.5	20.5	17.1	16.4	14.9	-0.1	-2.3	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	61.9	59.5	54.0	-0.8	-1.4	-1.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.60	0.55	0.52	0.46	0.45	0.44	0.43	-1.4	-1.4	-0.5
Final energy demand (t of CO ₂ /toe)	2.27	2.15	1.94	1.92	1.79	1.70	1.64	-1.6	-0.8	-0.9
Industry	2.79	2.55	2.21	2.16	1.97	1.85	1.66	-2.3	-1.1	-1.7
Residential	1.43	1.33	1.24	1.24	1.14	1.03	0.88	-1.4	-0.8	-2.6
Tertiary	1.63	1.26	1.22	1.18	1.13	0.93	0.78	-2.9	-0.8	-3.5
Transport	2.85	2.92	2.81	2.79	2.63	2.63	2.60	-0.1	-0.7	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.6	15.5	18.3			
RES-H&C share	5.9	9.1	12.6	15.5	17.2	19.2	21.8			
RES-E share	3.4	3.8	7.5	10.3	8.9	13.3	20.3			
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.6	11.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	82	85	78	2.0	3.1	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	130	129	126	7.9	-0.9	-0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.1	35.4	41.2	6.8	1.2	2.5
as % of GDP	13.1	14.8	18.1	16.7	17.7	18.0	19.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
		5	6	6	6	6	6	0.4	0.4	0.5
Population (in million)										
GDP (in 000 ME13)	233	248	247	256	289	321	350	0.6	1.6	1.9
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16820	15664	14417	0.2	-1.7	-1.5
Solids	3985	3713	3809	1860	1686	822	507	-0.5	-7.8	-11.3
Oil	9101	8063	7568	6738	6247	5734	5147	-1.8	-1.9	-1.9
Natural gas	4465	4413	4435	3680	2635	2373	1874	-0.1	-5.1	-3.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Renewable energy forms	2124	3246	4326	3795	5637	6030	6524	7.4	2.7	1.5
Energy Branch Consumption	1121	1205	1132	911	890	743	614	0.1	-2.4	-3.6
Non-Energy Uses	301	289	263	283	313	339	345	-1.3	1.8	1.0
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	27958	30781	22915	15259	15897	13565	11603	-2.0	-3.6	-3.1
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil	18465	18464	12040	8158	7711	6407	4415	-4.2	-4.4	-5.4
Natural gas	7428	9397	7356	4188	3857	2446	1764	-0.1	-6.3	-7.5
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	2065	2920	3520	2913	4329	4712	5424	5.5	2.1	2.3
Hydro	3	2	2	2	2	2	2	-3.6	0.2	1.1
Biomass & Waste	1688	2335	2825	1819	2824	2974	2756	5.3	0.0	-0.2
Wind	365	569	672	1007	1318	1495	1950	6.3	7.0	4.0
Solar and others	8	10	16	80	100	124	157	7.2	19.9	4.7
Geothermal	1	4	5	6	85	117	560	13.8	32.6	20.7
Net Imports (ktoe)	-7370	-10130	-3257	2304	1725	2949	3719	-7.8	0.0	8.0
Solids	3783	3505	2642	1860	1686	822	507	-3.5	-4.4	-11.3
Oil	-8386	-9068	-3586	-676	-670	160	1552	-8.1	-15.4	0.0
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-740	66	1521	-5.4	-17.4	0.0
Oil products	397	1865	1447	-7	70	94	31	13.8	-26.1	-7.7
Natural gas	-2882	-5010	-3022	-508	-1214	-56	194	0.5	-8.7	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	9.8	17.9	24.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30704	30586	35203	0.8	-2.3	1.4
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	16673	15463	17006	6440	5421	2458	1924	0.2	-10.8	-9.8
Oil (including refinery gas)	4439	1375	774	214	7	79	53	-16.0	-37.5	22.3
Gas (including derived gases)	8774	8780	7906	4589	705	1303	993	-1.0	-21.5	3.5
Biomass-waste	1895	3989	5340	3223	8456	8576	8771	10.9	4.7	0.4
Hydro (pumping excluded)	30	23	21	21	21	21	24	-3.5	0.2	1.1
Wind	4241	6614	7809	11709	15325	17381	22670	6.3	7.0	4.0
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13146	13309	1.3	0.2	-0.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2401	3141	3818	5910	6456	6682	8098	4.7	5.4	2.3
Hydro (pumping excluded)	10	11	9	9	9	9	10	-1.0	0.0	1.1
Wind	2390	3127	3802	5064	5609	5835	7251	4.8	4.0	2.6
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	9386	9880	9601	9297	7179	6465	5211	0.2	-2.9	-3.2
of which cogeneration units	5578	5685	5806	7114	6143	5264	3160	0.4	0.6	-6.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6
Gas fired	1862	2278	2274	2274	1135	1039	651	2.0	-6.7	-5.4
Oil fired	860	860	1017	1017	492	223	217	1.7	-7.0	-7.8
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2870	2.4	5.6	-1.0
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.7	25.7	29.4			
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.3	33.1	34.9			
% of gross electricity from CHP	52.6	52.1	49.2	53.6	46.8	38.6	27.0			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.3	80.0	87.4	91.6			
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3766	3222	2890	-0.3	-6.8	-2.6
Solids	3669	3444	3770	1696	1537	726	425	0.3	-8.6	-12.1
Oil (including refinery gas)	1354	346	221	65	2	22	16	-16.6	-39.0	26.3
Gas (including derived gases)	2112	1996	1812	1197	202	329	247	-1.5	-19.7	2.0
Biomass & Waste	699	1341	1821	880	2025	2145	2202	10.0	1.1	0.8
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	9001	8288	8139	8416	8104	7519	7180	-1.0	0.0	-1.2
Refineries	8435	7700	7175	7493	6971	6469	5931	-1.6	-0.3	-1.6
Biofuels and hydrogen production	0	0	27	277	433	366	312	0.0	32.1	-3.2
District heating	549	575	923	644	690	644	885	5.3	-2.9	2.5
Derived gases, cokeries etc.	17	13	13	3	10	40	52	-2.9	-2.2	17.5

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Denmark: EUOQ+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0	
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.6	
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6	
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3	
Aviation ⁽³⁾	8	9	10	12	13	14	17	2.7	2.5	2.2	
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1	
Freight transport activity (Gtkm)	21	22	23	25	29	31	33	0.6	2.3	1.3	
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.2	
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9	
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.1	
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4961	4702	4556	0.7	-0.4	-0.8	
Public road transport	203	202	199	204	213	215	213	-0.2	0.7	0.0	
Private cars and motorcycles	2627	2866	2828	2599	2396	2094	1949	0.7	-1.6	-2.0	
Heavy goods and light commercial vehicles	864	1003	1011	971	1059	1066	1051	1.6	0.5	-0.1	
Rail	103	107	113	118	125	132	137	0.9	1.0	0.9	
Aviation	856	955	874	960	997	1015	1018	0.2	1.3	0.2	
Inland navigation	163	192	156	158	171	181	186	-0.4	0.9	0.9	
By transport activity											
Passenger transport	3874	4197	4049	3915	3771	3500	3364	0.4	-0.7	-1.1	
Freight transport	942	1128	1132	1094	1190	1202	1192	1.9	0.5	0.0	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.8	8.1				
ENERGY EFFICIENCY											
Primary energy consumption	19432	19264	19777	16536	16507	15326	14072	0.2	-1.8	-1.6	
Final Energy Demand	14717	15497	15606	14800	14754	13954	12210	0.6	-0.6	-1.9	
by sector											
Industry	2934	2864	2417	2568	2708	2641	2419	-1.9	1.1	-1.1	
Energy intensive industries	1156	1107	849	908	934	855	761	-3.0	1.0	-2.0	
Other industrial sectors	1778	1757	1569	1659	1773	1786	1658	-1.2	1.2	-0.7	
Residential	4162	4453	4916	4345	4184	3906	3046	1.7	-1.6	-3.1	
Tertiary	2805	2856	3094	2879	2901	2704	2190	1.0	-0.6	-2.8	
Transport ⁽⁵⁾	4816	5324	5179	5009	4961	4702	4556	0.7	-0.4	-0.8	
by fuel											
Solids	290	253	166	163	150	95	81	-5.4	-1.0	-5.9	
Oil	7058	7293	6759	6083	5655	5123	4560	-0.4	-1.8	-2.1	
Gas	1667	1708	1771	1744	1823	1618	1304	0.6	0.3	-3.3	
Electricity	2791	2877	2783	2733	2839	2935	3029	0.0	0.2	0.6	
Heat (from CHP and District Heating)	2255	2424	2840	2556	2498	2327	1673	2.3	-1.3	-3.9	
Renewable energy forms	656	943	1287	1519	1778	1814	1505	7.0	3.3	-1.7	
Other	0	0	0	3	10	41	58	-100.0	0.0	18.6	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	85	79	81	66	58	49	41	-0.4	-3.3	-3.4	
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	80	68	-0.9	-0.1	-2.8	
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	59	42	0.2	-3.5	-5.1	
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	67	49	0.1	-2.3	-4.7	
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	30	27	-0.4	-2.2	-2.4	
Freight transport (toe/Mtkm)	44	51	50	44	42	39	37	1.3	-1.7	-1.3	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	71.7	66.3	63.9	50.5	45.7	39.5	34.7	-1.1	-3.3	-2.7	
of which ETS sectors (2013 scope) GHG emissions		29.3	27.9	18.0	14.6	10.9	8.8			-6.2	-4.9
of which ESD sectors (2013 scope) GHG emissions			37.0	36.0	32.5	31.1	28.6			-1.5	-1.8
CO2 Emissions (energy related)	53.3	50.0	48.8	35.8	31.1	25.3	21.0	-0.9	-4.4	-3.9	
Power generation/District heating	24.5	20.3	21.2	10.6	7.1	4.0	2.5	-1.4	-10.3	-9.8	
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.3	
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.5	-3.2	0.4	-4.8	
Residential	3.9	3.6	3.2	2.6	2.2	1.9	1.2	-2.0	-3.7	-5.6	
Tertiary	3.0	2.7	2.9	2.5	2.4	1.8	1.3	-0.3	-1.8	-6.2	
Transport	14.3	15.9	15.5	14.2	13.5	12.8	12.3	0.8	-1.3	-0.9	
CO2 Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.5	1.5	1.4	-6.1	1.1	-0.6	
Non-CO2 GHG emissions	15.8	14.0	13.7	13.3	13.1	12.7	12.3	-1.4	-0.4	-0.6	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.3	54.7	48.1	-1.1	-3.3	-2.7	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.36	0.28	0.26	0.17	0.11	0.06	0.04	-3.0	-8.3	-8.7	
Final energy demand (t of CO2/toe)	1.81	1.76	1.63	1.58	1.51	1.43	1.42	-1.0	-0.8	-0.6	
Industry	1.85	1.79	1.63	1.58	1.52	1.31	1.04	-1.3	-0.7	-3.7	
Residential	0.95	0.80	0.66	0.59	0.53	0.49	0.41	-3.6	-2.1	-2.5	
Tertiary	1.05	0.95	0.93	0.88	0.83	0.65	0.58	-1.2	-1.2	-3.5	
Transport	2.97	2.99	2.99	2.83	2.72	2.72	2.71	0.0	-0.9	-0.1	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	34.0	39.8	45.2				
RES-H&C share	15.3	22.2	30.8	28.2	36.9	45.9	51.1				
RES-E share	15.0	25.0	33.1	42.0	62.7	67.1	79.9				
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	16.1	22.2				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	107	111	98	1.8	1.9	-0.9	
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	206	211	216	1.4	0.5	0.5	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.3	33.2	2.4	1.0	2.6	
as % of GDP	7.9	8.8	9.4	8.2	8.8	8.8	9.5				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Estonia: EUCo+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.6		
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6		
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6431	6213	5287	2.1	0.4	-1.9		
Solids	2968	3190	3917	3589	3677	3595	2863	2.8	-0.6	-2.5		
Oil	916	1182	1109	1065	975	889	824	1.9	-1.3	-1.7		
Natural gas	662	800	563	796	857	786	481	-1.6	4.3	-5.6		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Renewable energy forms	513	589	847	995	1037	1040	1050	5.1	2.0	0.1		
Energy Branch Consumption	163	193	199	190	186	179	145	2.0	-0.7	-2.5		
Non-Energy Uses	180	229	90	280	295	305	308	-6.7	12.6	0.4		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	3435	4250	5467	5368	5401	5277	4501	4.8	-0.1	-1.8		
Solids	2669	3176	3943	3594	3679	3604	2871	4.0	-0.7	-2.4		
Oil	249	375	532	681	648	585	522	7.9	2.0	-2.1		
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	512	692	988	1093	1074	1087	1108	6.8	0.8	0.3		
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0		
Biomass & Waste	512	686	962	1040	1012	1023	1036	6.5	0.5	0.2		
Wind	0	5	24	49	57	58	62	0.0	9.2	0.8		
Solar and others	0	0	0	0	2	3	6	0.0	0.0	14.1		
Geothermal	0	0	0	0	0	0	1	0.0	0.0	20.8		
Net Imports (ktoe)	1628	1489	862	1219	1265	1170	1023	-6.2	3.9	-2.1		
Solids	270	23	-22	-5	-2	-9	-8	0.0	-22.8	17.2		
Oil	786	917	760	625	555	525	506	-0.3	-3.1	-0.9		
Crude oil and Feedstocks	-125	-225	-394	-560	-524	-464	-406	12.2	2.9	-2.5		
Oil products	911	1142	1153	1185	1079	989	913	2.4	-0.7	-1.7		
Natural gas	657	792	558	796	863	800	514	-1.6	4.5	-5.1		
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0		
Import Dependency (%)	32.0	25.9	13.5	18.5	19.0	18.1	18.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11340	11318	8822	4.3	-1.3	-2.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	7682	9302	11167	8608	9100	9079	6666	3.8	-2.0	-3.1		
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0		
Gas (including derived gases)	757	760	712	689	665	638	472	-0.6	-0.7	-3.4		
Biomass-waste	13	35	740	859	873	893	925	49.8	1.7	0.6		
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0		
Wind	0	54	277	575	668	674	726	0.0	9.2	0.8		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2278	2245	2295	-0.3	-2.1	0.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2	36	114	312	343	347	363	49.8	11.6	0.6		
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0		
Wind	0	31	108	303	334	338	354	0.0	12.0	0.6		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2910	2648	2713	2377	1935	1898	1933	-0.7	-3.3	0.0		
of which cogeneration units	452	1604	447	437	266	250	429	-0.1	-5.1	4.9		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2684	2411	2430	1871	1416	1416	1416	-1.0	-5.3	0.0		
Gas fired	218	224	224	362	370	333	363	0.3	5.2	-0.2		
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0		
Biomass-waste fired	0	5	51	144	148	148	154	0.0	11.2	0.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	51.3	52.0	39.8					
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.3	33.8	33.7					
% of gross electricity from CHP	11.0	10.2	10.3	12.7	11.0	9.1	11.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.9	14.1	19.1					
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2668	2696	2055	2.5	-1.5	-2.6		
Solids	2199	2353	2715	2171	2292	2314	1695	2.1	-1.7	-3.0		
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0		
Gas (including derived gases)	226	227	209	168	167	168	141	-0.8	-2.2	-1.7		
Biomass & Waste	2	10	179	205	208	214	219	55.3	1.5	0.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	926	1271	1523	1753	1789	1649	1438	5.1	1.6	-2.2		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	0	10	65	54	45	0.0	0.0	-3.6		
District heating	454	489	446	418	435	401	303	-0.2	-0.3	-3.6		
Derived gases, cokeries etc.	473	782	1077	1325	1289	1194	1090	8.6	1.8	-1.7		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EUO0+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.8
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.5
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.5
Rail	0	0	0	0	0	1	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.3
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	794	733	700	3.0	0.2	-1.3
Public road transport	62	62	67	74	76	76	74	0.7	1.3	-0.2
Private cars and motorcycles	349	475	499	524	483	408	364	3.6	-0.3	-2.8
Heavy goods and light commercial vehicles	95	135	116	132	139	142	144	2.0	1.9	0.4
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	66	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
<i>By transport activity</i>										
Passenger transport	441	589	614	647	618	551	513	3.4	0.1	-1.8
Freight transport	138	178	167	164	176	181	187	1.9	0.5	0.6
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.8	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6136	5908	4979	2.4	0.1	-2.1
Final Energy Demand	2434	2877	2907	3036	3090	2949	2598	1.8	0.6	-1.7
<i>by sector</i>										
Industry	571	718	575	713	745	740	698	0.1	2.6	-0.6
Energy intensive industries	245	273	231	294	305	302	283	-0.6	2.8	-0.7
Other industrial sectors	327	446	343	419	440	438	415	0.5	2.5	-0.6
Residential	929	890	1028	963	987	942	759	1.0	-0.4	-2.6
Tertiary	348	495	520	544	558	528	435	4.1	0.7	-2.5
Transport ⁽⁵⁾	586	774	785	816	800	739	707	3.0	0.2	-1.2
<i>by fuel</i>										
Solids	118	118	83	64	56	46	37	-3.4	-3.8	-4.2
Oil	772	982	941	966	860	760	689	2.0	-0.9	-2.2
Gas	177	263	207	286	328	319	212	1.6	4.7	-4.3
Electricity	431	519	594	614	655	677	659	3.3	1.0	0.1
Heat (from CHP and District Heating)	511	547	531	484	513	485	399	0.4	-0.4	-2.5
Renewable energy forms	425	447	550	622	678	659	596	2.6	2.1	-1.3
Other	0	0	0	0	0	3	6	-100.0	0.0	38.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	465	372	405	346	314	280	220	-1.4	-2.5	-3.5
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	61	54	-4.0	-0.2	-1.9
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	45	33	-2.9	-3.4	-4.5
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	74	56	0.8	-2.4	-4.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	32	28	0.3	-1.7	-2.7
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.7	16.2	12.5	1.0	-1.2	-2.8
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	12.0	11.9	8.7		-1.4	-3.2
of which ESD sectors (2013 scope) GHG emissions			5.1	5.0	4.7	4.3	3.8		-0.6	-2.1
CO₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.4	14.0	10.5	1.6	-1.3	-3.1
Power generation/District heating	10.7	11.3	12.7	10.1	10.7	10.6	7.6	1.7	-1.7	-3.3
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.0	-2.3
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.4	-1.8	-0.1	-5.1
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.1	-4.2	0.5	-4.4
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.3	2.1	1.8	-5.6
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.9	3.1	-0.6	-1.4
CO₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.4	0.4	-6.0	3.0	-0.7
Non-CO₂ GHG emissions	2.3	1.9	2.0	1.9	1.8	1.8	1.6	-1.4	-1.0	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	41.5	40.5	31.1	1.0	-1.2	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.59	0.61	0.55	-0.6	-0.6	-0.7
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.11	1.06	-0.5	-0.8	-1.0
Industry	1.58	1.43	1.31	1.07	1.00	0.95	0.64	-1.8	-2.6	-4.5
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.17	-5.2	0.9	-1.9
Tertiary	0.91	1.05	0.75	0.92	0.84	0.69	0.61	-2.0	1.1	-3.2
Transport	2.96	2.98	2.99	2.96	2.75	2.74	2.71	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.9	26.6	30.4			
RES-H&C share	31.8	32.2	43.2	39.9	38.7	40.5	49.9			
RES-E share	0.2	1.1	10.4	14.4	14.9	14.9	16.6			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.4	10.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	43	47	65	64	68	78	1.0	3.2	1.9
Average Price of Electricity in Final demand sectors (€13/MWh)	59	63	80	109	122	130	129	3.2	4.3	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	5.5	8.6	4.1	2.3
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.6	22.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Finland: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5	
GDP (in 000 ME13)	157	179	187	188	199	210	226	1.7	0.6	1.3	
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35233	34672	30700	1.3	-0.5	-1.4	
Solids	5131	4936	6874	4106	4611	4207	3079	3.0	-3.9	-4.0	
Oil	9342	10335	10121	9288	8373	7323	6153	0.8	-1.9	-3.0	
Natural gas	3422	3598	3838	2821	2680	2974	2511	1.2	-3.5	-0.6	
Nuclear	5799	6003	5881	5763	8733	8733	8733	0.1	4.0	-2.7	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Renewable energy forms	7816	8195	9508	10767	10547	11953	12228	2.0	1.0	1.5	
Energy Branch Consumption	1168	1209	1529	1577	1542	1360	1307	2.7	0.1	-1.6	
Non-Energy Uses	1040	1155	1229	1157	1191	1240	1243	1.7	-0.3	0.4	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	20955	22470	20745	1.7	1.7	-0.1	
Solids	1088	2136	1803	1007	1111	1269	1228	5.2	-4.7	1.0	
Oil	189	257	389	433	393	351	306	7.5	0.1	-2.5	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Renewable energy sources	7816	8273	9589	10905	10717	12117	12548	2.1	1.1	1.6	
Hydro	1261	1185	1111	1350	1215	1270	1310	-1.3	0.9	0.8	
Biomass & Waste	6549	7072	8451	9354	9025	9900	10279	2.6	0.7	1.3	
Wind	7	15	25	198	464	923	928	14.2	33.8	7.2	
Solar and others	1	1	1	2	14	22	26	10.0	26.4	6.7	
Geothermal	0	0	0	0	0	2	5	0.0	0.0	39.7	
Net Imports (ktoe)	18337	18979	17869	16077	14484	12401	10151	-0.3	-2.1	-3.5	
Solids	3537	3341	3977	3099	3500	2938	1851	1.2	-1.3	-6.2	
Oil	10357	10655	9232	9068	8182	7163	6022	-1.1	-1.2	-3.0	
Crude oil and Feedstocks	11964	10713	11206	13148	11845	10625	9353	-0.7	0.6	-2.3	
Oil products	-1607	-58	-1974	-4080	-3663	-3462	-3331	2.1	6.4	-0.9	
Natural gas	3422	3598	3838	2821	2684	2983	2532	1.2	-3.5	-0.6	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Import Dependency (%)	55.2	54.2	47.9	47.0	40.9	35.6	32.9				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71479	84145	101518	94212	1.4	0.4	1.1	
Nuclear energy	22479	23271	22800	23137	36999	37079	28850	0.1	5.0	-2.5	
Solids	12452	10998	20826	8559	11120	11976	8778	5.3	-6.1	-2.3	
Oil (including refinery gas)	587	500	484	635	38	264	13	-1.9	-22.4	-10.0	
Gas (including derived gases)	10816	11921	11847	7771	6530	10756	7948	0.9	-5.8	2.0	
Biomass-waste	8860	9891	11413	13361	9937	15933	22589	2.6	-1.4	8.6	
Hydro (pumping excluded)	14660	13784	12922	15701	14123	14772	15230	-1.3	0.9	0.8	
Wind	78	170	294	2307	5392	10732	10789	14.2	33.8	7.2	
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7	
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19614	21021	20524	0.4	1.6	0.5	
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5	
Renewable energy	2923	3121	3359	4289	5628	7432	7589	1.4	5.3	3.0	
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3377	3486	0.9	0.4	0.6	
Wind	38	82	197	1001	2343	4046	4084	17.9	28.1	5.7	
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	10363	10739	10605	11158	9609	9212	9537	0.2	-1.0	-0.1	
of which cogeneration units	8280	5832	6168	6361	5451	5345	4225	-2.9	-1.2	-2.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4676	4633	4532	4340	3303	2308	1828	-0.3	-3.1	-5.7	
Gas fired	2570	2481	2703	2698	2826	3404	3847	0.5	0.4	3.1	
Oil fired	1519	1505	1194	1532	643	637	617	-2.4	-6.0	-0.4	
Biomass-waste fired	1597	2120	2176	2589	2837	2863	3245	3.1	2.7	1.4	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.1	53.0	50.2				
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.4	36.1	37.4				
% of gross electricity from CHP	36.4	38.9	36.2	33.7	27.0	26.7	25.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	79.0	77.3	82.2				
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	6902	9267	9037	3.9	-4.1	2.7	
Solids	3181	2998	5098	2421	2885	2911	2056	4.8	-5.5	-3.3	
Oil (including refinery gas)	122	98	99	168	12	65	4	-2.1	-18.8	-9.8	
Gas (including derived gases)	2119	2385	2516	1493	1282	1792	1351	1.7	-6.5	0.5	
Biomass & Waste	1744	2302	2747	3480	2723	4498	5627	4.6	-0.1	7.5	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	21306	21544	23155	24530	26271	23978	19545	0.8	1.3	-2.9	
Refineries	13059	12876	14265	15688	14231	12687	11068	0.9	0.0	-2.5	
Biofuels and hydrogen production	0	0	140	334	373	339	320	0.0	10.3	-1.5	
District heating	1059	1265	1600	1434	1505	1107	583	4.2	-0.6	-9.1	
Derived gases, cokeries etc.	7188	7403	7149	7074	10162	9844	7575	-0.1	3.6	-2.9	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.7
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.4
Private cars and motorcycles	57	63	66	68	69	69	71	1.5	0.4	0.3
Rail	4	4	4	5	5	6	6	1.4	1.5	1.6
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.2
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.6
Freight transport activity (Gtkm)	42	42	42	43	46	49	52	-0.2	1.0	1.4
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.2
Rail	10	10	10	10	11	12	13	-0.4	1.4	1.9
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4735	4447	4207	1.1	-0.2	-1.2
Public road transport	120	116	121	121	121	119	116	0.1	0.0	-0.4
Private cars and motorcycles	2334	2542	2693	2631	2399	2100	1894	1.4	-1.1	-2.3
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1163	1143	1145	-0.3	0.3	-0.2
Rail	90	92	90	94	101	106	111	0.0	1.2	1.0
Aviation	469	526	619	746	785	807	762	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
<i>By transport activity</i>										
Passenger transport	3086	3310	3549	3604	3416	3141	2890	1.4	-0.4	-1.7
Freight transport	1251	1314	1278	1292	1319	1306	1317	0.2	0.3	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.2	2.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.4			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32814	34042	33432	29458	1.3	-0.5	-1.4
Final Energy Demand	24510	25239	26243	24732	24676	22624	19663	0.7	-0.6	-2.2
<i>by sector</i>										
Industry	12313	11922	11428	10647	10725	9896	9087	-0.7	-0.6	-1.6
Energy intensive industries	10172	9616	9017	8347	8378	7524	6849	-1.2	-0.7	-2.0
Other industrial sectors	2141	2306	2412	2299	2347	2372	2238	1.2	-0.3	-0.5
Residential	4544	5053	5804	5338	5404	4681	3446	2.5	-0.7	-4.4
Tertiary	3296	3616	4169	3837	3798	3586	2909	2.4	-0.9	-2.6
Transport ⁽⁵⁾	4356	4648	4842	4910	4749	4461	4221	1.1	-0.2	-1.2
<i>by fuel</i>										
Solids	1109	873	843	702	698	642	492	-2.7	-1.9	-3.4
Oil	7850	8102	7619	7073	6498	5409	4387	-0.3	-1.6	-3.9
Gas	1209	1082	1012	981	987	1051	1157	-1.8	-0.3	1.6
Electricity	6507	6942	7178	6788	6892	7512	7459	1.0	-0.4	0.8
Heat (from CHP and District Heating)	3334	3972	4656	4143	4255	3554	2306	3.4	-0.9	-5.9
Renewable energy forms	4501	4268	4935	5042	5339	4435	3828	0.9	0.8	-3.3
Other	0	0	0	3	7	22	33	0.0	1586.2	17.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	207	193	199	181	177	165	136	-0.4	-1.2	-2.6
Industry (Energy on Value added, index 2000=100)	100	81	79	75	73	65	57	-2.3	-0.8	-2.6
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	67	46	-0.2	-1.8	-5.7
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	82	62	0.9	-1.7	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	23	-0.6	-1.5	-2.5
Freight transport (toe/Mtkm)	30	31	31	30	29	27	25	0.4	-0.6	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	73.1	71.5	78.2	61.1	58.8	53.7	44.2	0.7	-2.8	-2.8
of which ETS sectors (2013 scope) GHG emissions	37.2	43.9	30.8	31.6	30.0	23.0	23.0		-3.2	-3.1
of which ESD sectors (2013 scope) GHG emissions	34.3	34.3	30.3	27.2	23.7	21.2	21.2		-2.3	-2.4
CO₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.6	42.8	33.7	1.2	-3.1	-3.4
Power generation/District heating	22.5	23.0	32.3	17.5	18.7	18.6	13.2	3.7	-5.3	-3.4
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.2	2.0	1.2	0.0	-3.5
Industry	14.2	12.7	11.0	10.1	9.5	8.0	6.4	-2.5	-1.4	-4.0
Residential	2.4	2.3	1.8	1.4	1.3	0.7	0.2	-2.6	-3.5	-16.5
Tertiary	3.6	3.5	3.4	2.8	2.4	1.3	0.8	-0.6	-3.6	-10.7
Transport	12.9	13.8	14.0	13.6	13.0	12.1	11.2	0.8	-0.8	-1.4
CO₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.1	3.8	3.8	0.3	-0.5
Non-CO₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.4	-2.3	-1.8	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.3	74.2	61.2	0.7	-2.8	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.14	0.13	0.11	1.4	-5.3	-2.3
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.98	0.94	-1.6	-0.8	-1.1
Industry	1.15	1.06	0.96	0.95	0.89	0.80	0.70	-1.8	-0.8	-2.4
Residential	0.52	0.45	0.32	0.26	0.24	0.16	0.06	-5.0	-2.8	-12.6
Tertiary	1.09	0.97	0.81	0.74	0.62	0.37	0.26	-2.9	-2.7	-8.3
Transport	2.97	2.97	2.89	2.77	2.73	2.70	2.66	-0.3	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	42.0	45.7	48.7			
RES-H&C share	38.2	39.1	44.4	55.2	57.8	61.0	64.0			
RES-E share	27.3	26.9	27.7	36.2	33.3	43.0	50.8			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	22.3	26.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	92	87	93	1.4	4.5	0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	131	139	143	3.7	3.0	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.7	35.3	40.1	4.4	2.4	2.1
as % of GDP	10.7	11.3	13.8	14.6	16.4	16.8	17.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										France: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	57	60	61	63	64	66	67	0.7	0.5	0.4		
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4		
Gross Inland Consumption (ktoe)	257565	276646	267546	258764	248933	231715	208257	0.4	-0.7	-1.8		
Solids	15048	14303	12076	8763	8524	5916	4994	-2.2	-3.4	-5.2		
Oil	88937	93185	82668	79806	75207	68756	61812	-0.7	-0.9	-1.9		
Natural gas	35766	41025	42540	38807	35931	32057	22043	1.7	-1.7	-4.8		
Nuclear	107093	116474	110539	109294	97019	94378	93178	0.3	-1.3	-0.4		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Renewable energy forms	16695	16847	22365	24473	37946	36294	31773	3.0	5.4	-1.8		
Energy Branch Consumption	10822	9989	9635	8309	7414	6608	6029	-1.2	-2.6	-2.0		
Non-Energy Uses	16851	16704	14290	14232	14666	14892	14840	-1.6	0.3	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	136015	131493	125686	0.4	0.1	-0.8		
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0		
Oil	2023	1604	1542	1217	1122	955	899	-2.7	-3.1	-2.2		
Natural gas	1505	909	646	304	294	283	266	-8.1	-7.6	-1.0		
Nuclear	107093	116474	110539	109294	97019	94378	93178	0.3	-1.3	-0.4		
Renewable energy sources	16688	16902	22206	24212	37579	35876	31343	2.9	5.4	-1.8		
Hydro	5771	4442	5364	5476	5753	5515	5516	-0.7	0.7	-0.4		
Biomass & Waste	10763	12159	15690	15780	23676	19874	13986	3.8	4.2	-5.1		
Wind	7	83	855	1850	4741	5620	6592	62.6	18.7	3.4		
Solar and others	21	26	118	870	3084	4488	4809	18.7	38.6	4.5		
Geothermal	126	192	180	236	325	380	438	3.6	6.1	3.0		
Net Imports (ktoe)	134082	144103	132149	123217	115669	103087	85538	-0.1	-1.3	-3.0		
Solids	13005	13511	12192	8620	8524	5916	4994	-0.6	-3.5	-5.2		
Oil	91265	95114	82886	81211	76782	70540	63541	-1.0	-0.8	-1.9		
Crude oil and Feedstocks	85329	85302	65254	46552	45754	43485	40665	-2.6	-3.5	-1.2		
Oil products	5936	9813	17632	34659	31027	27054	22876	11.5	5.8	-3.0		
Natural gas	35779	40720	39553	38504	35692	31900	22116	1.0	-1.0	-4.7		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Import Dependency (%)	51.5	51.6	49.0	47.7	46.0	43.9	40.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584201	596966	606773	589631	0.5	0.6	-0.1		
Nuclear energy	415162	451529	428521	444338	396167	385196	379463	0.3	-0.8	-0.4		
Solids	27004	27515	23359	8820	9109	439	0	-1.4	-9.0	-100.0		
Oil (including refinery gas)	7165	7925	5565	516	0	337	274	-2.5	-100.0	0.0		
Gas (including derived gases)	15365	26254	26385	25753	23162	26896	5254	5.6	-1.3	-13.8		
Biomass-waste	3559	5016	6675	10512	14131	18700	15432	6.5	7.8	0.9		
Hydro (pumping excluded)	67121	51658	62388	63670	66898	64123	64140	-0.7	0.7	-0.4		
Wind	77	964	9942	21517	55129	65350	76655	62.6	18.7	3.4		
Solar	5	10	620	8601	31589	44533	46406	63.1	48.2	3.9		
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148953	154759	158495	0.7	1.9	0.6		
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3		
Renewable energy	23570	24601	32099	40333	66684	77564	82326	3.1	7.6	2.1		
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	23635	0.2	-0.1	0.0		
Wind	57	777	7050	10358	22130	25130	28659	61.9	12.1	2.6		
Solar	7	13	1030	6100	20535	28228	29118	64.7	34.9	3.6		
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1		
Thermal power	26680	25361	27256	23974	20942	17702	16676	0.2	-2.6	-2.3		
of which cogeneration units	7013	5779	4606	10620	5958	4193	3113	-4.1	2.6	-6.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2		
Gas fired	4116	6055	9334	9646	9181	8960	8149	8.5	-0.2	-1.2		
Oil fired	11328	9794	9643	7693	5008	1849	1676	-1.6	-6.3	-10.4		
Biomass-waste fired	684	876	1049	1249	2894	3056	3068	4.4	10.7	0.6		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	43.2	41.1					
Efficiency of gross thermal power generation (%)	34.9	33.3	30.0	39.7	38.6	39.2	33.3					
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.9	1.6	1.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.6	95.4	99.1					
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10334	10178	5426	3.0	-5.3	-6.2		
Solids	6559	6402	4717	2258	2323	102	0	-3.2	-6.8	-100.0		
Oil (including refinery gas)	1242	2160	1639	135	0	111	91	2.8	-79.3	261.2		
Gas (including derived gases)	4002	6298	8178	4941	3868	4880	1382	7.4	-7.2	-9.8		
Biomass & Waste	1476	2469	3352	2529	4127	5068	3937	8.5	2.1	-0.5		
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	205144	211862	191250	166425	153113	148132	143592	-0.7	-2.2	-0.6		
Refineries	90823	88392	73306	49009	48043	45622	42663	-2.1	-4.1	-1.2		
Biofuels and hydrogen production	325	651	2397	2746	3119	2916	2888	22.1	2.7	-0.8		
District heating	312	448	608	546	574	553	396	6.9	-0.6	-3.7		
Derived gases, cokeries etc.	113684	122371	114938	114124	101377	99041	97645	0.1	-1.2	-0.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1204	1257	0.8	1.2	0.7
Public road transport	42	42	50	55	60	63	66	1.7	1.9	0.9
Private cars and motorcycles	754	801	811	850	901	909	933	0.7	1.1	0.3
Rail	81	90	101	107	119	131	145	2.1	1.7	2.0
Aviation ⁽³⁾	69	62	68	76	86	97	110	-0.1	2.3	2.5
Inland navigation	3	3	3	3	3	4	4	-0.3	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	510	568	-0.5	1.8	1.9
Heavy goods and light commercial vehicles	311	319	296	310	356	379	423	-0.5	1.9	1.7
Rail	58	41	30	37	42	51	60	-6.3	3.5	3.6
Inland navigation	43	49	66	66	71	79	85	4.4	0.8	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	49943	47220	45692	-0.2	0.1	-0.9
Public road transport	536	519	595	654	705	719	721	1.0	1.7	0.2
Private cars and motorcycles	31157	31368	31602	31615	29848	26349	24209	0.1	-0.6	-2.1
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10233	10339	10815	-1.5	0.8	0.6
Rail	1134	980	932	1017	1081	1165	1235	-1.9	1.5	1.3
Aviation	6088	6291	6294	6827	7541	8061	8091	0.3	1.8	0.7
Inland navigation	483	481	500	499	535	587	621	0.4	0.7	1.5
<i>By transport activity</i>										
Passenger transport	38753	38887	39197	39839	38867	35933	33846	0.1	-0.1	-1.4
Freight transport	11607	11307	10150	10316	11076	11288	11846	-1.3	0.9	0.7
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.5	3.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234266	216822	193417	0.5	-0.8	-1.9
Final Energy Demand	154639	160337	155397	155251	156461	141359	121424	0.0	0.1	-2.5
<i>by sector</i>										
Industry	36670	34356	28478	30330	31251	29775	28297	-2.5	0.9	-1.0
Energy intensive industries	20906	20576	16506	17590	18006	16841	15992	-2.3	0.9	-1.2
Other industrial sectors	15764	13780	11972	12740	13245	12933	12305	-2.7	1.0	-0.7
Residential	42153	45931	45463	44159	45096	37687	26803	0.8	-0.1	-5.1
Tertiary	25209	29569	31792	30270	29806	26284	20209	2.3	-0.6	-3.8
Transport ⁽⁵⁾	50607	50482	49664	50492	50308	47613	46114	-0.2	0.1	-0.9
<i>by fuel</i>										
Solids	5775	5218	4547	4076	4165	3588	2816	-2.4	-0.9	-3.8
Oil	72503	71421	64647	63583	58936	52549	45980	-1.1	-0.9	-2.5
Gas	30907	33744	32430	32675	31009	26640	20355	0.5	-0.4	-4.1
Electricity	33096	36352	38185	37788	38948	39957	38865	1.4	0.2	0.0
Heat (from CHP and District Heating)	3236	4163	3525	3658	3393	2986	2118	0.9	-0.4	-4.6
Renewable energy forms	9123	9439	12064	13458	19964	15471	10977	2.8	5.2	-5.8
Other	0	0	0	12	46	169	313	0.0	0.0	21.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	141	132	122	110	96	80	-0.7	-1.8	-3.1
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	70	63	-2.5	-0.1	-2.0
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	63	41	-0.9	-1.3	-6.4
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	91	75	54	1.0	-1.8	-5.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	24	21	-0.7	-1.6	-2.5
Freight transport (toe/Mtkm)	28	28	26	25	24	22	21	-0.9	-0.9	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	585.3	552.1	512.0	482.2	444.3	398.9	345.1	-1.3	-1.4	-2.5
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	131.8	125.2	114.9	99.6			-1.6	-2.3
of which ESD sectors (2013 scope) GHG emissions	378.8	364.7	350.4	319.1	284.0	245.5			-1.3	-2.6
CO₂ Emissions (energy related)	388.3	394.4	360.0	332.5	307.5	268.2	220.2	-0.8	-1.6	-3.3
Power generation/District heating	46.7	53.6	48.1	26.7	22.3	17.3	8.6	0.3	-7.4	-9.0
Energy Branch	19.9	16.3	15.0	13.7	11.5	10.2	9.2	-2.7	-2.6	-2.3
Industry	74.6	67.0	54.1	59.8	57.5	50.5	43.9	-3.2	0.6	-2.7
Residential	59.3	64.8	57.2	51.5	43.6	33.2	16.7	-0.4	-2.7	-9.2
Tertiary	39.8	44.4	44.7	38.9	33.3	27.4	19.2	1.1	-2.9	-5.4
Transport	148.0	148.1	140.9	141.9	139.3	129.7	122.7	-0.5	-0.1	-1.3
CO₂ Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	26.7	25.6	23.9	-1.2	0.4	-1.1
Non-CO₂ GHG emissions	168.1	129.2	126.3	124.1	110.1	105.1	101.0	-2.8	-1.4	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.3	71.2	61.6	-1.3	-1.4	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.08	0.09	0.08	0.04	0.03	0.03	0.01	-0.3	-7.9	-8.7
Final energy demand (t of CO ₂ /toe)	2.08	2.02	1.91	1.88	1.75	1.70	1.67	-0.8	-0.9	-0.5
Industry	2.03	1.95	1.90	1.97	1.84	1.70	1.55	-0.7	-0.3	-1.7
Residential	1.41	1.41	1.26	1.17	0.97	0.88	0.62	-1.1	-2.6	-4.3
Tertiary	1.58	1.50	1.41	1.29	1.12	1.04	0.95	-1.2	-2.3	-1.6
Transport	2.92	2.93	2.84	2.81	2.77	2.72	2.66	-0.3	-0.2	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	25.2	26.1			
RES-H&C share	12.4	12.3	15.8	19.4	30.0	30.7	31.6			
RES-E share	14.7	13.7	14.9	19.8	31.5	35.6	38.8			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	12.7	17.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	82	72	-0.7	5.1	-2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	147	154	0.0	2.9	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	274.1	280.1	303.2	2.4	3.4	1.0
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.6	11.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Germany: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual % Change	
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1		
GDP (in 000 M€13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9		
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	309181	286693	246017	-0.3	-0.7	-2.3		
Solids	84802	81952	78824	78036	78308	78669	62554	-0.7	-0.1	-2.2		
Oil	130980	121460	111798	111688	102692	90872	79590	-1.6	-0.8	-2.5		
Natural gas	71878	77782	75905	74011	68404	63790	52207	0.5	-1.0	-2.7		
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0		
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0		
Renewable energy forms	10665	19054	31477	39195	50745	51878	50344	11.4	4.9	-0.1		
Energy Branch Consumption	14566	14384	13378	13631	12266	11612	10076	-0.8	-0.9	-1.9		
Non-Energy Uses	25064	24662	22582	24685	25861	26624	26389	-1.0	1.4	0.2		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	135549	137356	129648	120921	110251	100222	86225	-0.4	-1.6	-2.4		
Solids	60629	56484	45906	42340	37538	37428	27816	-2.7	-2.0	-3.0		
Oil	4680	5782	4754	4964	3809	2912	2225	0.2	-2.2	-5.2		
Natural gas	15825	14334	11113	10749	9887	8198	6051	-3.5	-1.2	-4.8		
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0		
Renewable energy sources	10665	18695	31618	39044	50543	51684	50133	11.5	4.8	-0.1		
Hydro	1869	1689	1802	1925	1936	2044	2098	-0.4	0.7	0.8		
Biomass & Waste	7876	14249	24988	27662	32660	31103	26443	12.2	2.7	-2.1		
Wind	804	2341	3250	5689	9411	10180	11672	15.0	11.2	2.2		
Solar and others	116	371	1493	3575	5510	7297	8473	29.1	14.0	4.4		
Geothermal	0	46	86	192	1027	1060	1448	0.0	28.1	3.5		
Net Imports (ktoe)	204709	208118	201696	204465	201926	189443	162987	-0.1	0.0	-2.1		
Solids	21663	25972	31644	35695	40771	41240	34738	3.9	2.6	-1.6		
Oil	125918	120239	109834	109501	101820	90899	80313	-1.4	-0.8	-2.3		
Crude oil and Feedstocks	101441	111039	91612	87783	82369	74564	67238	-1.0	-1.1	-2.0		
Oil products	24477	9200	18222	21718	19450	16335	13075	-2.9	0.7	-3.9		
Natural gas	56865	61940	61645	63262	58577	55725	46403	0.8	-0.5	-2.3		
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0		
Import Dependency (%)	59.4	60.4	60.1	62.8	64.7	65.4	65.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645694	598775	640899	598899	0.9	-0.5	0.0		
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0		
Solids	296687	288142	262896	272895	274871	286080	225882	-1.2	0.4	-1.9		
Oil (including refinery gas)	4785	11997	8741	1079	941	2156	3116	6.2	-20.0	12.7		
Gas (including derived gases)	59970	83608	100912	92808	71734	99093	86431	5.3	-3.4	1.9		
Biomass-waste	10121	20849	42975	58714	35393	45100	43074	15.6	-1.9	2.0		
Hydro (pumping excluded)	21732	19638	20953	22381	22506	23764	24394	-0.4	0.7	0.8		
Wind	9352	27229	37793	66153	109427	118372	135720	15.0	11.2	2.2		
Solar	60	1283	11727	34612	48465	65364	79312	69.3	15.2	5.0		
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207113	211561	224233	3.1	3.0	0.8		
Nuclear energy	21644	20656	20660	12188	6907	0	0	-0.5	-10.4	-100.0		
Renewable energy	11040	25641	50141	90293	120216	135597	158591	16.3	9.1	2.8		
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5847	5970	1.1	0.3	0.7		
Wind	6095	18375	27180	44946	61821	61141	71118	16.1	8.6	1.4		
Solar	114	2056	17554	39757	52803	68609	81503	65.5	11.6	4.4		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	81689	77676	83806	86551	79990	75964	65642	0.3	-0.5	-2.0		
of which cogeneration units	14369	20840	24554	17053	6201	10464	10024	5.5	-12.9	4.9		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	50924	48087	47789	52819	49170	44029	36725	-0.6	0.3	-2.9		
Gas fired	21336	21671	26890	25178	21891	23229	20604	2.3	-2.0	-0.6		
Oil fired	8066	5686	5688	5028	1674	1457	1247	-3.4	-11.5	-2.9		
Biomass-waste fired	1363	2232	3432	3501	7084	7079	6895	9.7	7.5	-0.3		
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.2	32.8	29.1					
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	39.3	40.1					
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.2	9.8	10.6					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	42.0	39.6	47.3					
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	87755	94938	77116	0.7	-0.3	-1.3		
Solids	67101	65740	59687	61356	61149	62949	48628	-1.2	0.2	-2.3		
Oil (including refinery gas)	1411	1427	855	236	311	694	1020	-4.9	-9.6	12.6		
Gas (including derived gases)	12891	17808	19955	16546	12400	16910	14728	4.5	-4.6	1.7		
Biomass & Waste	3158	5100	10066	12030	13061	13552	11906	12.3	2.6	-0.9		
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	180304	187908	163048	142875	120536	101312	92149	-1.0	-3.0	-2.6		
Refineries	119420	125092	103238	98875	92813	84166	75967	-1.4	-1.1	-2.0		
Biofuels and hydrogen production	237	1859	2884	3011	2842	2615	2721	28.4	-0.1	-0.4		
District heating	1198	3942	4754	4043	3518	2719	2109	14.8	-3.0	-5.0		
Derived gases, cokeries etc.	59450	57015	52171	36947	21363	11812	11352	-1.3	-8.5	-6.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1208	1227	1253	0.6	0.7	0.4
Public road transport	69	67	62	63	67	68	69	-1.1	0.7	0.3
Private cars and motorcycles	850	876	905	942	949	947	957	0.6	0.5	0.1
Rail	90	92	100	111	115	130	140	1.1	1.4	1.9
Aviation ⁽³⁾	55	62	61	69	75	80	85	1.1	2.0	1.3
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.7
Freight transport activity (Gtkm)	493	545	592	619	682	703	749	1.9	1.4	0.9
Heavy goods and light commercial vehicles	342	385	422	439	486	487	520	2.1	1.4	0.7
Rail	83	95	107	116	126	139	147	2.6	1.6	1.6
Inland navigation	68	65	63	65	70	78	82	-0.7	1.1	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56100	51036	48041	-1.1	-0.4	-1.5
Public road transport	1047	897	803	815	836	822	801	-2.6	0.4	-0.4
Private cars and motorcycles	42176	37675	35607	35814	31215	26749	24181	-1.7	-1.3	-2.5
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12340	11613	11700	-0.8	0.9	-0.5
Rail	1947	1580	1414	1496	1455	1543	1551	-3.2	0.3	0.6
Aviation	7345	8265	8719	9601	9949	9969	9458	1.7	1.3	-0.5
Inland navigation	283	323	278	285	307	339	350	-0.2	1.0	1.3
<i>By transport activity</i>										
Passenger transport	51841	47805	45951	47113	42812	38403	35293	-1.2	-0.7	-1.9
Freight transport	13261	11992	12194	12678	13288	12633	12748	-0.8	0.9	-0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.5	3.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	6.0	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	317273	317254	310393	297924	283320	259969	219628	-0.2	-0.9	-2.5
Final Energy Demand	219989	218456	219721	217308	213455	193406	165577	0.0	-0.3	-2.5
<i>by sector</i>										
Industry	57570	59093	60563	62096	65199	62693	56159	0.5	0.7	-1.5
Energy intensive industries	39345	40705	42170	43510	45969	43985	38791	0.7	0.9	-1.7
Other industrial sectors	18225	18389	18393	18586	19231	18708	17368	0.1	0.4	-1.0
Residential	63072	63498	62442	58726	57381	49324	38324	-0.1	-0.8	-4.0
Tertiary	34239	35302	38222	36396	34494	30096	22831	1.1	-1.0	-4.0
Transport ⁽⁵⁾	65109	60563	58494	60090	56380	51292	48263	-1.1	-0.4	-1.5
<i>by fuel</i>										
Solids	10958	8238	9379	9284	10014	9661	7900	-1.5	0.7	-2.3
Oil	99738	90309	83168	82419	73162	60982	50258	-1.8	-1.3	-3.7
Gas	56064	55136	56501	56368	55515	46255	37395	0.1	-0.2	-3.9
Electricity	41570	44907	45781	44880	45907	49982	46721	1.0	0.0	0.2
Heat (from CHP and District Heating)	6831	10751	11268	9856	9768	9110	7785	5.1	-1.4	-2.2
Renewable energy forms	4828	9116	13625	14468	18994	16978	14804	10.9	3.4	-2.5
Other	0	0	0	32	94	437	715	0.0	0.0	22.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	144	140	128	116	104	92	76	-1.2	-2.0	-3.1
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	83	73	-0.7	-0.3	-2.1
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	61	45	-0.6	-2.2	-5.0
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	64	46	-0.2	-2.4	-5.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	24	21	-2.2	-1.7	-2.7
Freight transport (toe/Mtkm)	27	22	21	20	19	18	17	-2.6	-0.6	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	1076.8	1015.8	957.1	943.5	894.0	837.2	699.4	-1.2	-0.7	-2.4
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	497.6	500.0	416.7		-0.2	-1.8	
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	396.4	337.1	282.7		-1.3	-3.3	
CO₂ Emissions (energy related)	852.1	825.2	787.8	777.7	735.1	684.5	556.9	-0.8	-0.7	-2.7
Power generation/District heating	330.6	344.9	324.5	317.5	304.7	321.9	257.8	-0.2	-0.6	-1.7
Energy Branch	28.1	26.2	23.5	25.9	22.1	19.7	17.5	-1.8	-0.6	-2.3
Industry	130.2	115.3	115.3	112.7	115.5	101.0	84.1	-1.2	0.0	-3.1
Residential	119.4	110.8	104.3	98.0	87.8	66.4	46.4	-1.3	-1.7	-6.2
Tertiary	58.5	55.9	56.3	55.4	47.9	35.3	22.5	-0.4	-1.6	-7.3
Transport	185.3	172.2	163.8	168.2	157.0	140.1	128.5	-1.2	-0.4	-2.0
CO₂ Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.5	58.6	56.7	-1.4	0.5	-0.3
Non-CO₂ GHG emissions	161.0	128.9	113.7	109.1	100.4	94.0	85.7	-3.4	-1.2	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	71.0	66.5	55.5	-1.2	-0.7	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.50	0.46	0.42	0.41	0.42	0.42	0.37	-1.7	0.0	-1.3
Final energy demand (t of CO ₂ /toe)	2.24	2.08	2.00	2.00	1.91	1.77	1.70	-1.1	-0.5	-1.2
Industry	2.26	1.95	1.90	1.81	1.77	1.61	1.50	-1.7	-0.7	-1.7
Residential	1.89	1.74	1.67	1.67	1.53	1.35	1.21	-1.2	-0.9	-2.3
Tertiary	1.71	1.58	1.47	1.52	1.39	1.17	0.99	-1.5	-0.6	-3.4
Transport	2.85	2.84	2.80	2.80	2.79	2.73	2.66	-0.2	-0.1	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	21.4	24.7			
RES-H&C share	4.2	6.7	9.6	10.6	17.5	19.7	21.4			
RES-E share	6.1	10.5	18.1	29.5	34.9	37.7	45.2			
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	15.6	21.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	106	99	98	3.7	5.5	-0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	168	174	177	2.2	0.3	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	344.3	365.1	417.5	3.0	1.3	1.9
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.7	12.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Greece: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.6		
GDP (in 000 M€13)	190	231	232	200	207	213	225	2.0	-1.1	0.8		
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25210	22348	17721	0.2	-1.3	-3.5		
Solids	9038	8944	7863	6765	5669	4490	2384	-1.4	-3.2	-8.3		
Oil	16085	18119	14974	12997	12140	10445	8512	-0.7	-2.1	-3.5		
Natural gas	1705	2354	3235	2979	3775	3320	1924	6.6	1.6	-6.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Renewable energy forms	1466	1668	2163	2714	3225	3848	4718	4.0	4.1	3.9		
Energy Branch Consumption	1634	1820	1839	1906	1780	1618	1404	1.2	-0.3	-2.4		
Non-Energy Uses	719	761	1108	824	847	842	833	4.4	-2.7	-0.2		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	10012	10326	9461	9027	8384	7919	6829	-0.6	-1.2	-2.0		
Solids	8222	8538	7315	6430	5372	4247	2245	-1.2	-3.0	-8.4		
Oil	282	101	132	75	73	70	67	-7.3	-5.7	-0.8		
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	1466	1668	2006	2521	2939	3602	4516	3.2	3.9	4.4		
Hydro	318	431	641	506	508	477	480	7.3	-2.3	-0.6		
Biomass & Waste	1009	1015	919	1157	1348	1286	1160	-0.9	3.9	-1.5		
Wind	39	109	233	330	448	859	1630	19.7	6.7	13.8		
Solar and others	99	101	197	514	621	963	1231	7.1	12.2	7.1		
Geothermal	2	12	16	16	15	16	16	25.9	-0.4	0.2		
Net Imports (ktoe)	22151	23498	21712	20057	19810	17357	13853	-0.2	-0.9	-3.5		
Solids	769	364	401	335	298	242	139	-6.3	-2.9	-7.4		
Oil	19695	20476	17433	15950	15017	13231	11219	-1.2	-1.5	-2.9		
Crude oil and Feedstocks	20596	19488	20633	24349	23252	21493	19616	0.0	1.2	-1.7		
Oil products	-900	988	-3200	-8399	-8235	-8263	-8397	13.5	9.9	0.2		
Natural gas	1689	2332	3231	2979	3810	3392	2111	6.7	1.7	-5.7		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Import Dependency (%)	69.5	68.6	69.1	69.0	70.3	68.7	67.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58341	57728	50387	0.7	0.2	-1.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	34313	35543	30797	26751	23196	19280	9548	-1.1	-2.8	-8.5		
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	128	-3.7	-1.7	-30.9		
Gas (including derived gases)	5920	8171	9830	8817	13817	11440	3383	5.2	3.5	-13.1		
Biomass-waste	163	222	319	195	382	677	910	6.9	1.8	9.1		
Hydro (pumping excluded)	3693	5017	7460	5880	5901	5552	5577	7.3	-2.3	-0.6		
Wind	451	1266	2714	3834	5207	9985	18957	19.7	6.7	13.8		
Solar	0	1	158	3757	4715	8411	11883	0.0	40.4	9.7		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19738	22793	26751	3.5	2.2	3.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	3298	3598	4715	8146	9363	13320	18140	3.6	7.1	6.8		
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0		
Wind	226	491	1298	2152	2637	4295	7121	19.1	7.3	10.4		
Solar	0	1	202	2605	3147	5446	7440	0.0	31.6	9.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	7914	9610	11174	11062	10375	9473	8611	3.5	-0.7	-1.8		
of which cogeneration units	195	3051	588	284	310	302	305	11.7	-6.2	-0.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	4454	4754	4312	3923	3064	3134	2879	-0.3	-3.4	-0.6		
Gas fired	1157	2203	4189	5062	5306	5273	4738	13.7	2.4	-1.1		
Oil fired	2302	2625	2618	2022	1824	834	734	1.3	-3.6	-8.7		
Biomass-waste fired	1	28	55	55	180	232	260	50.5	12.6	3.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.5	27.4	20.9					
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	42.8	39.0					
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.4	2.8	2.7					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.8	42.7	74.1					
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8834	6790	3077	-0.6	-2.0	-10.0		
Solids	8170	8694	7567	6558	5477	4329	2290	-0.8	-3.2	-8.4		
Oil (including refinery gas)	1978	1992	1278	1005	1071	505	42	-4.3	-1.8	-27.6		
Gas (including derived gases)	1280	1605	1863	1435	2204	1812	561	3.8	1.7	-12.8		
Biomass & Waste	64	52	79	43	83	144	184	2.2	0.4	8.3		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	22570	21629	22585	24150	24046	22370	20583	0.0	0.6	-1.5		
Refineries	22508	21536	22462	23941	23760	22077	20271	0.0	0.6	-1.6		
Biofuels and hydrogen production	0	0	124	207	279	275	286	0.0	8.4	0.2		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	62	93	0	2	7	18	26	-95.7	1750.5	14.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EUO0+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	129	153	161	164	172	175	182	2.2	0.7	0.5
Public road transport	22	22	21	21	22	23	23	-0.3	0.6	0.5
Private cars and motorcycles	67	90	105	106	108	105	107	4.7	0.2	-0.1
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.9
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.3
Inland navigation	7	7	7	7	7	8	8	-0.1	0.2	0.6
Freight transport activity (Gtkm)	38	34	37	37	39	41	42	-0.1	0.5	0.7
Heavy goods and light commercial vehicles	28	24	30	30	32	33	34	0.8	0.5	0.6
Rail	0	1	1	1	1	1	1	3.7	0.8	1.2
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7249	6815	6445	1.1	-1.2	-1.2
Public road transport	423	438	403	403	408	403	390	-0.5	0.1	-0.4
Private cars and motorcycles	3327	4435	4483	4018	3693	3221	2825	3.0	-1.9	-2.6
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1486	1443	1399	-0.4	-0.7	-0.6
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.3
Aviation	1325	1181	919	936	1017	1086	1156	-3.6	1.0	1.3
Inland navigation	495	648	717	612	621	638	650	3.8	-1.4	0.4
<i>By transport activity</i>										
Passenger transport	5530	6460	6297	5784	5548	5150	4816	1.3	-1.3	-1.4
Freight transport	1756	1714	1850	1688	1701	1664	1630	0.5	-0.8	-0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.3	4.7			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24363	21506	16888	0.0	-1.2	-3.6
Final Energy Demand	18676	20958	19197	17486	17115	15735	13386	0.3	-1.1	-2.4
<i>by sector</i>										
Industry	4450	4161	3672	3224	3305	3193	2825	-1.9	-1.0	-1.6
Energy intensive industries	2737	2588	2427	2157	2193	2091	1790	-1.2	-1.0	-2.0
Other industrial sectors	1714	1573	1245	1067	1112	1102	1035	-3.1	-1.1	-0.7
Residential	4502	5510	4615	4351	4279	3731	2637	0.2	-0.8	-4.7
Tertiary	2426	3100	2752	2426	2269	1982	1465	1.3	-1.9	-4.3
Transport ⁽⁵⁾	7297	8188	8158	7484	7262	6829	6460	1.1	-1.2	-1.2
<i>by fuel</i>										
Solids	891	458	302	208	192	160	94	-10.3	-4.4	-6.9
Oil	12744	14413	12110	10307	9458	8418	7087	-0.5	-2.4	-2.8
Gas	257	586	982	1018	1031	971	809	14.3	0.5	-2.4
Electricity	3710	4377	4568	4397	4602	4487	3946	2.1	0.1	-1.5
Heat (from CHP and District Heating)	28	49	46	44	50	51	42	5.2	0.8	-1.9
Renewable energy forms	1046	1076	1191	1510	1774	1626	1369	1.3	4.1	-2.6
Other	0	0	0	2	7	21	39	0.0	0.0	18.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	149	136	124	130	122	105	79	-1.8	-0.2	-4.2
Industry (Energy on Value added, index 2000=100)	100	88	101	99	97	92	78	0.1	-0.4	-2.2
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	75	51	-2.2	1.0	-5.2
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	79	67	47	-1.5	-0.8	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.0
Freight transport (toe/Mtkm)	46	51	50	45	43	41	39	0.7	-1.4	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	133.3	139.6	121.4	105.7	96.8	83.1	62.2	-0.9	-2.2	-4.3
of which ETS sectors (2013 scope) GHG emissions	77.2	64.9	57.3	53.2	44.1	28.5		-2.0	-6.1	
of which ESD sectors (2013 scope) GHG emissions	62.4	56.5	48.4	43.6	39.0	33.7		-2.6	-2.6	
CO₂ Emissions (energy related)	98.4	106.4	92.1	79.6	73.1	60.8	40.6	-0.7	-2.3	-5.7
Power generation/District heating	52.1	55.6	47.9	40.9	37.3	28.5	13.4	-0.8	-2.5	-9.7
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	2.9	1.6	-0.1	-1.9
Industry	10.4	8.9	7.2	6.2	5.9	5.2	4.0	-3.7	-1.9	-3.9
Residential	7.6	9.9	6.7	5.0	4.3	3.3	1.5	-1.3	-4.2	-10.3
Tertiary	3.4	4.3	2.8	1.8	1.2	0.9	0.5	-2.1	-8.0	-8.0
Transport	21.8	24.4	24.0	21.7	20.9	19.5	18.3	1.0	-1.4	-1.3
CO₂ Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	7.5	-2.9	0.1	1.2
Non-CO₂ GHG emissions	26.1	23.6	22.6	19.3	16.9	15.4	14.0	-1.4	-2.9	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.1	77.4	57.8	-0.9	-2.2	-4.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.97	0.93	0.83	0.75	0.63	0.49	0.26	-1.6	-2.7	-8.4
Final energy demand (t of CO ₂ /toe)	2.32	2.26	2.12	1.99	1.89	1.84	1.81	-0.9	-1.1	-0.4
Industry	2.35	2.13	1.96	1.91	1.79	1.64	1.40	-1.8	-0.9	-2.4
Residential	1.69	1.79	1.45	1.16	1.02	0.88	0.56	-1.5	-3.5	-5.9
Tertiary	1.41	1.38	1.01	0.76	0.53	0.44	0.36	-3.3	-6.2	-3.9
Transport	2.99	2.98	2.94	2.90	2.87	2.86	2.83	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.5	24.1	35.3			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.5	41.0			
RES-E share	7.2	8.2	12.3	22.4	25.7	40.7	71.8			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.1	18.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	96	97	97	1.9	2.9	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	136	144	156	3.8	2.3	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	15.2	20.2	26.7	26.6	31.4	32.9	35.9	5.8	1.6	1.3
as % of GDP	8.0	8.7	11.5	13.3	15.2	15.5	16.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Hungary: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1		
GDP (in 000 M€13)	83	102	101	107	117	131	145	1.9	1.5	2.2		
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24253	24313	23077	0.2	-0.6	-0.5		
Solids	3850	3031	2730	2635	2145	1450	1163	-3.4	-2.4	-5.9		
Oil	6964	7115	6699	6271	6312	6361	6294	-0.4	-0.6	0.0		
Natural gas	9657	12094	9816	7786	8566	6577	5044	0.2	-1.4	-5.2		
Nuclear	3672	3585	4078	3666	3677	6045	6849	1.1	-1.0	6.4		
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2		
Renewable energy forms	859	1251	2042	1931	2692	3052	3037	9.0	2.8	1.2		
Energy Branch Consumption	1164	1062	1095	1029	950	935	925	-0.6	-1.4	-0.3		
Non-Energy Uses	1587	2169	1974	2275	2502	2826	3077	2.2	2.4	2.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	9904	10884	11515	-0.5	-1.1	1.5		
Solids	2893	1748	1593	1794	1383	680	663	-5.8	-1.4	-7.1		
Oil	1699	1457	1150	795	619	277	192	-3.8	-6.0	-11.0		
Natural gas	2475	2331	2235	1857	1197	517	479	-1.0	-6.1	-8.7		
Nuclear	3672	3585	4078	3666	3677	6045	6849	1.1	-1.0	6.4		
Renewable energy sources	859	1251	2010	2132	3029	3366	3332	8.9	4.2	1.0		
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0		
Biomass & Waste	758	1145	1844	1905	2650	2540	2224	9.3	3.7	-1.7		
Wind	0	1	46	50	77	183	218	0.0	5.3	11.0		
Solar and others	0	2	6	9	45	206	222	0.0	23.5	17.2		
Geothermal	86	87	99	148	237	417	648	1.4	9.1	10.6		
Net Imports (ktoe)	13956	17421	14988	13249	14349	13428	11561	0.7	-0.4	-2.1		
Solids	1087	1299	1143	841	762	770	500	0.5	-4.0	-4.1		
Oil	5291	5780	5637	5476	5693	6085	6101	0.6	0.1	0.7		
Crude oil and Feedstocks	5887	5988	5806	5273	5500	5909	5972	-0.1	-0.5	0.8		
Oil products	-596	-208	-169	203	193	176	130	-11.9	0.0	-3.9		
Natural gas	7283	9808	7726	5929	7369	6060	4564	0.6	-0.5	-4.7		
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2		
Import Dependency (%)	55.2	63.1	58.1	56.4	59.2	55.2	50.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33209	36634	37498	0.6	-1.2	1.2		
Nuclear energy	14180	13834	15761	15087	15024	24706	27994	1.1	-0.5	6.4		
Solids	9590	7023	6234	6436	5156	2349	2291	-4.2	-1.9	-7.8		
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0		
Gas (including derived gases)	6719	12502	11714	3383	9504	3151	555	5.7	-2.1	-24.7		
Biomass-waste	120	1730	2449	2015	2241	2342	1952	35.2	-0.9	-1.4		
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0		
Wind	0	10	534	585	890	2133	2536	0.0	5.2	11.0		
Solar	0	0	1	32	97	1656	1873	0.0	55.6	34.5		
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7097	9801	11219	-0.4	-1.5	4.7		
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6		
Renewable energy	48	66	348	431	640	2661	3106	21.9	6.3	17.1		
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0		
Wind	0	17	293	329	477	1040	1283	0.0	5.0	10.4		
Solar	0	0	2	45	106	1564	1766	0.0	48.7	32.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6621	6311	6024	5103	4498	3920	3631	-0.9	-2.9	-2.1		
of which cogeneration units	1464	2047	1862	1144	1570	1118	527	2.4	-1.7	-10.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1747	1380	1155	1137	703	436	425	-4.1	-4.8	-4.9		
Gas fired	4160	4622	4605	3496	3377	3063	2792	1.0	-3.1	-1.9		
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3		
Biomass-waste fired	112	133	173	349	356	358	358	4.4	7.5	0.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.4	40.5	36.2					
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	40.5	35.9	29.9					
% of gross electricity from CHP	13.5	19.1	19.6	14.4	13.7	8.8	5.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.9	85.0	92.4					
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3606	1895	1401	-1.3	-3.7	-9.0		
Solids	2755	1924	1646	1611	1309	609	596	-5.0	-2.3	-7.6		
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0		
Gas (including derived gases)	2140	3079	2704	657	1589	557	169	2.4	-5.2	-20.1		
Biomass & Waste	61	534	777	436	651	673	580	28.9	-1.7	-1.2		
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	12946	13165	14441	12781	12803	15144	15798	1.1	-1.2	2.1		
Refineries	7638	8118	8427	6997	7084	7159	7109	1.0	-1.7	0.0		
Biofuels and hydrogen production	0	3	175	182	348	322	323	0.0	7.1	-0.7		
District heating	471	627	474	648	634	595	757	0.1	3.0	1.8		
Derived gases, cokeries etc.	4837	4417	5365	4954	4737	7068	7609	1.0	-1.2	4.9		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Hungary: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	84	84	86	95	103	110	0.5	1.3	1.4
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	64	67	1.4	1.1	1.1
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.4
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	41	45	2.3	1.1	1.8
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.8	1.5
Rail	9	9	9	10	11	12	14	0.0	2.0	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	0.9	1.8
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4116	4089	4142	2.8	-0.5	0.1
Public road transport	339	361	335	346	353	351	346	-0.1	0.5	-0.2
Private cars and motorcycles	1805	2191	2208	2035	2070	1973	1915	2.0	-0.6	-0.8
Heavy goods and light commercial vehicles	763	1341	1418	1214	1275	1268	1309	6.4	-1.1	0.3
Rail	171	154	150	152	171	192	207	-1.3	1.3	1.9
Aviation	230	261	230	207	243	300	362	0.0	0.6	4.0
Inland navigation	1	1	1	4	4	4	5	3.1	14.5	1.6
<i>By transport activity</i>										
Passenger transport	2449	2877	2826	2642	2729	2696	2698	1.4	-0.3	-0.1
Freight transport	860	1431	1515	1316	1387	1393	1445	5.8	-0.9	0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.5	8.6			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21750	21486	20000	0.1	-0.9	-0.8
Final Energy Demand	16139	18218	16596	15895	16134	15226	13273	0.3	-0.3	-1.9
<i>by sector</i>										
Industry	3513	3369	2890	3081	2997	3118	2978	-1.9	0.4	-0.1
Energy intensive industries	2517	2267	1854	1941	1847	1886	1716	-3.0	0.0	-0.7
Other industrial sectors	996	1102	1036	1141	1150	1232	1262	0.4	1.0	0.9
Residential	5603	6464	5740	5253	5256	4729	3675	0.2	-0.9	-3.5
Tertiary	3712	4072	3625	3566	3726	3256	2449	-0.2	0.3	-4.1
Transport ⁽⁵⁾	3311	4313	4341	3995	4154	4122	4172	2.7	-0.4	0.0
<i>by fuel</i>										
Solids	665	690	481	501	371	387	181	-3.2	-2.6	-6.9
Oil	4218	4904	4638	4261	4174	3984	3776	1.0	-1.0	-1.0
Gas	6503	7852	6261	5868	5788	5052	3886	-0.4	-0.8	-3.9
Electricity	2531	2780	2941	2977	3096	3316	3313	1.5	0.5	0.7
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	871	757	-2.8	-0.8	-2.8
Renewable energy forms	774	683	1184	1301	1694	1602	1339	4.3	3.6	-2.3
Other	0	0	0	1	5	15	21	0.0	0.0	15.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	305	271	257	219	207	186	159	-1.7	-2.1	-2.6
Industry (Energy on Value added, index 2000=100)	100	74	64	63	56	52	45	-4.4	-1.2	-2.1
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	57	40	-1.4	-2.0	-5.5
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	56	38	-2.0	-1.3	-6.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	25	23	0.8	-1.7	-1.7
Freight transport (toe/Mtkm)	32	41	45	38	37	34	32	3.5	-2.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	79.8	76.9	67.7	59.4	55.7	47.2	41.1	-1.6	-1.9	-3.0
of which ETS sectors (2013 scope) GHG emissions	30.6	25.6	19.8	19.6	13.9	12.1	12.1		-2.6	-4.7
of which ESD sectors (2013 scope) GHG emissions	46.3	42.1	39.6	36.2	33.2	29.0	29.0		-1.5	-2.2
CO₂ Emissions (energy related)	55.0	56.4	49.0	41.5	40.6	32.4	26.9	-1.1	-1.9	-4.0
Power generation/District heating	22.1	18.3	16.0	10.5	10.9	5.2	4.1	-3.2	-3.8	-9.2
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.2
Industry	6.8	6.7	5.3	5.8	4.9	4.7	3.6	-2.4	-0.8	-3.2
Residential	8.8	10.7	8.6	7.3	7.0	6.1	4.2	-0.2	-2.1	-4.9
Tertiary	6.1	6.7	5.2	5.2	5.2	4.0	2.7	-1.6	-0.1	-6.2
Transport	9.7	12.7	12.3	11.2	11.2	11.0	11.0	2.4	-1.0	-0.2
CO₂ Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.1	5.3	-1.9	2.5	1.2
Non-CO₂ GHG emissions	20.3	15.6	15.0	13.5	10.4	9.6	8.9	-3.0	-3.6	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	58.9	49.8	43.4	-1.6	-1.9	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.34	0.31	0.26	0.23	0.11	0.09	-2.7	-2.7	-9.4
Final energy demand (t of CO ₂ /toe)	1.94	2.02	1.90	1.85	1.75	1.70	1.62	-0.2	-0.8	-0.8
Industry	1.92	2.00	1.84	1.87	1.64	1.50	1.20	-0.4	-1.1	-3.1
Residential	1.57	1.66	1.50	1.39	1.33	1.30	1.15	-0.4	-1.2	-1.4
Tertiary	1.65	1.65	1.44	1.45	1.39	1.23	1.12	-1.4	-0.4	-2.1
Transport	2.92	2.94	2.83	2.81	2.69	2.67	2.63	-0.3	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.1	15.3	16.3			
RES-H&C share	7.6	6.0	11.1	13.4	17.0	19.1	22.2			
RES-E share	0.6	4.4	7.1	6.7	7.9	13.7	14.4			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	10.0	10.5	11.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	70	78	88	3.5	0.4	2.2
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	129	139	161	5.4	-0.2	2.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.2	25.5	31.0	6.1	0.9	3.4
as % of GDP	13.5	15.9	20.2	16.7	18.9	19.4	21.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Ireland: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0	
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6	
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14466	14027	12406	0.5	-0.5	-1.5	
Solids	2601	2664	1979	2028	1844	1688	976	-2.7	-0.7	-6.2	
Oil	8145	8589	7818	6926	6744	6349	5744	-0.4	-1.5	-1.6	
Natural gas	3436	3470	4683	4016	4058	3910	3207	3.1	-1.4	-2.3	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1	
Renewable energy forms	235	366	671	1152	1959	2228	2604	11.1	11.3	2.9	
Energy Branch Consumption	254	300	243	250	206	204	171	-0.4	-1.6	-1.8	
Non-Energy Uses	675	516	341	360	405	441	449	-6.6	1.7	1.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1922	2168	2540	-1.6	0.4	2.8	
Solids	965	820	981	740	0	1	1	0.2	-56.5	13.6	
Oil	0	0	0	44	0	0	0	0.0	0.0	13.6	
Natural gas	958	461	233	231	236	234	230	-13.2	0.1	-0.3	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	235	366	628	1016	1686	1933	2310	10.3	10.4	3.2	
Hydro	73	54	52	62	66	65	66	-3.4	2.6	-0.1	
Biomass & Waste	141	216	327	420	651	796	805	8.8	7.1	2.1	
Wind	21	96	242	520	911	988	1350	27.7	14.2	4.0	
Solar and others	0	1	8	13	58	82	88	54.0	22.6	4.3	
Geothermal	0	0	0	0	0	1	2	0.0	0.0	18.5	
Net imports (ktoe)	12370	13765	13215	12285	12653	11975	9987	0.7	-0.4	-2.3	
Solids	1681	1886	945	1288	1843	1687	975	-5.6	6.9	-6.2	
Oil	8203	8694	7706	6991	6851	6462	5851	-0.6	-1.2	-1.6	
Crude oil and Feedstocks	3016	3166	2987	2873	2873	2647	2360	-0.1	-0.4	-1.9	
Oil products	5186	5527	4718	4118	3979	3815	3491	-0.9	-1.7	-1.3	
Natural gas	2478	3010	4480	3784	3823	3678	2991	6.1	-1.6	-2.4	
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1	
Import Dependency (%)	84.9	89.6	86.5	85.8	86.8	84.7	79.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31144	33395	33561	1.8	0.9	0.8	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	8587	8839	6384	6793	6070	6009	3557	-2.9	-0.5	-5.2	
Oil (including refinery gas)	4638	3340	605	15	3	16	6	-18.4	-41.0	7.3	
Gas (including derived gases)	9263	11574	17705	12617	13013	14212	12410	6.7	-3.0	-0.5	
Biomass-waste	95	130	317	660	682	891	1114	12.8	8.0	5.0	
Hydro (pumping excluded)	846	631	599	721	771	760	766	-3.4	2.6	-0.1	
Solar	244	1112	2815	6049	10588	11492	15693	27.7	14.2	4.0	
Geothermal and other renewables	0	0	0	0	1	16	16	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9591	9267	10100	6.2	1.7	0.5	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	355	751	1611	2724	4127	4416	5742	16.3	9.9	3.4	
Hydro (pumping excluded)	236	234	237	237	258	258	259	0.0	0.8	0.1	
Wind	119	517	1374	2486	3851	4140	5464	27.7	10.9	3.6	
Solar	0	0	0	1	19	19	19	0.0	0.0	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	4097	5179	6480	6366	5464	4851	4358	4.7	-1.7	-2.2	
of which cogeneration units	77	240	285	264	63	280	282	14.0	-14.0	16.1	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0	
Gas fired	1872	2625	4081	3969	3624	3485	3140	8.1	-1.2	-1.4	
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2	
Biomass-waste fired	14	43	43	69	197	198	202	11.4	16.6	0.3	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	36.0	40.0	37.1				
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.7	47.0	47.4				
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.9	13.0	14.2				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	38.7	39.4	52.4				
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3563	3866	3098	-0.4	-2.5	-1.4	
Solids	1930	1920	1358	1448	1344	1330	798	-3.5	-0.1	-5.1	
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4	
Gas (including derived gases)	1825	2040	3039	2066	2065	2320	2037	5.2	-3.8	-0.1	
Biomass & Waste	24	30	75	143	153	213	262	12.2	7.5	5.5	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	3341	3204	3033	3024	3133	2921	2645	-1.0	0.3	-1.7	
Refineries	3341	3203	2940	2933	2926	2693	2403	-1.3	0.0	-2.0	
Biofuels and hydrogen production	0	1	93	89	199	193	193	0.0	7.9	-0.3	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	0	0	0	2	8	35	49	0.0	2204.6	20.2	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.6
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.7
Rail	1	2	2	2	2	2	2	2.7	1.0	1.1
Aviation ⁽³⁾	6	10	10	11	14	16	17	5.2	3.1	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	0.9
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.4
Heavy goods and light commercial vehicles	11	17	10	11	13	15	17	-0.5	2.4	2.4
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.7
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4762	4747	4781	1.5	0.1	0.0
Public road transport	96	101	110	111	111	113	114	1.4	0.1	0.2
Private cars and motorcycles	2206	2577	2807	2583	2525	2414	2308	2.4	-1.1	-0.9
Heavy goods and light commercial vehicles	1086	1482	967	1019	1135	1226	1330	-1.2	1.6	1.6
Rail	40	42	44	44	47	49	50	0.8	0.7	0.7
Aviation	629	857	767	809	921	922	955	2.0	1.9	0.4
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.9
<i>By transport activity</i>										
Passenger transport	2958	3559	3724	3544	3602	3495	3424	2.3	-0.3	-0.5
Freight transport	1124	1519	990	1042	1160	1253	1357	-1.3	1.6	1.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.8	5.1			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14061	13586	11957	0.8	-0.5	-1.6
Final Energy Demand	10779	12597	11957	11423	11759	11114	9975	1.0	-0.2	-1.6
<i>by sector</i>										
Industry	2498	2582	2146	2453	2557	2406	2215	-1.5	1.8	-1.4
Energy intensive industries	1245	1341	1023	1166	1182	1025	880	-1.9	1.5	-2.9
Other industrial sectors	1252	1241	1123	1287	1375	1381	1335	-1.1	2.0	-0.3
Residential	2513	2954	3296	2823	2856	2592	1907	2.7	-1.4	-4.0
Tertiary	1684	1979	1799	1556	1579	1363	1066	0.7	-1.3	-3.9
Transport ⁽⁵⁾	4085	5082	4715	4590	4767	4752	4786	1.4	0.1	0.0
<i>by fuel</i>										
Solids	671	751	604	567	500	358	178	-1.0	-1.9	-9.8
Oil	7045	8204	7270	6439	6229	5804	5200	0.3	-1.5	-1.8
Gas	1200	1364	1593	1883	1927	1530	1128	2.9	1.9	-5.2
Electricity	1745	2094	2186	2107	2262	2426	2481	2.3	0.3	0.9
Heat (from CHP and District Heating)	0	0	0	1	14	36	60	0.0	0.0	15.4
Renewable energy forms	118	184	304	424	820	925	876	10.0	10.4	0.7
Other	0	0	0	2	8	36	52	0.0	1734.1	20.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	93	92	78	70	62	51	-1.9	-2.7	-3.1
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	64	55	-2.8	-0.3	-2.9
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	60	39	-0.2	-2.7	-6.3
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	46	33	-1.9	-3.6	-5.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	34	31	-1.2	-1.8	-2.2
Freight transport (toe/Mtkm)	96	88	92	89	86	81	79	-0.3	-0.7	-0.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.8	73.1	65.0	63.1	61.4	59.7	53.2	-1.0	-0.6	-1.4
of which ETS sectors (2013 scope) GHG emissions	25.4	20.0	18.5	17.8	17.6	14.2	14.2		-1.2	-2.2
of which ESD sectors (2013 scope) GHG emissions	47.8	45.0	44.6	43.6	42.0	39.0	39.0		-0.3	-1.1
CO₂ Emissions (energy related)	43.2	47.3	42.0	37.8	36.2	34.0	27.5	-0.3	-1.5	-2.7
Power generation/District heating	15.6	15.3	13.3	11.0	10.4	10.9	8.1	-1.6	-2.4	-2.5
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-1.7
Industry	5.3	5.6	3.6	3.8	3.4	2.6	1.9	-3.9	-0.5	-5.6
Residential	6.4	7.2	7.8	6.5	6.1	4.7	2.5	2.1	-2.5	-8.5
Tertiary	3.4	3.5	3.1	2.5	2.4	1.8	1.3	-0.7	-2.8	-6.1
Transport	12.3	15.3	13.9	13.6	13.8	13.6	13.6	1.3	-0.1	-0.1
CO₂ Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	1.9	1.8	1.8	-7.0	3.1	-0.6
Non-CO₂ GHG emissions	25.6	23.1	21.5	23.5	23.2	23.8	23.8	-1.7	0.8	0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.2	103.2	92.0	-1.0	-0.6	-1.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.66	0.60	0.47	0.41	0.33	0.32	0.24	-3.4	-3.4	-3.4
Final energy demand (t of CO ₂ /toe)	2.53	2.51	2.38	2.32	2.18	2.05	1.93	-0.6	-0.9	-1.2
Industry	2.13	2.16	1.66	1.56	1.33	1.09	0.86	-2.5	-2.2	-4.2
Residential	2.53	2.44	2.37	2.30	2.13	1.82	1.31	-0.7	-1.1	-4.7
Tertiary	1.99	1.77	1.74	1.63	1.50	1.35	1.19	-1.3	-1.5	-2.3
Transport	3.00	3.01	2.96	2.96	2.89	2.87	2.84	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.2	18.5	24.9			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	18.1	25.9			
RES-E share	4.8	7.2	14.5	26.5	40.7	41.5	54.8			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	12.3	16.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	91	93	90	5.9	2.0	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	177	178	176	3.0	1.2	-0.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.8	13.9	15.5	15.6	18.8	20.8	23.2	4.7	1.9	2.1
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.2	9.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Italy: EUCC+33
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3	
GDP (in 000 M€13)	1564	1643	1622	1565	1675	1776	1885	0.4	0.3	1.2	
Gross Inland Consumption (ktoe)	174219	187471	174761	159035	161208	149481	128615	0.0	-0.8	-2.2	
Solids	12550	16461	14170	16106	18603	11615	6354	1.2	2.8	-10.2	
Oil	89540	83963	69558	61171	56699	51002	44492	-2.5	-2.0	-2.4	
Natural gas	57945	70651	68057	56177	59791	57478	47246	1.6	-1.3	-2.3	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Renewable energy forms	10371	12170	19180	21628	23537	26622	27771	6.3	2.1	1.7	
Energy Branch Consumption	7704	10052	9539	8520	8164	7259	6409	2.2	-1.5	-2.4	
Non-Energy Uses	9019	8607	9560	7050	7322	7453	7360	0.6	-2.6	0.1	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	28400	27839	29560	30751	31717	33501	34321	0.4	0.7	0.8	
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0	
Oil	4915	6376	5687	5142	5667	5610	5593	1.5	0.0	-0.1	
Natural gas	13627	9886	6885	6760	5759	4588	3938	-6.6	-1.8	-3.7	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	9856	11516	16924	18793	20291	23303	24790	5.6	1.8	2.0	
Hydro	3800	3101	4395	4138	4087	4212	4220	1.5	-0.7	0.3	
Biomass & Waste	1736	3392	6670	10105	11354	12471	11803	14.4	5.5	0.4	
Wind	48	202	785	1258	1260	1277	2537	32.1	4.8	7.3	
Solar and others	12	30	298	2199	2501	4184	5017	37.4	23.7	7.2	
Geothermal	4259	4791	4776	1092	1089	1180	1212	1.2	-13.7	1.1	
Net Imports (ktoe)	152069	160241	149804	131764	133073	119703	98138	-0.1	-1.2	-3.0	
Solids	13133	16367	14301	16050	18603	11615	6354	0.9	2.7	-10.2	
Oil	87599	79154	67826	59509	54557	48986	42393	-2.5	-2.2	-2.5	
Crude oil and Feedstocks	89451	94307	84882	68525	61895	54907	47452	-0.5	-3.1	-2.6	
Oil products	-1852	-15153	-17056	-9016	-7138	-5921	-5059	24.9	-8.3	-3.4	
Natural gas	47008	59840	61600	49416	54088	53019	43657	2.7	-1.3	-2.1	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Import Dependency (%)	86.5	84.5	84.3	81.1	80.8	78.1	74.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288968	317496	307739	284659	1.0	0.6	-1.1	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	26272	43606	39734	58856	67196	41214	20296	4.2	5.4	-11.3	
Oil (including refinery gas)	85878	47124	21714	8782	7793	6456	3109	-12.8	-9.7	-8.8	
Gas (including derived gases)	106398	156191	158215	110293	127125	114960	91380	4.0	-2.2	-3.2	
Biomass-waste	1908	6153	11586	18671	21446	31620	33007	19.8	6.4	4.4	
Hydro (pumping excluded)	44199	36067	51116	48119	47528	48976	49075	1.5	-0.7	0.3	
Wind	563	2344	9126	14628	14646	14844	29498	32.1	4.8	7.3	
Solar	17	31	1906	23409	25552	43458	52082	59.9	29.6	7.4	
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122838	123117	124879	3.9	1.6	0.2	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	16770	18701	26470	46375	47826	59144	69844	4.7	6.1	3.9	
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	18824	0.7	0.7	0.0	
Wind	363	1635	5794	8958	8963	8963	13908	31.9	4.5	4.5	
Solar	17	30	3113	18905	20057	31375	37111	68.3	20.5	6.3	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	55126	64249	78450	81079	75012	63973	55035	3.6	-0.4	-3.0	
of which cogeneration units	6476	5888	7351	17212	16939	16778	13835	1.3	8.7	-2.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4	
Gas fired	22819	36431	51677	52045	51353	46610	41156	8.5	-0.1	-2.2	
Oil fired	21763	17998	14748	13928	8629	5986	2172	-3.8	-5.2	-12.9	
Biomass-waste fired	436	870	1774	4810	5388	5488	5823	15.1	11.7	0.8	
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0	
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.3	27.5	25.3				
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.6	46.1	45.7				
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.4	11.1	11.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	36.3	47.2	59.7				
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43310	37386	28961	0.9	-2.2	-3.9	
Solids	6045	10399	9484	12963	14702	8343	4112	4.6	4.5	-12.0	
Oil (including refinery gas)	18954	12079	7365	1905	1675	1439	854	-9.0	-13.8	-6.5	
Gas (including derived gases)	19668	29585	28966	18745	21663	20137	16161	3.9	-2.9	-2.9	
Biomass & Waste	438	2270	3527	3795	4330	6526	6893	23.2	2.1	4.8	
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	101609	106909	97409	78677	74316	67274	59139	-0.4	-2.7	-2.3	
Refineries	95900	101959	91472	74873	68917	62274	54788	-0.5	-2.8	-2.3	
Biofuels and hydrogen production	0	177	1419	1593	2218	1997	1874	0.0	4.6	-1.7	
District heating	0	0	110	121	123	120	104	0.0	1.1	-1.7	
Derived gases, cokeries etc.	5709	4773	4408	2090	3058	2883	2373	-2.6	-3.6	-2.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	943	931	952	967	1020	1043	1075	0.1	0.7	0.5
Public road transport	93	101	102	105	107	109	111	0.9	0.5	0.3
Private cars and motorcycles	756	727	740	746	781	788	806	-0.2	0.5	0.3
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.0
Aviation ⁽³⁾	34	43	51	56	63	70	75	4.3	2.2	1.7
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.2
Freight transport activity (Gtkm)	253	303	268	271	290	302	320	0.6	0.8	1.0
Heavy goods and light commercial vehicles	192	226	202	203	217	222	235	0.5	0.7	0.8
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	56	59	2.4	0.5	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	38986	36651	35281	-0.2	-0.6	-1.0
Public road transport	1061	1231	1245	1278	1308	1301	1286	1.6	0.5	-0.2
Private cars and motorcycles	27882	27505	25835	24747	23387	20991	19560	-0.8	-1.0	-1.8
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8425	8265	8305	0.9	-0.3	-0.1
Rail	526	492	463	487	522	564	589	-1.3	1.2	1.2
Aviation	3491	3700	3863	4073	4278	4381	4345	1.0	1.0	0.2
Inland navigation	1269	1387	1128	1012	1065	1149	1196	-1.2	-0.6	1.2
<i>By transport activity</i>										
Passenger transport	33399	32865	31375	30531	29431	27166	25708	-0.6	-0.6	-1.3
Freight transport	8775	11512	9844	9324	9555	9486	9573	1.2	-0.3	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.7	5.6			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	153886	142029	121255	0.0	-0.7	-2.4
Final Energy Demand	125579	134544	124781	122385	122397	115154	99693	-0.1	-0.2	-2.0
<i>by sector</i>										
Industry	40502	39858	30905	27952	28590	27167	24457	-2.7	-0.8	-1.5
Energy intensive industries	25289	25477	19382	16985	17621	16841	14744	-2.6	-0.9	-1.8
Other industrial sectors	15214	14382	11523	10966	10969	10326	9713	-2.7	-0.5	-1.2
Residential	27656	31313	31959	34859	34801	32548	25453	1.5	0.9	-3.1
Tertiary	14901	18537	20182	19017	19278	18027	13743	3.1	-0.5	-3.3
Transport ⁽⁵⁾	42519	44836	41734	40557	39729	37412	36041	-0.2	-0.5	-1.0
<i>by fuel</i>										
Solids	3586	3980	2910	2094	2644	2224	1255	-2.1	-1.0	-7.2
Oil	57249	59005	48733	45659	41834	36941	31773	-1.6	-1.5	-2.7
Gas	38022	40609	38499	36390	37274	36487	30349	0.1	-0.3	-2.0
Electricity	23472	25871	25736	25288	26235	25847	24227	0.9	0.2	-0.8
Heat (from CHP and District Heating)	1449	3082	3332	3592	3781	3815	3427	8.7	1.3	-1.0
Renewable energy forms	1802	1997	5570	9356	10613	9757	8502	11.9	6.7	-2.2
Other	0	0	0	6	17	83	160	0.0	0.0	24.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	114	108	102	96	84	68	-0.3	-1.1	-3.4
Industry (Energy on Value added, index 2000=100)	100	100	83	79	77	71	62	-1.8	-0.7	-2.2
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	100	73	0.9	0.4	-4.3
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	100	71	2.3	-1.0	-4.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	21	-1.0	-1.5	-2.0
Freight transport (toe/Mtkm)	35	38	37	34	33	31	30	0.6	-1.1	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	558.5	592.5	509.9	457.0	458.5	400.1	330.9	-0.9	-1.1	-3.2
of which ETS sectors (2013 scope) GHG emissions	261.5	213.8	172.1	188.1	152.3	116.9		-1.3	-4.6	
of which ESD sectors (2013 scope) GHG emissions	331.0	296.1	284.8	270.4	247.7	214.0		-0.9	-2.3	
CO₂ Emissions (energy related)	432.5	470.4	404.2	354.7	361.2	309.1	245.1	-0.7	-1.1	-3.8
Power generation/District heating	137.1	158.5	135.9	106.9	121.8	89.9	61.8	-0.1	-1.1	-6.6
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.3	10.0	0.4	-2.4	-2.5
Industry	78.0	72.5	49.5	42.3	42.7	38.0	29.3	-4.5	-1.5	-3.7
Residential	53.4	59.9	53.6	51.4	49.7	46.1	32.5	0.0	-0.8	-4.1
Tertiary	24.4	29.3	30.2	26.0	25.5	22.9	16.5	2.2	-1.7	-4.3
Transport	123.7	131.8	118.6	114.0	108.6	100.8	95.0	-0.4	-0.9	-1.3
CO₂ Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	21.8	21.8	21.6	-1.7	-1.0	-0.1
Non-CO₂ GHG emissions	97.3	91.3	81.6	81.2	75.5	69.2	64.1	-1.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.3	76.2	63.0	-0.9	-1.1	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.47	0.45	0.38	0.31	0.32	0.24	0.18	-2.0	-1.7	-5.5
Final energy demand (t of CO ₂ /toe)	2.23	2.18	2.02	1.91	1.85	1.81	1.74	-1.0	-0.9	-0.6
Industry	1.93	1.82	1.60	1.51	1.49	1.40	1.20	-1.8	-0.7	-2.2
Residential	1.93	1.91	1.68	1.48	1.43	1.42	1.28	-1.4	-1.6	-1.1
Tertiary	1.64	1.58	1.50	1.37	1.32	1.27	1.20	-0.9	-1.3	-1.0
Transport	2.91	2.94	2.84	2.81	2.73	2.69	2.64	-0.2	-0.4	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.8	24.0	32.6			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	26.1	38.9			
RES-E share	15.7	16.3	20.1	33.6	32.6	42.1	53.0			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.7	13.3	17.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	66	77	90	86	93	98	99	3.2	0.3	0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	157	166	171	0.9	0.3	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.2	203.8	237.0	2.0	1.4	2.2
as % of GDP	8.6	9.2	10.2	10.9	11.4	11.5	12.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Latvia: EUCo+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4
GDP (in 000 ME13)	13	20	19	23	27	29	31	3.6	3.5	1.7
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4526	4563	3996	1.8	-0.2	-1.2
Solids	132	82	109	84	72	50	29	-1.9	-4.1	-8.7
Oil	1295	1487	1521	1464	1433	1381	1252	1.6	-0.6	-1.3
Natural gas	1092	1358	1462	867	919	1105	670	3.0	-4.5	-3.1
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6
Renewable energy forms	1191	1481	1463	1758	1958	1952	1879	2.1	3.0	-0.4
Energy Branch Consumption	39	42	48	33	36	40	28	2.1	-2.9	-2.6
Non-Energy Uses	75	97	73	105	127	138	144	-0.3	5.7	1.3
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	1411	1868	1979	2228	2484	2448	2328	3.4	2.3	-0.6
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	1393	1858	1975	2228	2484	2448	2328	3.6	2.3	-0.6
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0
Biomass & Waste	1150	1568	1668	1972	2157	2119	1931	3.8	2.6	-1.1
Wind	0	4	4	8	54	55	123	30.2	29.1	8.6
Solar and others	0	0	0	0	1	2	2	0.0	0.0	6.6
Geothermal	0	0	0	0	0	0	0	0.0	0.0	11.1
Net Imports (ktoe)	2361	3097	2220	2456	2402	2484	2048	-0.6	0.8	-1.6
Solids	61	77	112	84	72	50	29	6.3	-4.4	-8.7
Oil	1235	1783	1671	1807	1788	1738	1600	3.1	0.7	-1.1
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0
Oil products	1148	1779	1669	1807	1788	1738	1600	3.8	0.7	-1.1
Natural gas	1113	1434	903	867	925	1116	700	-2.1	0.2	-2.7
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6
Import Dependency (%)	61.0	63.9	45.5	52.4	49.2	50.4	46.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6670	7989	6826	4.8	0.1	0.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	78	0	2	78	108	106	69	-30.7	49.0	-4.4
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0
Gas (including derived gases)	1128	1486	2988	2023	2110	3301	1266	10.2	-3.4	-5.0
Biomass-waste	0	41	66	511	662	780	903	0.0	25.9	3.2
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0
Wind	4	47	49	95	628	640	1427	28.5	29.1	8.6
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3104	3401	2.0	2.0	0.9
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	1515	1562	1606	1652	1872	1873	2148	0.6	1.5	1.4
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0
Wind	2	26	30	62	281	283	557	31.1	25.1	7.1
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	574	600	940	1185	1229	1231	1254	5.1	2.7	0.2
of which cogeneration units	254	586	870	1026	1028	1023	1100	13.1	1.7	0.7
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0
Gas fired	522	572	893	1098	1098	1089	1089	5.5	2.1	-0.1
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0
Biomass-waste fired	2	10	10	50	95	105	128	17.8	24.9	3.0
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.0	27.7	21.8			
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.5	46.0	35.4			
% of gross electricity from CHP	31.4	30.7	45.0	38.6	33.8	45.0	24.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.7	57.3	80.4			
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	545	783	543	4.1	-4.0	0.0
Solids	53	1	9	13	17	17	11	-15.9	6.4	-4.6
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0
Gas (including derived gases)	408	562	767	360	383	572	304	6.5	-6.7	-2.3
Biomass & Waste	0	22	29	117	144	194	228	0.0	17.4	4.7
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	570	479	383	344	426	394	321	-3.9	1.1	-2.8
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	3	27	37	89	73	67	0.0	12.6	-2.7
District heating	569	476	356	307	337	318	249	-4.6	-0.5	-3.0
Derived gases, cokeries etc.	1	0	0	0	0	3	4	-95.3	1788.1	29.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.1
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.4
Private cars and motorcycles	12	12	13	13	14	14	15	0.8	0.7	0.6
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.1
Aviation ⁽³⁾	0	1	2	2	2	3	4	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	5	5.8	2.2	1.5
Rail	13	20	17	20	21	24	27	2.6	2.2	2.6
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1186	1139	4.9	-0.1	-0.5
Public road transport	51	67	68	65	66	67	67	2.9	-0.3	0.2
Private cars and motorcycles	502	603	673	613	590	530	470	3.0	-1.3	-2.2
Heavy goods and light commercial vehicles	89	242	260	255	292	314	311	11.2	1.2	0.6
Rail	76	94	76	87	91	101	110	0.1	1.8	1.9
Aviation	27	59	118	132	148	166	172	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.2
<i>By transport activity</i>										
Passenger transport	582	729	861	811	805	764	711	4.0	-0.7	-1.2
Freight transport	163	335	340	347	389	422	428	7.6	1.4	1.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.6	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4399	4425	3854	1.9	-0.4	-1.3
Final Energy Demand	3254	4018	4120	4104	4245	4127	3601	2.4	0.3	-1.6
<i>by sector</i>										
Industry	576	699	774	912	989	1012	934	3.0	2.5	-0.6
Energy intensive industries	229	282	305	277	305	303	261	2.9	0.0	-1.5
Other industrial sectors	348	417	469	635	684	709	673	3.0	3.9	-0.2
Residential	1327	1504	1389	1286	1298	1213	957	0.5	-0.7	-3.0
Tertiary	602	749	756	744	761	713	569	2.3	0.1	-2.9
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1189	1142	4.8	0.0	-0.5
<i>by fuel</i>										
Solids	62	74	94	70	54	33	18	4.2	-5.4	-10.4
Oil	1056	1323	1446	1355	1306	1242	1108	3.2	-1.0	-1.6
Gas	329	508	498	391	437	445	363	4.2	-1.3	-1.8
Electricity	385	493	534	568	620	654	655	3.3	1.5	0.5
Heat (from CHP and District Heating)	598	603	575	524	570	538	427	-0.4	-0.1	-2.8
Renewable energy forms	824	1018	973	1194	1257	1211	1023	1.7	2.6	-2.0
Other	0	0	0	0	0	3	7	0.0	0.0	35.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	293	235	246	189	171	156	127	-1.8	-3.6	-2.9
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	86	75	0.2	-1.0	-2.0
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	38	28	-4.0	-3.9	-4.7
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	50	37	-2.0	-3.2	-4.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	33	28	1.7	-1.8	-2.6
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	10.5	11.3	12.3	10.6	10.1	10.2	8.6	1.6	-1.9	-1.6
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	2.9	2.0		-3.7	-2.2
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.3	6.6		-1.3	-1.4
CO₂ Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.6	5.1	2.0	-2.6	-2.3
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.6	0.8	-0.9	-6.6	-4.4
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.5	0.0	-2.9	-4.3
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.3	6.5	-2.1	-4.6
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.4	2.1	-1.8	-4.5
Transport	2.2	3.2	3.5	3.4	3.3	3.3	3.1	4.9	-0.6	-0.7
CO₂ Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.7	10.4	2.8	0.0
Non-CO₂ GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.8	-0.1	-1.3	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.4	32.4	1.6	-1.9	-1.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.21	0.17	0.16	0.09	0.08	0.11	0.06	-2.2	-6.4	-3.1
Final energy demand (t of CO ₂ /toe)	1.29	1.37	1.45	1.30	1.23	1.20	1.19	1.1	-1.6	-0.3
Industry	1.80	1.55	1.34	0.85	0.78	0.71	0.53	-2.9	-5.2	-3.8
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.29	6.0	-1.5	-1.6
Tertiary	1.14	1.10	1.12	0.98	0.92	0.83	0.78	-0.2	-1.9	-1.6
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.70	0.0	-0.6	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.4	41.9	46.4			
RES-H&C share	40.1	43.0	40.9	51.2	51.8	55.4	62.1			
RES-E share	52.7	43.0	42.1	46.2	53.4	51.6	62.6			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.3	18.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	107	86	93	77	85	91	110	-1.4	-0.9	2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	57	66	107	102	115	123	132	6.5	0.7	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.9	7.2	10.0	0.1	3.5
as % of GDP	14.8	17.3	27.0	19.0	19.4	20.0	23.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8
GDP (in 000 M€13)	19	27	29	35	40	42	43	4.4	3.3	0.7
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6566	6323	6590	-0.4	-0.3	0.0
Solids	91	185	213	254	197	137	89	8.8	-0.8	-7.6
Oil	2125	2710	2502	2432	2367	2253	1979	1.6	-0.6	-1.8
Natural gas	2064	2477	2492	2122	2092	2217	1400	1.9	-1.7	-3.9
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Renewable energy forms	675	881	1065	1249	1343	1323	1215	4.7	2.3	-1.0
Energy Branch Consumption	610	853	743	680	612	599	576	2.0	-1.9	-0.6
Non-Energy Uses	662	804	714	717	793	788	758	0.8	1.1	-0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3269	3900	1318	1358	1473	1447	3353	-8.7	1.1	8.6
Solids	12	20	9	19	7	8	8	-3.0	-2.1	1.3
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.2
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Renewable energy sources	682	900	1185	1262	1389	1367	1267	5.7	1.6	-0.9
Hydro	29	39	46	38	38	38	38	4.7	-2.0	0.0
Biomass & Waste	653	858	1114	1158	1278	1133	1009	5.5	1.4	-2.3
Wind	0	0	19	60	60	174	174	0.0	12.0	11.2
Solar and others	0	0	0	5	8	8	12	0.0	0.0	4.0
Geothermal	0	3	5	1	6	15	35	0.0	3.1	19.2
Net Imports (ktoe)	4247	5026	5668	5454	5257	5044	3396	2.9	-0.7	-4.3
Solids	80	174	196	235	190	129	81	9.4	-0.3	-8.1
Oil	2223	2622	2607	2516	2451	2342	2068	1.6	-0.6	-1.7
Crude oil and Feedstocks	4760	9029	9339	9639	9124	8586	7923	7.0	-0.2	-1.4
Oil products	-2537	-6408	-6732	-7123	-6672	-6244	-5856	10.3	-0.1	-1.3
Natural gas	2065	2493	2485	2122	2096	2224	1413	1.9	-1.7	-3.9
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Import Dependency (%)	59.4	56.8	81.8	80.1	78.1	77.7	50.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	6001	8332	13926	-7.7	1.9	8.8
Nuclear energy	8419	10337	0	0	0	0	9377	-100.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0
Gas (including derived gases)	1707	3217	3436	3028	4077	5020	1105	7.2	1.7	-12.2
Biomass-waste	0	7	147	657	725	790	922	0.0	17.3	2.4
Hydro (pumping excluded)	340	451	540	440	440	440	440	4.7	-2.0	0.0
Wind	0	2	224	695	695	2018	2018	0.0	12.0	11.2
Solar	0	0	0	64	64	64	64	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2423	3004	3921	-6.3	-1.7	4.9
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0
Renewable energy	103	118	249	614	614	1327	1327	9.2	9.4	8.0
Hydro (pumping excluded)	103	117	116	116	116	116	116	1.2	0.0	0.0
Wind	0	1	133	424	424	1137	1137	0.0	12.3	10.4
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2556	2577	2629	2829	1809	1677	1478	0.3	-3.7	-2.0
of which cogeneration units	650	1038	1100	1799	577	933	731	5.4	-6.2	2.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	3	3	0	0	0	0	0	-100.0	0.0	0.0
Gas fired	1736	1781	1822	1992	1520	1520	1349	0.5	-1.8	-1.2
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4
Biomass-waste fired	0	0	37	67	90	110	129	0.0	9.3	3.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.4	30.0	38.5			
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	47.4	46.1	29.8			
% of gross electricity from CHP	15.5	15.5	34.6	45.5	49.8	41.5	9.7			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	32.1	39.8	92.1			
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	871	1084	584	3.3	-3.8	-3.9
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0
Gas (including derived gases)	723	1057	1117	725	708	861	312	4.4	-4.5	-7.9
Biomass & Waste	1	5	65	135	163	223	272	59.7	9.7	5.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	7911	12651	9987	10232	9878	9324	10517	2.4	-0.1	0.6
Refineries	5032	9415	9446	9704	9277	8809	8147	6.5	-0.2	-1.3
Biofuels and hydrogen production	0	3	45	59	113	101	93	0.0	9.7	-2.0
District heating	656	520	496	468	488	413	266	-2.7	-0.2	-5.9
Derived gases, cokeries etc.	2223	2713	0	0	0	1	2011	0.0	0.0	154.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Lithuania: EUO+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.7	
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2	
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.6	
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7	
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.5	
Inland navigation	0	0	0	0	0	0	0	0.4	1.4	0.9	
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3	
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.4	
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6	
Inland navigation	0	0	0	0	0	0	0	0.4	1.7	0.7	
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1630	1572	1470	3.7	0.7	-1.0	
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4	
Private cars and motorcycles	705	845	919	881	871	802	722	2.7	-0.5	-1.9	
Heavy goods and light commercial vehicles	204	387	443	517	555	556	544	8.1	2.3	-0.2	
Rail	76	79	65	67	78	81	80	-1.5	1.8	0.3	
Aviation	27	46	49	69	79	85	78	6.1	4.9	-0.1	
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5	
By transport activity											
Passenger transport	777	947	1013	998	998	935	846	2.7	-0.2	-1.6	
Freight transport	277	466	508	584	632	637	624	6.2	2.2	-0.1	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.6	6.5				
ENERGY EFFICIENCY											
Primary energy consumption	6401	7907	6073	5934	5774	5535	5822	-0.5	-0.5	0.1	
Final Energy Demand	3767	4601	4763	4996	5040	4699	3888	2.4	0.6	-2.6	
by sector											
Industry	780	987	898	1172	1193	1196	1001	1.4	2.9	-1.7	
Energy intensive industries	363	436	486	689	694	696	582	3.0	3.6	-1.8	
Other industrial sectors	416	551	412	483	498	500	420	-0.1	1.9	-1.7	
Residential	1368	1509	1599	1498	1435	1250	908	1.6	-1.1	-4.5	
Tertiary	563	672	720	718	757	657	489	2.5	0.5	-4.3	
Transport ⁽⁵⁾	1057	1433	1546	1608	1656	1596	1491	3.9	0.7	-1.0	
by fuel											
Solids	82	177	208	238	180	119	69	9.8	-1.4	-9.1	
Oil	1356	1616	1613	1664	1693	1589	1412	1.7	0.5	-1.8	
Gas	363	519	567	649	607	591	409	4.6	0.7	-3.9	
Electricity	533	686	717	832	894	904	860	3.0	2.2	-0.4	
Heat (from CHP and District Heating)	827	905	922	870	911	845	600	1.1	-0.1	-4.1	
Renewable energy forms	605	698	738	743	754	650	535	2.0	0.2	-3.4	
Other	0	0	0	0	0	1	3	0.0	0.0	30.3	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	374	317	234	191	164	149	154	-4.6	-3.5	-0.7	
Industry (Energy on Value added, index 2000=100)	100	80	66	74	69	67	56	-4.1	0.5	-2.2	
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	50	40	29	-2.7	-4.2	-5.3	
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	53	39	-1.3	-2.9	-5.0	
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	19	0.3	-1.2	-2.3	
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.4	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	18.9	15.7	1.5	-1.6	-2.1	
of which ETS sectors (2013 scope) GHG emissions		11.7	9.4	7.8	7.0	7.3	5.0		-2.9	-3.2	
of which ESD sectors (2013 scope) GHG emissions		13.2	13.6	13.4	12.5	11.7	10.7		-0.8	-1.6	
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.4	7.5	1.8	-1.4	-3.5	
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.5	0.9	-0.8	-5.5	-7.9	
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.1	
Industry	1.1	1.3	1.2	1.5	1.5	1.4	0.9	0.7	2.4	-4.8	
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.3	3.7	-2.6	-7.9	
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.3	2.2	-0.6	-7.7	
Transport	3.1	4.2	4.5	4.6	4.6	4.4	4.1	3.7	0.2	-1.2	
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.4	2.2	6.0	-1.4	-0.8	
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	6.2	6.0	0.0	-2.1	-0.7	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.4	39.3	32.6	1.5	-1.6	-2.1	
Carbon Intensity indicators											
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.13	0.04	2.3	-5.6	-9.6	
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.41	1.41	0.6	-0.3	-0.2	
Industry	1.38	1.35	1.29	1.31	1.22	1.19	0.89	-0.7	-0.5	-3.1	
Residential	0.40	0.43	0.50	0.51	0.42	0.32	0.29	2.1	-1.6	-3.6	
Tertiary	0.88	0.84	0.86	0.82	0.76	0.62	0.53	-0.3	-1.1	-3.6	
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.72	-0.2	-0.5	-0.1	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.1	25.1	27.0				
RES-H&C share	26.1	30.4	33.2	36.7	38.2	36.7	43.5				
RES-E share	4.0	3.8	7.4	15.6	15.4	26.0	27.7				
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.2	10.9	12.0				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	109	107	110	8.7	-4.6	0.1	
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	119	134	158	5.7	0.6	2.9	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	7.9	8.9	7.6	2.5	2.2	
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.6	20.8				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Luxembourg: EUCL+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2
GDP (in 000 M€13)	32	38	41	45	52	60	68	2.6	2.3	2.8
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4726	4724	4554	2.4	0.2	-0.4
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4
Oil	2320	3160	2869	2908	2862	2775	2786	2.2	0.0	-0.3
Natural gas	671	1176	1197	1031	1044	1119	904	6.0	-1.4	-1.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Renewable energy forms	64	106	160	245	391	412	427	9.6	9.4	0.9
Energy Branch Consumption	26	30	50	51	55	60	68	6.9	0.9	2.1
Non-Energy Uses	55	29	33	39	42	43	46	-5.1	2.5	0.9
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	64	111	122	148	265	289	297	6.7	8.1	1.1
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	64	111	122	148	265	289	297	6.7	8.1	1.1
Hydro	11	8	9	9	9	10	13	-1.4	0.2	3.0
Biomass & Waste	51	97	105	119	186	201	175	7.5	5.9	-0.6
Wind	2	5	5	7	43	42	48	7.4	24.8	1.1
Solar and others	0	2	3	13	27	36	61	0.0	25.2	8.6
Geothermal	0	0	0	0	0	0	0	0.0	0.0	15.6
Net Imports (ktoe)	3639	4671	4503	4468	4461	4435	4257	2.2	-0.1	-0.5
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4
Oil	2368	3141	2852	2908	2862	2775	2786	1.9	0.0	-0.3
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil products	2368	3141	2852	2908	2862	2775	2786	1.9	0.0	-0.3
Natural gas	671	1176	1197	1031	1044	1119	904	6.0	-1.4	-1.4
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.9	93.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3274	3896	3878	22.6	0.1	1.7
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0
Gas (including derived gases)	215	3107	2916	2304	2363	2957	2577	29.8	-2.1	0.9
Biomass-waste	56	76	129	158	175	210	243	8.7	3.1	3.3
Hydro (pumping excluded)	124	94	108	110	110	114	149	-1.4	0.2	3.0
Wind	27	52	55	78	501	491	560	7.4	24.7	1.1
Solar	0	17	21	112	121	121	346	0.0	19.2	11.0
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	163	574	597	702	971	949	1239	13.8	5.0	2.5
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	47	93	107	212	467	454	759	8.6	15.9	5.0
Hydro (pumping excluded)	33	34	34	34	34	35	46	0.3	0.0	3.1
Wind	14	35	44	58	302	288	323	12.1	21.2	0.7
Solar	0	24	29	120	131	131	390	0.0	16.2	11.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	116	481	490	490	504	496	481	15.5	0.3	-0.5
of which cogeneration units	63	101	121	229	182	125	153	6.7	4.1	-1.7
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	103	468	469	469	469	457	442	16.4	0.0	-0.6
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0
Biomass-waste fired	9	9	17	20	34	37	37	7.1	7.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	37.9	46.2	35.2			
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.5	49.1			
% of gross electricity from CHP	17.7	10.1	9.6	23.3	16.0	7.7	8.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.7	24.0	33.5			
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	437	562	495	19.1	-2.3	1.2
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0
Gas (including derived gases)	66	544	520	383	392	504	438	22.8	-2.8	1.1
Biomass & Waste	29	32	33	36	46	57	56	1.5	3.2	2.1
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1	3	46	113	153	152	167	57.2	12.7	0.9
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	1	42	108	147	145	161	0.0	13.4	0.9
District heating	1	2	4	5	5	5	4	23.1	2.3	-2.1
Derived gases, cokeries etc.	0	0	0	0	0	1	2	0.0	0.0	16.6

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Luxembourg: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.2
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.5
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.2
Rail	0	0	0	0	0	1	1	0.4	3.1	2.9
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	3	3	3	3	4	5	5	0.8	3.6	1.9
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.7
Rail	1	0	0	0	0	0	1	-6.5	2.0	3.3
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2759	2720	2822	3.1	0.6	0.2
Public road transport	60	92	106	115	122	124	129	5.9	1.4	0.6
Private cars and motorcycles	1153	1521	1341	1311	1216	1120	1168	1.5	-1.0	-0.4
Heavy goods and light commercial vehicles	364	721	709	818	956	972	981	6.9	3.0	0.3
Rail	12	11	13	14	16	18	20	0.8	1.9	2.3
Aviation	321	432	431	435	446	482	520	3.0	0.3	1.6
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.5
<i>By transport activity</i>										
Passenger transport	1535	2046	1880	1863	1785	1728	1819	2.0	-0.5	0.2
Freight transport	379	735	724	834	974	992	1003	6.7	3.0	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.4	5.4			
ENERGY EFFICIENCY										
Primary energy consumption	3599	4771	4609	4576	4684	4681	4508	2.5	0.2	-0.4
Final Energy Demand	3505	4477	4327	4382	4469	4389	4230	2.1	0.3	-0.5
<i>by sector</i>										
Industry	714	754	739	585	590	559	488	0.4	-2.2	-1.9
Energy intensive industries	583	598	601	438	432	396	327	0.3	-3.2	-2.7
Other industrial sectors	130	156	139	148	158	163	160	0.6	1.3	0.2
Residential	468	525	508	498	520	522	416	0.8	0.2	-2.2
Tertiary	409	418	477	601	599	588	504	1.5	2.3	-1.7
Transport ⁽⁵⁾	1914	2781	2604	2697	2759	2720	2822	3.1	0.6	0.2
<i>by fuel</i>										
Solids	108	77	66	51	44	31	17	-4.8	-4.0	-9.4
Oil	2261	3106	2835	2869	2820	2731	2740	2.3	-0.1	-0.3
Gas	605	631	675	645	652	614	466	1.1	-0.4	-3.3
Electricity	497	529	568	557	599	648	658	1.4	0.5	0.9
Heat (from CHP and District Heating)	13	75	74	80	75	76	62	19.2	0.2	-1.9
Renewable energy forms	22	59	108	181	277	286	274	17.2	9.9	-0.1
Other	0	0	0	0	1	3	13	0.0	0.0	35.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	115	126	113	103	91	79	67	-0.1	-2.1	-3.1
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	62	2.9	-3.7	-3.9
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	73	50	-0.7	-1.1	-4.9
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	71	53	-1.5	-0.1	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	161	139	132	0.3	-2.5	-2.0
Freight transport (toe/Mtkm)	139	268	247	245	234	217	200	5.9	-0.5	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	10.7	14.1	13.3	12.9	12.8	12.6	12.0	2.2	-0.4	-0.6
of which ETS sectors (2013 scope) GHG emissions		4.2	3.8	3.5	3.4	3.7	3.4		-1.0	0.0
of which ESD sectors (2013 scope) GHG emissions		9.9	9.5	9.5	9.4	8.9	8.6		-0.2	-0.9
CO₂ Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	11.1	10.6	2.9	-0.4	-0.6
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.2	1.0	22.6	-2.8	1.1
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.5	-2.0	-2.8	-5.0
Residential	1.1	1.2	1.1	1.1	1.0	0.9	0.7	0.5	-1.1	-4.2
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.4	-0.6	0.6	-4.1
Transport	5.8	8.4	7.8	7.9	7.9	7.8	8.0	3.1	0.2	0.1
CO₂ Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.5	-2.1	-1.1	-0.9
Non-CO₂ GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	1.0	-0.9	0.1	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.3	95.0	90.5	2.2	-0.4	-0.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.28	0.30	0.30	0.25	0.22	0.25	0.22	0.7	-2.9	0.1
Final energy demand (t of CO ₂ /toe)	2.49	2.52	2.43	2.40	2.32	2.26	2.26	-0.2	-0.5	-0.3
Industry	1.71	1.47	1.36	1.39	1.28	1.14	0.93	-2.3	-0.6	-3.1
Residential	2.29	2.28	2.22	2.14	1.93	1.80	1.58	-0.3	-1.4	-2.0
Tertiary	1.59	1.25	1.28	1.23	1.08	0.97	0.84	-2.1	-1.6	-2.5
Transport	3.01	3.04	2.99	2.92	2.88	2.86	2.84	-0.1	-0.4	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	8.9	9.6			
RES-H&C share	1.4	3.6	4.8	6.4	12.3	15.0	17.1			
RES-E share	2.1	3.2	3.8	6.1	12.0	11.4	15.5			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.8	11.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	95	93	99	-1.1	2.0	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	122	131	136	0.1	1.1	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.5	7.8	4.3	2.5	2.8
as % of GDP	9.5	11.5	11.2	10.4	11.4	10.9	11.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Malta: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	0	0	0	0	0	0	0	0.9	0.6	0.4	
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9	
Gross Inland Consumption (ktoe)	802	972	908	675	745	707	636	1.3	-2.0	-1.5	
Solids	0	0	0	0	0	0	0	0.0	0.0	-12.8	
Oil	802	972	903	579	342	325	296	1.2	-9.3	-1.4	
Natural gas	0	0	0	0	338	308	262	0.0	0.0	-2.5	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8	
Renewable energy forms	0	1	5	21	49	58	62	0.0	25.7	2.4	
Energy Branch Consumption	10	2	10	6	5	4	3	0.5	-7.2	-4.0	
Non-Energy Uses	0	20	9	11	12	12	12	0.0	3.4	-0.2	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	0	1	4	16	38	48	56	0.0	24.3	4.1	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	0	1	4	16	38	48	56	0.0	24.3	4.1	
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biomass & Waste	0	0	1	3	1	2	3	0.0	9.5	8.4	
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solar and others	0	1	4	13	36	46	53	0.0	25.6	3.8	
Geothermal	0	0	0	0	0	0	0	0.0	0.0	1.1	
Net Imports (ktoe)	1458	1630	2362	2099	2096	2082	2055	4.9	-1.2	-0.2	
Solids	0	0	0	0	0	0	0	0.0	0.0	-12.8	
Oil	1458	1630	2361	2019	1719	1723	1653	4.9	-3.1	-0.4	
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil products	1458	1630	2361	2019	1719	1723	1653	4.9	-3.1	-0.4	
Natural gas	0	0	0	0	350	333	379	0.0	0.0	0.8	
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8	
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.8	97.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2482	2552	2287	1.0	1.6	-0.8	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	1917	2240	2113	1293	0	0	0	1.0	-100.0	0.0	
Gas (including derived gases)	0	0	0	0	2148	2178	1859	0.0	0.0	-1.4	
Biomass-waste	0	0	0	6	8	11	18	0.0	0.0	8.2	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solar	0	0	0	103	326	363	410	0.0	0.0	2.3	
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	577	577	579	541	787	945	864	0.0	3.1	0.9	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	0	0	2	60	185	211	237	0.0	57.2	2.5	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solar	0	0	2	60	185	211	237	0.0	57.2	2.5	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	577	577	577	481	603	735	627	0.0	0.4	0.4	
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-6.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0	
Gas fired	0	0	0	0	239	479	479	0.0	0.0	7.2	
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8	
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	4.8	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.1	30.3	29.7				
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.7	61.0	61.4				
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.5	14.7	18.7				
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	339	309	263	2.1	-5.1	-2.5	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-100.0	0.0	
Gas (including derived gases)	0	0	0	0	338	307	262	0.0	0.0	-2.5	
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	0.2	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	0	0	1	3	7	7	6	0.0	23.3	-2.6	
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biofuels and hydrogen production	0	0	1	3	7	7	6	0.0	23.3	-2.6	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	20.8	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.2	1.2
Public road transport	0	0	1	1	1	1	1	0.8	0.5	0.4
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0.3	1.3	1.6
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0.3	1.3	1.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	269	264	-0.5	0.6	-0.2
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.7
Private cars and motorcycles	97	105	110	109	102	91	83	1.2	-0.7	-2.1
Heavy goods and light commercial vehicles	36	37	31	31	34	35	37	-1.5	0.7	0.9
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	122	87	102	105	122	132	134	-1.8	1.8	0.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
<i>By transport activity</i>										
Passenger transport	232	205	224	225	236	233	228	-0.4	0.5	-0.4
Freight transport	36	37	31	31	34	35	37	-1.5	0.7	0.9
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.1			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	733	694	626	1.2	-2.0	-1.6
Final Energy Demand	483	478	476	501	547	542	496	-0.1	1.4	-1.0
<i>by sector</i>										
Industry	83	74	48	51	52	53	52	-5.4	0.8	0.0
Energy intensive industries	13	19	8	8	8	8	8	-4.8	0.0	-0.3
Other industrial sectors	70	55	40	44	44	45	44	-5.5	1.0	0.1
Residential	76	77	80	85	101	96	78	0.5	2.4	-2.6
Tertiary	55	85	94	108	124	124	102	5.4	2.8	-2.0
Transport ⁽⁵⁾	268	242	255	256	270	269	264	-0.5	0.6	-0.2
<i>by fuel</i>										
Solids	0	0	0	0	0	0	0	0.0	0.0	-12.8
Oil	348	309	316	323	330	313	284	-1.0	0.4	-1.5
Gas	0	0	0	0	0	0	0	0.0	0.0	8.6
Electricity	135	168	155	166	197	204	186	1.4	2.4	-0.6
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-1.9
Renewable energy forms	0	1	5	11	20	25	26	0.0	14.2	2.5
Other	0	0	0	0	0	0	0	0.0	0.0	32.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	162	134	89	89	77	63	-0.6	-4.0	-3.4
Industry (Energy on Value added, index 2000=100)	100	116	74	73	67	65	58	-2.9	-1.0	-1.4
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	82	60	-1.1	0.9	-4.7
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	130	117	87	2.1	0.6	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.6
Freight transport (toe/Mtkm)	139	135	116	113	110	107	102	-1.7	-0.6	-0.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	2.8	3.3	3.1	2.1	2.1	1.9	1.7	1.0	-3.9	-2.1
of which ETS sectors (2013 scope) GHG emissions	2.4	2.1	1.1	1.1	1.2	1.1	1.0		-6.0	-1.3
of which ESD sectors (2013 scope) GHG emissions	1.0	1.0	1.0	0.9	0.8	0.7	0.7		-0.4	-3.1
CO₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.7	1.5	0.9	-4.4	-1.9
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.7	0.6	2.1	-8.1	-2.5
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.5	-6.8
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-1.2	2.4	-13.0
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.0	6.2	-0.7	-4.2
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.2
CO₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO₂ GHG emissions	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.6	-0.5	-3.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	94.7	87.4	76.7	1.0	-3.9	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.28	0.27	1.1	-9.6	-1.7
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.73	1.73	-0.9	-1.0	-0.4
Industry	1.55	1.43	0.97	1.00	0.94	0.86	0.47	-4.6	-0.3	-6.8
Residential	1.02	0.80	0.86	0.91	0.86	0.55	0.28	-1.7	0.0	-10.7
Tertiary	0.67	0.40	0.72	0.73	0.51	0.45	0.40	0.7	-3.5	-2.3
Transport	3.00	3.00	2.99	2.96	2.92	2.92	2.91	0.0	-0.2	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.7	14.1	16.7			
RES-H&C share	0.0	1.0	7.0	17.5	23.9	34.8	48.8			
RES-E share	0.0	0.0	0.1	4.8	12.5	13.6	17.2			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.6	10.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	78	111	173	117	90	95	100	8.4	-6.4	1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	75	84	201	177	169	163	153	10.4	-1.7	-1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.3	8.2	2.3	2.0
as % of GDP	6.8	8.9	12.5	11.2	12.7	13.0	12.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Netherlands: EUO0+33				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2		
GDP (in 000 ME13)	537	573	613	620	668	706	738	1.3	0.9	1.0		
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83460	80244	72469	1.4	-0.4	-1.4		
Solids	7852	8195	7596	9274	7951	8500	6531	-0.3	0.5	-1.9		
Oil	28245	32464	34649	34892	34339	33046	31400	2.1	-0.1	-0.9		
Natural gas	35009	35334	39309	33859	30922	29651	25117	1.2	-2.4	-2.1		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Renewable energy forms	1827	2872	3796	3906	9216	8703	9009	7.6	9.3	-0.2		
Energy Branch Consumption	5353	6336	5088	5607	5438	5022	4730	-0.5	0.7	-1.4		
Non-Energy Uses	10491	13013	17582	13895	14822	15340	15338	5.3	-1.7	0.3		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	57555	62220	70219	51471	52957	45369	37569	2.0	-2.8	-3.4		
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0		
Oil	2405	2328	1985	1381	1414	956	738	-1.9	-3.3	-6.3		
Natural gas	52203	56276	63534	44126	40613	33794	25822	2.0	-4.4	-4.4		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Renewable energy sources	1926	2577	3671	5009	9974	9630	10020	6.7	10.5	0.0		
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1		
Biomass & Waste	1831	2371	3282	4236	7005	6554	6760	6.0	7.9	-0.4		
Wind	71	178	343	618	2373	2373	2373	17.0	21.3	0.0		
Solar and others	11	21	29	123	546	618	733	9.8	34.1	3.0		
Geothermal	0	0	8	24	41	76	144	0.0	18.2	13.5		
Net Imports (ktoe)	33759	37076	30549	47678	45881	50942	52066	-1.0	4.2	1.3		
Solids	7998	8312	9228	9274	7951	8500	6531	1.4	-1.5	-1.9		
Oil	41425	47836	45167	48901	48023	47565	46406	0.9	0.6	-0.3		
Crude oil and Feedstocks	61018	61724	60676	53468	50690	47982	45410	-0.1	-1.8	-1.1		
Oil products	-19594	-13888	-15508	-4567	-2668	-417	996	-2.3	-16.1	0.0		
Natural gas	-17191	-20941	-24211	-10267	-9412	-3550	718	3.5	-9.0	0.0		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Import Dependency (%)	38.0	37.7	30.4	48.1	46.4	52.9	58.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107604	123305	134024	127945	2.8	0.4	0.4		
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4		
Solids	24276	23500	22588	29437	23896	28646	21958	-0.7	0.6	-0.8		
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0		
Gas (including derived gases)	54606	61588	77566	56719	46889	56282	55188	3.6	-4.9	1.6		
Biomass-waste	3203	6683	8606	8343	15906	12286	13928	10.4	6.3	-1.3		
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1		
Wind	829	2067	3993	7185	27598	27598	27598	17.0	21.3	0.0		
Solar	8	34	60	1113	5003	5003	5064	22.2	55.5	0.1		
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	21048	21728	25072	30866	38325	36711	33479	1.8	4.3	-1.3		
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0		
Renewable energy	497	1312	2362	4706	15719	15719	15788	16.9	20.9	0.0		
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0		
Wind	447	1224	2237	3431	10096	10096	10096	17.5	16.3	0.0		
Solar	13	51	88	1238	5586	5586	5655	21.1	51.4	0.1		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	20066	19931	22225	25674	22122	20507	17206	1.0	0.0	-2.5		
of which cogeneration units	7372	7162	9300	8514	2413	4743	5736	2.4	-12.6	9.0		
of which CCS units	0	0	0	0	0	250	250	0.0	0.0	0.0		
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9		
Gas fired	14667	14529	16575	17356	14403	13119	10455	1.2	-1.4	-3.2		
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6		
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	35.5	40.2	42.1					
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.6	43.9	44.8					
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.9	21.4	29.2					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.4	1.6					
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	42.6	36.6	39.7					
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17081	19074	17491	1.9	-2.2	0.2		
Solids	4998	4958	4669	6490	4875	5811	4433	-0.7	0.4	-0.9		
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4		
Gas (including derived gases)	10671	11953	13773	9489	7761	9631	9464	2.6	-5.6	2.0		
Biomass & Waste	1213	2052	2460	1892	4446	3612	3574	7.3	6.1	-2.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	86454	91417	68924	63771	61738	59304	56535	-2.2	-1.1	-0.9		
Refineries	82233	86869	64188	58847	56693	54872	52434	-2.4	-1.2	-0.8		
Biofuels and hydrogen production	0	0	230	579	485	471	519	0.0	7.8	0.7		
District heating	398	436	499	366	338	309	256	2.3	-3.8	-2.7		
Derived gases, cokeries etc.	3824	4113	4007	3979	4222	3651	3326	0.5	0.5	-2.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Netherlands: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	184	195	183	191	200	205	213	-0.1	0.9	0.6
Public road transport	11	12	12	13	13	14	14	0.8	0.9	0.9
Private cars and motorcycles	143	152	138	141	147	147	150	-0.4	0.6	0.3
Rail	16	17	17	19	21	23	25	0.5	2.1	1.9
Aviation ⁽³⁾	13	14	15	17	18	20	22	1.1	2.4	1.8
Inland navigation	1	1	1	1	1	1	1	0.1	1.1	1.5
Freight transport activity (Gtkm)	94	100	106	111	121	128	134	1.3	1.3	1.0
Heavy goods and light commercial vehicles	48	51	54	55	61	62	64	1.2	1.3	0.5
Rail	5	6	6	6	7	8	8	2.7	1.5	1.9
Inland navigation	41	42	47	50	53	58	62	1.2	1.3	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14207	13213	12511	0.5	-0.5	-1.3
Public road transport	212	224	260	267	270	273	269	2.1	0.4	-0.1
Private cars and motorcycles	8007	8288	8206	7708	6904	6018	5509	0.2	-1.7	-2.2
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2740	2662	2634	2.2	0.1	-0.4
Rail	184	172	182	189	204	219	228	-0.1	1.1	1.1
Aviation	3382	3712	3463	3821	3835	3766	3581	0.2	1.0	-0.7
Inland navigation	328	207	159	239	253	275	291	-7.0	4.8	1.4
<i>By transport activity</i>										
Passenger transport	11703	12265	11985	11861	11079	10133	9439	0.2	-0.8	-1.6
Freight transport	2594	2933	3001	2957	3128	3081	3072	1.5	0.4	-0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	0.9	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.1	4.5			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68638	64904	57130	0.6	-0.1	-1.8
Final Energy Demand	50505	51654	51835	50854	50339	46239	40070	0.3	-0.3	-2.3
<i>by sector</i>										
Industry	14804	14814	12208	12815	13599	12594	11691	-1.9	1.1	-1.5
Energy intensive industries	10277	10532	8224	8734	9328	8600	8064	-2.2	1.3	-1.4
Other industrial sectors	4527	4281	3984	4082	4271	3994	3627	-1.3	0.7	-1.6
Residential	10299	10143	11518	10892	10509	9777	7672	1.1	-0.9	-3.1
Tertiary	11104	11499	13124	12329	12024	10654	8196	1.7	-0.9	-3.8
Transport ⁽⁵⁾	14297	15198	14985	14817	14207	13213	12511	0.5	-0.5	-1.3
<i>by fuel</i>										
Solids	1330	1515	1270	1402	1592	1566	1062	-0.5	2.3	-4.0
Oil	16505	17382	16113	15746	14872	13364	12069	-0.2	-0.8	-2.1
Gas	21011	20346	22378	21405	20301	17191	13063	0.6	-1.0	-4.3
Electricity	8408	8986	9189	9034	9561	9699	9218	0.9	0.4	-0.4
Heat (from CHP and District Heating)	2893	2981	2106	2038	2150	2245	2136	-3.1	0.2	-0.1
Renewable energy forms	358	444	780	1223	1837	2068	2327	8.1	8.9	2.4
Other	0	0	0	8	27	106	194	-100.0	0.0	21.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	141	142	141	135	125	114	98	0.0	-1.2	-2.4
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	65	57	-2.9	-0.2	-2.5
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	75	55	0.6	-2.0	-4.4
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	71	52	0.1	-1.7	-4.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	27	24	-0.4	-2.4	-2.7
Freight transport (toe/Mtkm)	28	29	28	27	26	24	23	0.2	-0.9	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	222.8	221.6	216.9	209.7	193.0	183.7	160.2	-0.3	-1.2	-1.8
of which ETS sectors (2013 scope) GHG emissions	103.3	95.6	95.8	85.2	85.2	86.5	75.5		-1.1	-1.2
of which ESD sectors (2013 scope) GHG emissions	118.2	121.4	113.9	107.9	97.2	84.7			-1.2	-2.4
CO₂ Emissions (energy related)	168.5	175.7	175.0	171.3	155.9	147.4	124.1	0.4	-1.2	-2.3
Power generation/District heating	51.9	55.5	57.7	54.3	43.7	49.6	43.0	1.1	-2.7	-0.2
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.7	7.9	-2.3	1.2	-2.2
Industry	26.6	26.5	22.9	26.6	27.6	22.9	18.1	-1.5	1.9	-4.1
Residential	18.9	17.9	20.6	19.1	17.5	15.3	10.4	0.9	-1.7	-5.0
Tertiary	17.5	18.3	21.1	18.7	16.6	13.6	9.9	1.9	-2.4	-5.0
Transport	42.4	45.3	43.9	42.3	40.6	37.3	34.7	0.4	-0.8	-1.6
CO₂ Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.8	8.9	8.8	2.0	0.3	0.0
Non-CO₂ GHG emissions	47.3	37.0	33.3	29.9	28.3	27.5	27.2	-3.4	-1.6	-0.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	85.8	81.6	71.2	-0.3	-1.2	-1.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.40	0.38	0.37	0.38	0.28	0.29	0.26	-0.6	-3.0	-0.4
Final energy demand (t of CO ₂ /toe)	2.09	2.09	2.09	2.10	2.03	1.93	1.83	0.0	-0.3	-1.1
Industry	1.80	1.79	1.87	2.07	2.03	1.82	1.55	0.4	0.8	-2.6
Residential	1.84	1.77	1.79	1.75	1.66	1.56	1.36	-0.2	-0.7	-2.0
Tertiary	1.58	1.59	1.61	1.51	1.38	1.27	1.21	0.2	-1.5	-1.3
Transport	2.97	2.98	2.93	2.86	2.86	2.82	2.77	-0.1	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	13.1	14.0	16.9			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.5	12.5			
RES-E share	2.6	6.3	9.7	12.9	37.9	34.3	37.2			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.8	13.4	17.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	83	87	91	2.7	2.4	0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	136	141	149	0.9	0.5	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	78.1	84.0	96.5	3.5	1.5	2.1
as % of GDP	8.9	10.6	11.0	10.5	11.7	11.9	13.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Poland: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2		
GDP (in 000 M€13)	253	294	371	425	492	559	623	3.9	2.9	2.4		
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	105509	103048	94515	1.3	0.5	-1.1		
Solids	56291	54612	54808	53011	50295	45717	38540	-0.3	-0.8	-2.6		
Oil	19037	21696	25747	25895	26606	25234	23671	3.1	0.3	-1.2		
Natural gas	9964	12237	12807	13159	16176	17244	16749	2.5	2.4	0.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-548	-962	-116	6	63	167	82	-14.4	0.0	2.6		
Renewable energy forms	3905	4643	7684	9863	12368	14686	15474	7.0	4.9	2.3		
Energy Branch Consumption	6664	6104	6095	6243	6146	5450	5139	-0.9	0.1	-1.8		
Non-Energy Uses	4357	4573	4961	5545	6359	6998	7344	1.3	2.5	1.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	79590	78592	67394	70900	70363	65354	59021	-1.6	0.4	-1.7		
Solids	71299	68857	55381	55586	52051	44435	35457	-2.5	-0.6	-3.8		
Oil	1062	1143	1063	1539	1581	1533	1486	0.0	4.0	-0.6		
Natural gas	3317	3887	3696	3947	4583	4770	6667	1.1	2.2	3.8		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3912	4705	7254	9828	12148	14615	15412	6.4	5.3	2.4		
Hydro	181	189	251	206	209	217	246	3.3	-1.8	1.7		
Biomass & Waste	3728	4493	6838	8749	10836	12084	11993	6.3	4.7	1.0		
Wind	0	12	143	832	984	2072	2631	80.0	21.3	10.3		
Solar and others	0	0	8	22	82	196	225	0.0	25.5	10.6		
Geothermal	3	11	13	21	38	46	316	16.1	11.0	23.5		
Net Imports (ktoe)	8773	15932	31567	31285	35438	38013	35636	13.7	1.2	0.1		
Solids	-16353	-13039	-2814	-2575	-1756	1282	3083	-16.1	-4.6	0.0		
Oil	19067	21466	25187	24607	25313	24011	22504	2.8	0.0	-1.2		
Crude oil and Feedstocks	17616	17893	22965	24633	24825	23262	21544	2.7	0.8	-1.4		
Oil products	1451	3573	2222	-26	488	750	960	4.4	-14.1	7.0		
Natural gas	6607	8531	8874	9213	11597	12483	10105	3.0	2.7	-1.4		
Electricity	-548	-962	-116	6	63	167	82	-14.4	0.0	2.6		
Import Dependency (%)	9.9	17.2	31.3	30.6	33.5	36.8	37.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	177628	188567	192869	0.9	1.2	0.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	135888	142161	136592	137628	142554	132636	124384	0.1	0.4	-1.4		
Oil (including refinery gas)	1916	2757	2892	9	0	479	470	4.2	-100.0	0.0		
Gas (including derived gases)	2961	6573	6689	2968	9691	16286	18166	8.5	3.8	6.5		
Biomass-waste	298	1532	6332	9667	11452	12482	16306	35.7	6.1	3.6		
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2523	2865	3.3	-1.8	1.7		
Wind	5	135	1664	9669	11437	24094	30592	78.7	21.3	10.3		
Solar	0	0	0	29	67	67	84	0.0	0.0	2.3		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	30310	31721	33411	38260	33730	38260	40946	1.0	0.1	2.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	821	1036	2044	6084	6756	12522	15375	9.6	12.7	8.6		
Hydro (pumping excluded)	817	915	936	949	949	981	1063	1.4	0.1	1.1		
Wind	4	121	1108	5100	5728	11462	14212	75.5	17.9	9.5		
Solar	0	0	0	35	79	79	99	0.0	0.0	2.3		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	29489	30685	31367	32176	26974	25738	25571	0.6	-1.5	-0.5		
of which cogeneration units	9354	8313	8693	6564	6335	7827	6585	-0.7	-3.1	0.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	28214	28608	29158	28543	23120	20837	19410	0.3	-2.3	-1.7		
Gas fired	764	1548	1592	1659	1703	2675	3810	7.6	0.7	8.4		
Oil fired	396	396	396	398	171	162	155	0.0	-8.1	-0.9		
Biomass-waste fired	115	133	221	1574	1980	2064	2196	6.8	24.5	1.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.2	52.2	50.1					
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.4	37.2	38.0					
% of gross electricity from CHP	16.1	16.8	17.6	18.2	20.6	18.6	16.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	14.3	20.8	25.8					
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	37619	37392	36096	0.5	-0.2	-0.4		
Solids	35247	36349	34345	33735	33212	31366	29437	-0.3	-0.3	-1.2		
Oil (including refinery gas)	245	184	171	2	0	156	154	-3.5	-74.4	286.6		
Gas (including derived gases)	1032	1805	2179	913	1947	3018	3157	7.8	-1.1	5.0		
Biomass & Waste	102	434	1645	2046	2460	2852	3347	32.1	4.1	3.1		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	32964	31279	38694	40301	40612	37556	33200	1.6	0.5	-2.0		
Refineries	18969	18975	24192	27120	27438	25878	24116	2.5	1.3	-1.3		
Biofuels and hydrogen production	0	49	887	1100	1396	1372	1290	0.0	4.6	-0.8		
District heating	4179	3465	3716	3183	3579	3136	2606	-1.2	-0.4	-3.1		
Derived gases, cokeries etc.	9816	8789	9899	8898	8200	7171	5188	0.1	-1.9	-4.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	225	233	268	302	344	372	405	1.7	2.6	1.6
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.6
Private cars and motorcycles	134	156	194	223	254	270	289	3.8	2.7	1.3
Rail	29	23	22	24	31	38	46	-2.5	3.2	4.3
Aviation ⁽³⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.1
Freight transport activity (Gtkm)	114	140	170	201	228	256	286	4.0	3.0	2.3
Heavy goods and light commercial vehicles	59	90	121	150	167	186	206	7.4	3.3	2.1
Rail	54	50	49	51	61	70	80	-1.0	2.2	2.7
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.4
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19785	19273	19132	5.9	1.3	-0.3
Public road transport	654	581	610	632	668	680	673	-0.7	0.9	0.1
Private cars and motorcycles	6314	7213	9660	10120	10620	9773	9358	4.3	1.0	-1.3
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7373	7570	7682	11.9	1.6	0.4
Rail	541	469	372	366	427	476	531	-3.7	1.4	2.2
Aviation	274	319	508	613	693	771	884	6.4	3.1	2.5
Inland navigation	6	5	3	3	4	4	5	-7.4	2.3	2.5
<i>By transport activity</i>										
Passenger transport	7317	8170	10823	11407	12035	11289	10993	4.0	1.1	-0.9
Freight transport	2514	4095	6636	7283	7750	7984	8139	10.2	1.6	0.5
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99149	96049	87171	1.3	0.3	-1.3
Final Energy Demand	55260	58986	67070	68144	71627	69225	61837	2.0	0.7	-1.5
<i>by sector</i>										
Industry	18504	16147	14193	16600	17414	18100	17049	-2.6	2.1	-0.2
Energy intensive industries	13031	10951	9372	10814	11107	11156	10086	-3.2	1.7	-1.0
Other industrial sectors	5473	5196	4821	5786	6307	6943	6963	-1.3	2.7	1.0
Residential	17193	19454	22501	20556	21360	19710	15572	2.7	-0.5	-3.1
Tertiary	9644	10846	12664	12057	12796	11872	9831	2.8	0.1	-2.6
Transport ⁽⁵⁾	9919	12539	17712	18930	20058	19543	19386	6.0	1.3	-0.3
<i>by fuel</i>										
Solids	13215	12285	14494	13387	11176	9413	5806	0.9	-2.6	-6.3
Oil	15500	17844	20727	21289	21506	19817	18238	2.9	0.4	-1.6
Gas	7574	8780	9468	9673	11132	10899	9868	2.3	1.6	-1.2
Electricity	8482	9064	10238	11011	12302	13441	13755	1.9	1.9	1.1
Heat (from CHP and District Heating)	6886	7056	6547	6063	6917	6406	5834	-0.5	0.6	-1.7
Renewable energy forms	3602	3957	5596	6721	8594	9238	8286	4.5	4.4	-0.4
Other	0	0	0	1	1	11	51	0.0	0.0	44.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	350	313	272	240	214	184	152	-2.5	-2.4	-3.4
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	29	24	-9.7	-1.3	-2.8
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	53	37	-0.8	-3.4	-5.5
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	76	62	46	0.0	-2.7	-4.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	29	26	2.0	-1.5	-2.6
Freight transport (toe/Mtkm)	22	29	39	36	34	31	28	5.9	-1.4	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	400.5	403.1	411.9	407.8	400.0	375.4	337.3	0.3	-0.3	-1.7
of which ETS sectors (2013 scope) GHG emissions	222.2	210.3	208.8	206.3	195.7	176.8			-0.2	-1.5
of which ESD sectors (2013 scope) GHG emissions	180.9	201.6	199.0	193.7	179.7	160.5			-0.4	-1.9
CO₂ Emissions (energy related)	303.3	307.5	320.7	311.8	307.1	284.6	248.5	0.6	-0.4	-2.1
Power generation/District heating	167.4	171.0	165.6	157.9	158.6	151.9	138.8	-0.1	-0.4	-1.3
Energy Branch	10.2	7.7	8.5	9.7	9.1	7.7	7.3	-1.8	0.7	-2.2
Industry	51.9	36.9	30.4	34.9	31.8	28.7	21.8	-5.2	0.4	-3.7
Residential	27.4	35.5	44.9	37.8	34.6	29.2	18.9	5.1	-2.6	-5.9
Tertiary	18.4	20.7	21.9	19.1	18.1	14.1	9.8	1.7	-1.9	-6.0
Transport	28.0	35.8	49.3	52.4	54.8	53.0	52.0	5.8	1.1	-0.5
CO₂ Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.4	26.2	26.8	-1.0	2.3	0.5
Non-CO₂ GHG emissions	75.0	74.7	71.0	73.2	67.5	64.6	62.1	-0.5	-0.5	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	84.3	79.1	71.1	0.3	-0.3	-1.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.71	0.69	0.67	0.65	0.59	0.56	0.51	-0.6	-1.2	-1.4
Final energy demand (t of CO ₂ /toe)	2.27	2.18	2.19	2.12	1.95	1.81	1.66	-0.4	-1.2	-1.6
Industry	2.81	2.28	2.14	2.10	1.83	1.59	1.28	-2.6	-1.6	-3.5
Residential	1.59	1.83	2.00	1.84	1.62	1.48	1.21	2.3	-2.1	-2.9
Tertiary	1.91	1.91	1.73	1.59	1.41	1.18	0.99	-1.0	-2.0	-3.5
Transport	2.82	2.85	2.79	2.77	2.73	2.71	2.68	-0.1	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.1	18.0	20.4			
RES-H&C share	9.6	10.2	11.6	13.8	19.1	22.1	25.5			
RES-E share	1.6	2.7	6.6	13.4	14.2	20.6	25.8			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.6	10.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	72	78	81	2.6	3.9	1.2
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	130	136	137	5.2	0.1	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	93.0	109.0	131.8	6.9	3.5	3.6
as % of GDP	13.4	15.7	17.8	16.7	18.9	19.5	21.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Portugal: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4	
GDP (in 000 ME13)	169	176	181	174	187	204	217	0.7	0.4	1.5	
Gross Inland Consumption (ktoe)	25285	27475	24205	22984	21375	20453	17389	-0.4	-1.2	-2.0	
Solids	3805	3349	1658	3347	853	10	4	-8.0	-6.4	-41.6	
Oil	15475	16174	12215	10669	10364	9784	8881	-2.3	-1.6	-1.5	
Natural gas	2078	3751	4489	3446	3420	3647	1602	8.0	-2.7	-7.3	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3	
Renewable energy forms	3846	3615	5618	5328	6287	6512	6465	3.9	1.1	0.3	
Energy Branch Consumption	1028	1235	1195	1417	1208	1230	1144	1.5	0.1	-0.6	
Non-Energy Uses	2393	2587	1728	1470	1485	1525	1509	-3.2	-1.5	0.2	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5217	6156	6384	6318	4.1	0.6	0.3	
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	3846	3615	5800	5217	6156	6384	6318	4.2	0.6	0.3	
Hydro	974	407	1389	821	1596	1563	1623	3.6	1.4	0.2	
Biomass & Waste	2770	2967	3375	3181	3274	3240	2617	2.0	-0.3	-2.2	
Wind	14	153	790	1004	1012	1013	1493	49.2	2.5	4.0	
Solar and others	19	23	66	136	199	492	506	13.6	11.6	9.8	
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4	
Net Imports (ktoe)	22072	24845	18588	16330	15773	14607	11595	-1.7	-1.6	-3.0	
Solids	3914	3225	1629	3347	853	10	4	-8.4	-6.3	-41.6	
Oil	16039	17140	12436	11231	10912	10310	9372	-2.5	-1.3	-1.5	
Crude oil and Feedstocks	12316	13795	11875	14608	14054	13302	12294	-0.4	1.7	-1.3	
Oil products	3723	3345	561	-3376	-3141	-2993	-2922	-17.2	0.0	-0.7	
Natural gas	2039	3893	4505	3446	3426	3659	1635	8.2	-2.7	-7.1	
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3	
Import Dependency (%)	85.1	88.6	75.1	77.8	71.9	69.6	64.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50202	48532	49420	44635	2.2	-1.0	-0.8	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	14595	15226	7100	14862	3699	0	0	-7.0	-6.3	-100.0	
Oil (including refinery gas)	8421	8791	3008	769	1922	1253	609	-9.8	-4.4	-10.9	
Gas (including derived gases)	7231	13606	14900	9528	8531	9996	523	7.5	-5.4	-24.4	
Biomass-waste	1553	1987	2942	2936	3064	3988	3035	6.6	0.4	-0.1	
Hydro (pumping excluded)	11323	4731	16148	9543	18552	18170	18871	3.6	1.4	0.2	
Solar	168	1773	9182	11676	11767	11781	17365	49.2	2.5	4.0	
Wind	1	3	212	680	789	4025	4025	68.3	14.1	17.7	
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21872	22220	24435	5.6	1.5	1.1	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	4619	6083	9036	12611	14827	16665	18972	6.9	5.1	2.5	
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8	
Wind	83	1064	3796	5079	5113	5113	6858	46.6	3.0	3.0	
Solar	1	2	134	467	531	2143	2143	63.2	14.8	15.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	6370	7378	9885	8484	7045	5556	5462	4.5	-3.3	-2.5	
of which cogeneration units	1676	1079	1310	1491	1671	1393	1090	-2.4	2.5	-4.2	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0	
Gas fired	1542	2477	4799	5062	5012	4168	4092	12.0	0.4	-2.0	
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6	
Biomass-waste fired	221	244	343	521	643	664	672	4.5	6.5	0.4	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	24.9	25.0	20.7				
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.7	41.1	29.3				
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.6	13.5	9.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.8	77.2	97.5				
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3426	3233	1282	-1.2	-5.1	-9.4	
Solids	3198	3319	1597	3329	839	0	0	-6.7	-6.2	-100.0	
Oil (including refinery gas)	1683	1793	574	185	454	296	144	-10.2	-2.3	-10.9	
Gas (including derived gases)	1215	2309	2775	1560	1398	1818	142	8.6	-6.6	-20.4	
Biomass & Waste	356	428	662	621	661	1045	922	6.4	0.0	3.4	
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	13004	13953	12457	15231	14670	13903	12852	-0.4	1.6	-1.3	
Refineries	12555	13953	12148	14807	14243	13485	12453	-0.3	1.6	-1.3	
Biofuels and hydrogen production	0	0	309	422	423	395	369	0.0	3.2	-1.4	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	449	0	0	1	4	24	30	0.0	0.0	22.4	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUCO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	105	115	116	121	125	135	143	1.0	0.8	1.4
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.2
Private cars and motorcycles	73	87	86	86	86	92	97	1.7	0.1	1.2
Rail	5	5	5	5	6	7	8	1.4	1.7	2.4
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	2.0
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.4
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.4
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.2
Rail	2	2	2	2	3	3	3	0.6	1.5	2.5
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6637	6451	6269	0.9	-0.8	-0.6
Public road transport	237	135	129	129	128	134	144	-5.9	0.0	1.1
Private cars and motorcycles	4590	5056	5149	4730	4385	4031	3792	1.2	-1.6	-1.4
Heavy goods and light commercial vehicles	891	1026	835	797	844	874	866	-0.6	0.1	0.3
Rail	89	67	57	50	56	57	62	-4.3	-0.3	1.1
Aviation	784	888	1012	1124	1185	1313	1363	2.6	1.6	1.4
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.1
<i>By transport activity</i>										
Passenger transport	5689	6109	6318	6007	5726	5505	5326	1.1	-1.0	-0.7
Freight transport	947	1079	908	860	911	946	943	-0.4	0.0	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.6	6.4			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21514	19890	18928	15880	-0.2	-1.2	-2.2
Final Energy Demand	17919	19009	18022	16789	16837	15831	13941	0.1	-0.7	-1.9
<i>by sector</i>										
Industry	6323	5796	5453	5066	5169	4946	4385	-1.5	-0.5	-1.6
Energy intensive industries	4179	3889	3634	3613	3670	3530	3063	-1.4	0.1	-1.8
Other industrial sectors	2144	1907	1819	1452	1498	1416	1322	-1.6	-1.9	-1.2
Residential	2804	3224	2976	2632	2762	2338	1714	0.6	-0.7	-4.7
Tertiary	2157	2801	2368	2224	2268	2096	1574	0.9	-0.4	-3.6
Transport ⁽⁵⁾	6636	7188	7226	6867	6637	6451	6269	0.9	-0.8	-0.6
<i>by fuel</i>										
Solids	466	17	50	17	15	10	4	-20.0	-11.4	-12.5
Oil	10713	10812	9199	8142	7697	7185	6497	-1.5	-1.8	-1.7
Gas	873	1307	1564	1691	1834	1651	1298	6.0	1.6	-3.4
Electricity	3300	3983	4290	3865	4051	4206	3815	2.7	-0.6	-0.6
Heat (from CHP and District Heating)	134	328	338	325	364	309	314	9.7	0.7	-1.5
Renewable energy forms	2434	2563	2581	2748	2872	2447	1976	0.6	1.1	-3.7
Other	0	0	0	1	4	25	37	0.0	0.0	24.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	156	134	132	114	100	80	-1.1	-1.6	-3.5
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	74	63	-1.2	-0.8	-2.5
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	86	66	45	-0.6	-0.9	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	72	51	-0.6	-0.9	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	32	29	-0.3	-2.2	-2.3
Freight transport (toe/Mtkm)	36	33	33	31	30	29	28	-0.9	-0.8	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.9	90.7	73.4	73.2	59.8	54.6	45.6	-1.7	-2.0	-2.7
of which ETS sectors (2013 scope) GHG emissions	40.6	27.7	32.3	32.1	22.1	19.5	14.4		-2.2	-4.2
of which ESD sectors (2013 scope) GHG emissions	50.1	45.7	40.9	37.7	35.1	31.2	31.2		-1.9	-1.9
CO₂ Emissions (energy related)	61.0	64.6	49.6	50.1	38.8	34.1	26.5	-2.1	-2.4	-3.8
Power generation/District heating	21.7	24.9	14.9	18.0	8.2	5.2	0.8	-3.6	-5.8	-20.8
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.8	2.6	-0.2	0.6	-0.1
Industry	11.6	8.2	6.3	5.7	5.5	5.2	4.0	-5.9	-1.2	-3.2
Residential	2.0	2.3	2.6	2.0	2.0	1.3	0.6	2.5	-2.4	-11.2
Tertiary	3.4	4.4	2.4	2.0	1.7	1.5	1.0	-3.2	-3.3	-5.3
Transport	19.9	21.7	20.9	19.5	18.8	18.2	17.5	0.5	-1.1	-0.7
CO₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.1	6.2	6.2	-2.0	1.1	0.3
Non-CO₂ GHG emissions	19.3	19.1	18.4	16.9	14.8	14.3	12.8	-0.4	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	96.1	87.8	73.3	-1.7	-2.0	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.15	0.10	0.02	-6.3	-5.0	-20.1
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.65	1.66	-1.4	-0.7	0.0
Industry	1.83	1.42	1.15	1.12	1.07	1.04	0.91	-4.5	-0.7	-1.6
Residential	0.71	0.72	0.86	0.75	0.73	0.55	0.36	1.9	-1.7	-6.9
Tertiary	1.55	1.56	1.02	0.88	0.76	0.70	0.64	-4.1	-2.9	-1.7
Transport	3.00	3.01	2.89	2.84	2.83	2.82	2.79	-0.4	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.4	35.7	41.4			
RES-H&C share	30.4	32.1	33.9	36.8	38.5	38.8	40.8			
RES-E share	28.3	27.7	40.7	47.5	63.7	68.9	87.5			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	13.5	19.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	112	115	106	1.6	3.6	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	139	143	147	-1.3	3.0	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.8	22.3	24.4	23.5	28.5	30.9	34.4	3.8	1.6	1.9
as % of GDP	10.0	12.7	13.5	13.5	15.2	15.1	15.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Romania: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4	
GDP (in 000 ME13)	87	114	130	145	163	181	195	4.1	2.3	1.8	
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	34986	35270	30814	-0.2	-0.2	-1.3	
Solids	7493	8788	7008	6207	6462	5153	3231	-0.7	-0.8	-6.7	
Oil	9992	10286	9310	8775	8528	8371	7759	-0.7	-0.9	-0.9	
Natural gas	13680	13923	10788	9688	10763	9985	7067	-2.3	0.0	-4.1	
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3	
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1	
Renewable energy forms	4137	5026	5891	6299	6966	6905	7958	3.6	1.7	1.3	
Energy Branch Consumption	3675	4105	2839	2480	2444	2341	2067	-2.5	-1.5	-1.7	
Non-Energy Uses	1883	2467	1473	1754	2001	2202	2346	-2.4	3.1	1.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	28465	28224	27824	26642	28345	29999	29068	-0.2	0.2	0.3	
Solids	5604	5795	5904	5042	5111	3933	2279	0.5	-1.4	-7.8	
Oil	6355	6226	4565	3643	3646	3655	3645	-3.3	-2.2	0.0	
Natural gas	10968	9701	8619	8848	9961	9925	9619	-2.4	1.5	-0.3	
Nuclear	1407	1433	2998	2838	2846	5749	5749	7.9	-0.5	7.3	
Renewable energy sources	4131	5070	5739	6271	6781	6736	7776	3.3	1.7	1.4	
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0	
Biomass & Waste	2854	3314	3960	4135	4555	4417	4216	3.4	1.4	-0.8	
Wind	0	0	26	557	560	560	1590	0.0	35.8	11.0	
Solar and others	0	0	0	163	183	249	386	0.0	111.9	7.8	
Geothermal	7	18	23	30	46	67	142	13.1	7.1	12.1	
Net Imports (ktoe)	8009	10867	7827	6473	6673	5308	1787	-0.2	-1.6	-12.3	
Solids	1920	2939	1234	1165	1350	1220	952	-4.3	0.9	-3.4	
Oil	3437	3988	4838	5156	4913	4752	4152	3.5	0.2	-1.7	
Crude oil and Feedstocks	4801	8857	6233	5504	4994	4614	3976	2.6	-2.2	-2.3	
Oil products	-1364	-4870	-1395	-348	-81	138	177	0.2	-24.8	0.0	
Natural gas	2712	4190	1816	839	803	60	-2550	-3.9	-7.8	0.0	
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1	
Import Dependency (%)	21.8	27.7	21.9	19.5	19.1	15.0	5.8				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67528	70630	75353	74119	1.6	1.5	0.5	
Nuclear energy	5456	5555	11623	11890	11922	23792	23606	7.9	0.3	7.1	
Solids	18926	21916	20681	21982	22416	16794	9176	0.9	0.8	-8.5	
Oil (including refinery gas)	3399	1894	692	625	406	229	204	-14.7	-5.2	-6.7	
Gas (including derived gases)	9001	9834	7323	8032	9939	7826	447	-2.0	3.1	-26.7	
Biomass-waste	0	7	111	522	763	970	1789	0.0	21.3	8.9	
Hydro (pumping excluded)	14778	20207	19883	16112	16723	16777	16779	3.0	-1.7	0.0	
Wind	0	0	306	6473	6512	6512	18485	0.0	35.8	11.0	
Solar	0	0	0	1891	1950	2452	3633	0.0	0.0	6.4	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	20197	19153	20120	24896	23884	22632	25699	0.0	1.7	0.7	
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2	
Renewable energy	6242	6289	6863	11413	11457	11707	16215	1.0	5.3	3.5	
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0	
Wind	0	0	389	2976	2989	2989	6730	0.0	22.6	8.5	
Solar	0	0	0	1792	1824	2074	2840	0.0	0.0	4.5	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	13283	12192	11913	12070	11013	8096	6657	-1.1	-0.8	-4.9	
of which cogeneration units	3431	5246	4582	4234	4098	2226	1959	2.9	-1.1	-7.1	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2	
Gas fired	3728	3439	3488	4173	4116	4063	3852	-0.7	1.7	-0.7	
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0	
Biomass-waste fired	147	5	23	96	139	168	219	-16.9	19.7	4.6	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.2	35.5	31.5				
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	38.9	39.1	34.0				
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.4	8.7	6.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.6	67.0	86.7				
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7404	5676	2936	-2.2	-1.6	-8.8	
Solids	5462	6085	5929	5216	5337	4105	2388	0.8	-1.0	-7.7	
Oil (including refinery gas)	1736	799	327	176	130	73	65	-15.4	-8.8	-6.7	
Gas (including derived gases)	3579	3437	2399	1331	1768	1279	106	-3.9	-3.0	-24.5	
Biomass & Waste	12	9	21	113	169	219	376	6.1	23.3	8.3	
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	16275	19666	15568	13664	13411	15815	14957	-0.4	-1.5	1.1	
Refineries	11250	15219	11480	9680	9157	8762	8094	0.2	-2.2	-1.2	
Biofuels and hydrogen production	0	0	115	273	558	520	493	0.0	17.1	-1.2	
District heating	1738	825	749	702	680	603	465	-8.1	-1.0	-3.7	
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5929	5906	-0.2	-0.7	6.9	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	85	93	110	118	130	144	158	2.6	1.7	2.0
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.7
Private cars and motorcycles	54	63	78	85	92	102	112	3.9	1.7	1.9
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.7
Freight transport activity (Gtkm)	27	56	43	51	61	69	77	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.5
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5725	5850	5871	4.3	1.2	0.3
Public road transport	293	260	359	373	378	379	377	2.0	0.5	0.0
Private cars and motorcycles	2082	2416	3214	3381	3371	3278	3165	4.4	0.5	-0.6
Heavy goods and light commercial vehicles	363	1182	946	1142	1356	1474	1526	10.1	3.7	1.2
Rail	357	159	222	245	274	303	321	-4.6	2.1	1.6
Aviation	128	128	272	265	298	363	426	7.8	0.9	3.6
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.7
<i>By transport activity</i>										
Passenger transport	2648	2855	3921	4091	4130	4112	4064	4.0	0.5	-0.2
Freight transport	689	1331	1152	1356	1595	1738	1807	5.3	3.3	1.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	32985	33068	28468	-0.1	-0.4	-1.5
Final Energy Demand	22772	24714	22591	23117	24593	24131	21288	-0.1	0.9	-1.4
<i>by sector</i>										
Industry	9296	10007	6876	7316	8140	8293	7505	-3.0	1.7	-0.8
Energy intensive industries	6510	7208	4759	4794	5386	5364	4667	-3.1	1.2	-1.4
Other industrial sectors	2787	2799	2117	2522	2754	2929	2838	-2.7	2.7	0.3
Residential	8409	7990	8102	7825	8135	7528	5937	-0.4	0.0	-3.1
Tertiary	1606	2441	2489	2468	2529	2394	1909	4.5	0.2	-2.8
Transport ⁽⁵⁾	3460	4276	5124	5507	5789	5916	5938	4.0	1.2	0.3
<i>by fuel</i>										
Solids	1046	1611	939	815	939	853	670	-1.1	0.0	-3.3
Oil	5526	6628	6184	6765	6594	6497	5966	1.1	0.6	-1.0
Gas	6910	7754	6189	6337	6832	6599	5013	-1.1	1.0	-3.0
Electricity	2918	3341	3553	3683	4076	4256	4303	2.0	1.4	0.5
Heat (from CHP and District Heating)	3570	2136	1650	1493	1623	1646	1396	-7.4	-0.2	-1.5
Renewable energy forms	2802	3244	4077	4023	4528	4276	3931	3.8	1.1	-1.4
Other	0	0	0	0	1	4	10	-100.0	0.0	27.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	423	343	275	229	215	195	158	-4.2	-2.5	-3.0
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	31	-7.8	-1.0	-2.6
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	33	24	-6.9	-2.1	-4.9
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	78	57	1.4	-2.1	-4.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	25	1.3	-1.2	-2.1
Freight transport (toe/Mtkm)	25	24	27	27	26	25	24	0.5	-0.2	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.5	109.8	90.9	-1.5	-0.6	-2.6
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	48.7	41.3	28.2		-1.3	-5.3	
of which ESD sectors (2013 scope) GHG emissions	76.5	69.6	71.8	69.7	68.5	62.7		0.0	-1.1	
CO₂ Emissions (energy related)	88.8	95.8	77.4	71.5	73.8	65.6	48.3	-1.4	-0.5	-4.1
Power generation/District heating	42.0	39.0	33.6	27.2	28.6	21.7	11.0	-2.2	-1.6	-9.1
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.4	-2.8	-2.9	-1.2
Industry	21.6	25.2	14.4	14.7	15.6	14.8	11.2	-4.0	0.9	-3.3
Residential	6.6	7.3	5.8	6.5	6.9	6.6	5.0	-1.2	1.7	-3.2
Tertiary	1.9	4.2	3.6	3.5	3.5	3.0	2.1	6.7	-0.4	-5.0
Transport	9.9	12.4	14.8	15.5	15.4	15.8	15.7	4.1	0.4	0.2
CO₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.6		-6.1	0.8	-0.2
Non-CO₂ GHG emissions	43.8	46.7	40.9	39.8	36.9	36.5	34.9	-0.7	-1.0	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.6	43.2	35.8	-1.5	-0.6	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.22	0.12	-0.6	-2.5	-9.1
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.67	1.59	-0.3	-0.2	-0.5
Industry	2.33	2.52	2.09	2.01	1.92	1.79	1.49	-1.1	-0.8	-2.5
Residential	0.79	0.92	0.72	0.83	0.85	0.88	0.84	-0.8	1.6	-0.1
Tertiary	1.17	1.70	1.44	1.42	1.37	1.27	1.09	2.2	-0.5	-2.3
Transport	2.86	2.90	2.89	2.81	2.67	2.67	2.64	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.2	26.6	34.5			
RES-H&C share	16.1	17.9	27.4	25.9	26.4	27.2	32.0			
RES-E share	30.2	28.8	30.4	42.3	40.7	41.2	64.6			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.4	15.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	75	74	73	5.0	0.7	-0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	108	116	125	5.7	1.9	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.5	37.4	45.6	8.8	3.5	3.4
as % of GDP	11.5	16.8	17.7	18.4	19.9	20.7	23.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EUCo+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	5	5	5	5	5	0.0	0.0	-0.2
GDP (in 000 ME13)	43	55	69	76	89	102	117	4.8	2.6	2.7
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18319	18429	17544	-0.2	0.3	-0.4
Solids	4278	4231	3897	3247	3117	2811	1978	-0.9	-2.2	-4.4
Oil	3415	3711	3692	3346	3438	3387	3412	0.8	-0.7	-0.1
Natural gas	5777	5884	5007	4939	4979	4964	3867	-1.4	-0.1	-2.5
Nuclear	4255	4626	3819	3569	4953	5375	6584	-1.1	2.6	2.9
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Renewable energy forms	810	859	1360	1551	2036	2121	1941	5.3	4.1	-0.5
Energy Branch Consumption	623	1297	963	942	937	860	812	4.5	-0.3	-1.4
Non-Energy Uses	1365	1279	1053	1597	1738	1869	2012	-2.6	5.1	1.5
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	6389	6684	6345	6192	7955	8081	8825	-0.1	2.3	1.0
Solids	1018	637	613	593	512	437	158	-4.9	-1.8	-11.1
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0
Natural gas	133	126	88	120	107	71	72	-4.0	1.9	-3.9
Nuclear	4255	4626	3819	3569	4953	5375	6584	-1.1	2.6	2.9
Renewable energy sources	818	912	1438	1613	2121	2197	2012	5.8	4.0	-0.5
Hydro	397	399	452	407	468	432	431	1.3	0.4	-0.8
Biomass & Waste	421	505	972	1148	1574	1635	1419	8.7	4.9	-1.0
Wind	0	1	1	1	2	33	33	0.0	16.2	30.9
Solar and others	0	0	6	51	63	69	77	0.0	26.9	2.1
Geothermal	0	8	8	6	14	28	52	0.0	5.4	14.1
Net Imports (ktoe)	11997	12428	11230	10675	10364	10348	8719	-0.7	-0.8	-1.7
Solids	3432	3739	2951	2654	2606	2374	1820	-1.5	-1.2	-3.5
Oil	3090	3274	3266	3048	3174	3387	3412	0.6	-0.3	0.7
Crude oil and Feedstocks	5720	5429	5282	5716	5602	5609	5417	-0.8	0.6	-0.3
Oil products	-2630	-2155	-2015	-2667	-2428	-2222	-2005	-2.6	1.9	-1.9
Natural gas	5707	5735	5003	4819	4872	4893	3795	-1.3	-0.3	-2.5
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Import Dependency (%)	65.5	65.3	62.9	63.3	56.6	56.2	49.7			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34025	36521	37096	-1.1	2.2	0.9
Nuclear energy	16494	17727	14574	14662	20320	22049	28143	-1.2	3.4	3.3
Solids	5584	5535	3570	4119	4615	3678	1450	-4.4	2.6	-10.9
Oil (including refinery gas)	202	741	600	163	8	90	91	11.5	-34.7	26.8
Gas (including derived gases)	3871	2629	2716	1730	923	2892	230	-3.5	-10.2	-13.0
Biomass-waste	32	76	726	1131	2154	1878	1165	36.6	11.5	-6.0
Hydro (pumping excluded)	4615	4638	5255	4738	5445	5019	5014	1.3	0.4	-0.8
Wind	0	6	6	6	26	383	383	0.0	15.8	30.9
Solar	0	0	17	520	532	532	619	0.0	40.8	1.5
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7732	7985	8762	-0.3	1.4	1.3
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6
Renewable energy	1685	1601	1624	2220	2356	2684	2744	-0.4	3.8	1.5
Hydro (pumping excluded)	1685	1596	1600	1607	1718	1718	1718	-0.5	0.7	0.0
Wind	0	5	5	5	19	347	347	0.0	14.3	33.6
Solar	0	0	19	608	620	620	680	0.0	41.7	0.9
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2526	2795	3246	3337	2555	2481	1998	2.5	-2.4	-2.4
of which cogeneration units	618	5411	2821	1020	873	893	782	16.4	-11.1	-1.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4
Gas fired	821	1067	1674	1738	1325	1327	1102	7.4	-2.3	-1.8
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0
Biomass-waste fired	7	30	177	241	354	358	358	38.2	7.2	0.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	47.3	49.4	46.0			
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	36.9	37.1	29.5			
% of gross electricity from CHP	18.4	15.3	15.9	25.6	21.9	19.4	7.9			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	83.7	81.8	95.2			
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1793	1980	855	-0.4	-3.5	-7.1
Solids	1619	1677	1205	1089	1132	991	415	-2.9	-0.6	-9.5
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.8
Gas (including derived gases)	1002	847	793	314	173	519	105	-2.3	-14.1	-4.9
Biomass & Waste	4	40	264	255	484	440	304	51.0	6.2	-4.5
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12901	13989	12558	12416	13528	13496	14253	-0.3	0.7	0.5
Refineries	5959	6398	6011	6450	6334	6105	5940	0.1	0.5	-0.6
Biofuels and hydrogen production	0	11	98	118	176	169	172	0.0	6.0	-0.2
District heating	674	718	497	367	376	357	247	-3.0	-2.8	-4.1
Derived gases, cokeries etc.	6268	6862	5952	5481	6643	6865	7894	-0.5	1.1	1.7

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovakia: EUO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	37	39	36	38	45	51	57	-0.2	2.2	2.4
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	2.2
Private cars and motorcycles	24	26	27	28	34	38	42	1.2	2.1	2.2
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.3
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	18	6.0	1.9	1.6
Rail	11	9	8	8	10	11	13	-3.2	1.8	3.0
Inland navigation	1	1	1	1	1	1	2	-1.5	1.1	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2346	2308	2357	4.4	0.5	0.0
Public road transport	193	185	132	141	154	165	175	-3.7	1.5	1.3
Private cars and motorcycles	830	992	1194	1155	1208	1141	1154	3.7	0.1	-0.5
Heavy goods and light commercial vehicles	308	527	821	814	872	874	883	10.3	0.6	0.1
Rail	83	42	40	41	48	55	62	-7.1	1.8	2.6
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.4
<i>By transport activity</i>										
Passenger transport	1064	1223	1374	1346	1423	1376	1409	2.6	0.4	-0.1
Freight transport	390	570	867	859	924	932	948	8.3	0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	7.9	8.0			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16581	16560	15532	-0.1	-0.1	-0.7
Final Energy Demand	10980	11561	11546	11225	11672	11311	10216	0.5	0.1	-1.3
<i>by sector</i>										
Industry	4532	4713	4361	4420	4568	4572	4366	-0.4	0.5	-0.5
Energy intensive industries	3678	3887	3637	3655	3739	3704	3474	-0.1	0.3	-0.7
Other industrial sectors	854	826	723	765	829	868	892	-1.7	1.4	0.7
Residential	2586	2540	2312	2176	2213	2085	1613	-1.1	-0.4	-3.1
Tertiary	2407	1916	2240	2038	2161	1969	1547	-0.7	-0.4	-3.3
Transport ⁽⁵⁾	1455	2392	2633	2591	2730	2686	2690	6.1	0.4	-0.1
<i>by fuel</i>										
Solids	1747	1572	1637	1294	1247	1180	996	-0.6	-2.7	-2.2
Oil	1703	2184	2301	2230	2287	2190	2155	3.1	-0.1	-0.6
Gas	4698	4540	4119	4011	4084	3664	2947	-1.3	-0.1	-3.2
Electricity	1893	1965	2075	2219	2346	2535	2576	0.9	1.2	0.9
Heat (from CHP and District Heating)	619	951	851	726	814	765	570	3.2	-0.5	-3.5
Renewable energy forms	320	349	562	745	894	969	958	5.8	4.8	0.7
Other	0	0	0	0	2	8	13	0.0	0.0	23.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	424	347	259	221	206	181	150	-4.8	-2.3	-3.1
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	30	25	-8.9	-1.5	-2.8
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	36	24	-5.1	-2.9	-6.0
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	39	26	-3.8	-3.2	-6.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	27	24	2.7	-1.8	-2.5
Freight transport (toe/Mtkm)	20	27	40	37	35	32	29	7.2	-1.1	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	54.1	54.7	50.8	45.0	42.3	39.6	32.6	-0.6	-1.8	-2.6
of which ETS sectors (2013 scope) GHG emissions	29.2	24.7	20.4	18.9	17.8	13.0	13.0		-2.6	-3.6
of which ESD sectors (2013 scope) GHG emissions	25.5	26.1	24.6	23.4	21.8	19.6	19.6		-1.1	-1.8
CO₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.3	29.8	23.1	0.0	-1.8	-3.3
Power generation/District heating	11.1	11.2	9.2	6.3	5.8	6.2	2.6	-1.8	-4.6	-7.6
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.7	1.6	4.4	-2.0	-2.2
Industry	13.3	14.1	12.8	12.0	11.3	9.9	8.6	-0.4	-1.2	-2.7
Residential	4.1	3.6	3.4	2.8	2.7	2.4	1.6	-2.0	-2.2	-5.0
Tertiary	4.5	2.7	3.5	3.1	3.1	2.4	1.6	-2.5	-1.0	-6.7
Transport	4.1	6.6	7.3	7.1	7.3	7.2	7.1	5.9	0.1	-0.3
CO₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.5	-7.0	0.9	-0.1
Non-CO₂ GHG emissions	8.7	9.1	8.9	7.8	6.4	6.3	6.0	0.2	-3.2	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	56.0	52.3	43.2	-0.6	-1.8	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.13	0.06	-1.4	-5.9	-7.5
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.10	1.93	1.85	-0.2	-1.1	-1.3
Industry	2.94	2.99	2.94	2.72	2.48	2.16	1.97	0.0	-1.7	-2.3
Residential	1.60	1.40	1.47	1.30	1.22	1.15	1.00	-0.9	-1.8	-2.0
Tertiary	1.85	1.43	1.55	1.54	1.45	1.22	1.02	-1.8	-0.7	-3.5
Transport	2.82	2.77	2.77	2.74	2.69	2.67	2.64	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.6	14.1	15.5	16.6			
RES-H&C share	1.2	4.9	7.8	10.3	12.2	15.4	18.5			
RES-E share	11.9	13.5	17.8	21.7	25.9	23.2	21.0			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	10.9	11.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	82	74	84	1.2	1.5	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	132	138	142	4.3	-0.7	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.7	15.7	18.9	4.9	1.8	3.3
as % of GDP	16.4	15.6	16.6	14.7	15.4	15.4	16.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EUCC+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 M€13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6776	7002	6825	6112	1.1	-0.3	-1.3
Solids	1305	1539	1451	1268	1353	1261	1025	1.1	-0.7	-2.7
Oil	2419	2580	2579	2360	2275	2054	1790	0.6	-1.2	-2.4
Natural gas	826	929	863	681	691	699	545	0.4	-2.2	-2.3
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Renewable energy forms	788	787	1054	1182	1394	1431	1465	3.0	2.8	0.5
Energy Branch Consumption	107	100	112	99	105	94	89	0.5	-0.6	-1.6
Non-Energy Uses	238	310	209	114	120	126	126	-1.3	-5.4	0.5
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3085	3492	3687	3441	3763	3776	3644	1.8	0.2	-0.3
Solids	1062	1184	1196	1023	1127	1044	882	1.2	-0.6	-2.4
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	10	15	0.0	-3.9	13.8
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1259	1292	1318	2.7	2.1	0.5
Hydro	330	298	388	380	391	407	433	1.6	0.1	1.0
Biomass & Waste	458	489	601	632	723	693	577	2.7	1.9	-2.2
Wind	0	0	0	0	24	24	53	0.0	0.0	8.1
Solar and others	0	0	9	36	54	116	217	0.0	19.2	14.8
Geothermal	0	0	27	45	66	51	39	0.0	9.4	-5.5
Net Imports (ktoe)	3415	3855	3581	3356	3260	3070	2488	0.5	-0.9	-2.7
Solids	244	323	279	245	226	218	143	1.4	-2.1	-4.5
Oil	2466	2634	2596	2380	2295	2074	1810	0.5	-1.2	-2.3
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2295	2074	1810	1.2	-1.2	-2.3
Natural gas	820	925	857	678	687	688	531	0.4	-2.2	-2.5
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Import Dependency (%)	52.9	52.5	49.4	49.4	46.4	44.8	40.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15127	16449	17186	18154	1.8	0.1	1.0
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5182	4661	3746	1.4	-0.2	-3.2
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	122	248	96	6.5	-14.0	-2.3
Biomass-waste	70	120	222	111	300	404	558	12.2	3.0	6.4
Hydro (pumping excluded)	3834	3461	4512	4424	4542	4735	5040	1.6	0.1	1.0
Wind	0	0	0	5	284	284	617	0.0	0.0	8.1
Solar	0	0	13	295	391	1054	2295	0.0	40.8	19.4
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3886	4301	5471	0.8	2.0	3.5
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2393	3839	2.6	5.0	8.0
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1292	2.5	1.3	0.6
Wind	0	0	0	4	200	200	422	0.0	0.0	7.7
Solar	0	0	12	262	352	973	2125	0.0	40.2	19.7
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1414	1208	932	-0.1	0.1	-4.1
of which cogeneration units	648	336	333	228	213	244	210	-6.4	-4.4	-0.1
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	469	389	166	3.0	2.3	-9.9
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	124	118	3.9	9.3	-0.5
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.4	43.5	36.4			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.5	32.7	32.5			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.5	5.7	4.2			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.8	71.4	78.8			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1396	1395	1164	1.8	-1.1	-1.8
Solids	1215	1412	1381	1217	1301	1219	1003	1.3	-0.6	-2.6
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	21	61	29	6.7	-15.3	3.1
Biomass & Waste	15	30	65	27	73	116	131	15.5	1.2	6.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1625	1613	0.6	0.1	0.2
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	142	147	0.0	12.3	0.1
District heating	80	89	57	61	62	53	36	-3.2	0.8	-5.4
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1431	1431	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovenia: EUO0+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	25	27	30	31	34	35	36	2.0	1.0	0.8
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.4
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.7
Rail	1	1	1	1	1	1	2	1.4	4.1	3.9
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.8
Heavy goods and light commercial vehicles	4	8	8	8	10	12	13	7.9	3.1	1.9
Rail	3	3	3	4	5	6	7	1.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1906	1844	1759	3.8	0.5	-0.8
Public road transport	78	71	92	94	96	96	93	1.8	0.3	-0.3
Private cars and motorcycles	1025	1047	1304	1319	1300	1190	1083	2.4	0.0	-1.8
Heavy goods and light commercial vehicles	98	323	355	370	444	482	500	13.8	2.3	1.2
Rail	24	28	26	27	33	38	43	1.0	2.2	2.8
Aviation	25	23	28	28	34	38	41	1.3	2.1	1.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
<i>By transport activity</i>										
Passenger transport	1132	1146	1430	1447	1437	1331	1226	2.4	0.1	-1.6
Freight transport	117	346	376	391	469	512	534	12.4	2.2	1.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.1	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.9	8.5			
ENERGY EFFICIENCY										
Primary energy consumption	6214	7016	7017	6662	6882	6699	5986	1.2	-0.2	-1.4
Final Energy Demand	4457	4897	4927	4954	5046	4804	4225	1.0	0.2	-1.8
<i>by sector</i>										
Industry	1424	1644	1273	1332	1412	1433	1285	-1.1	1.0	-0.9
Energy intensive industries	836	1028	788	890	944	948	819	-0.6	1.8	-1.4
Other industrial sectors	588	616	485	442	468	485	467	-1.9	-0.4	0.0
Residential	1077	1140	1191	1145	1099	980	751	1.0	-0.8	-3.7
Tertiary	697	620	657	638	628	546	428	-0.6	-0.4	-3.8
Transport ⁽⁵⁾	1259	1493	1806	1839	1907	1845	1760	3.7	0.5	-0.8
<i>by fuel</i>										
Solids	90	80	47	51	52	42	22	-6.3	1.1	-8.3
Oil	2264	2409	2447	2239	2154	1929	1666	0.8	-1.3	-2.5
Gas	569	665	620	635	644	607	501	0.9	0.4	-2.5
Electricity	905	1096	1029	1098	1158	1268	1264	1.3	1.2	0.9
Heat (from CHP and District Heating)	195	196	192	197	205	197	154	-0.2	0.7	-2.8
Renewable energy forms	435	452	592	735	832	759	613	3.1	3.5	-3.0
Other	0	0	0	0	0	2	6	0.0	0.0	33.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	227	215	195	181	171	152	127	-1.5	-1.3	-2.9
Industry (Energy on Value added, index 2000=100)	100	93	70	74	72	66	55	-3.6	0.3	-2.7
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	62	44	-1.6	-1.1	-5.5
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	47	34	-3.5	-1.6	-5.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	37	33	0.3	-1.0	-2.4
Freight transport (toe/Mtkm)	18	32	34	33	31	29	27	6.4	-1.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	19.0	20.2	19.2	17.5	17.4	16.2	13.9	0.1	-1.0	-2.2
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.6	7.1	5.8		-0.8	-2.6
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	9.0	8.1		-1.1	-1.9
CO₂ Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	12.8	10.7	0.9	-1.0	-2.6
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	5.3	4.3	1.3	-1.0	-2.6
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.9	13.8
Industry	2.4	2.3	1.7	1.7	1.7	1.5	1.1	-3.0	-0.5	-4.4
Residential	1.3	1.5	1.2	0.9	0.8	0.6	0.4	-1.0	-4.0	-7.3
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.3	-3.0	-4.1	-7.6
Transport	3.7	4.4	5.3	5.2	5.3	5.0	4.7	3.8	0.0	-1.2
CO₂ Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.8	-1.7	-1.1	0.5
Non-CO₂ GHG emissions	3.9	3.5	3.0	3.0	2.7	2.6	2.5	-2.6	-1.0	-1.0
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.3	87.0	74.9	0.1	-1.0	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.34	0.35	0.33	0.30	0.29	0.27	0.21	-0.3	-1.2	-3.1
Final energy demand (t of CO ₂ /toe)	1.91	1.88	1.85	1.72	1.64	1.56	1.50	-0.4	-1.2	-0.9
Industry	1.66	1.41	1.37	1.29	1.18	1.03	0.82	-1.9	-1.5	-3.5
Residential	1.24	1.28	1.01	0.79	0.73	0.61	0.50	-2.0	-3.2	-3.7
Tertiary	1.68	1.63	1.32	1.03	0.91	0.74	0.60	-2.4	-3.6	-4.0
Transport	2.90	2.97	2.93	2.85	2.76	2.72	2.65	0.1	-0.6	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	27.0	31.3			
RES-H&C share	18.9	19.0	25.5	29.8	34.4	36.6	38.4			
RES-E share	30.9	28.7	32.2	33.0	35.8	39.1	51.8			
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.2	18.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	70	57	62	-0.7	4.4	-1.2
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	107	111	115	0.2	-0.3	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.1	8.9	5.0	2.0	1.7
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.1	18.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Spain: EU ^{CO} +33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change		
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3			
GDP (in 000 M€13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8			
Gross Inland Consumption (ktoe)	123642	144223	129868	124583	125170	114425	100436	0.5	-0.4	-2.2			
Solids	20938	20566	7906	15768	15780	10343	4806	-9.3	7.2	-11.2			
Oil	63967	70457	60436	53990	50060	46619	42725	-0.8	-1.9	-1.6			
Natural gas	15305	29886	31162	25155	25431	20376	13640	7.4	-2.0	-6.0			
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0			
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4			
Renewable energy forms	7005	8587	15090	15611	19346	22369	24726	8.0	2.5	2.5			
Energy Branch Consumption	6259	6666	7878	7994	7432	6538	5953	2.3	-0.6	-2.2			
Non-Energy Uses	9407	8362	7046	5744	6094	6369	6375	-2.8	-1.4	0.5			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33101	36691	37852	39653	0.8	0.7	0.8			
Solids	7966	6265	3296	2973	2895	1074	418	-8.4	-1.3	-17.6			
Oil	228	167	124	377	365	345	360	-5.9	11.4	-0.1			
Natural gas	234	185	78	42	47	53	57	-10.4	-4.9	1.9			
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0			
Renewable energy sources	7005	8587	14677	15536	19211	22207	24647	7.7	2.7	2.5			
Hydro	2430	1582	3638	2853	2862	2877	2882	4.1	-2.4	0.1			
Biomass & Waste	4131	5113	6183	6934	9584	9035	8272	4.1	4.5	-1.5			
Wind	406	1821	3807	4443	4844	5288	7432	25.1	2.4	4.4			
Solar and others	33	65	1035	1288	1897	4953	6011	41.3	6.2	12.2			
Geothermal	5	7	16	18	24	53	49	11.5	4.3	7.3			
Net Imports (ktoe)	99342	123832	106084	100729	97829	85906	70211	0.7	-0.8	-3.3			
Solids	12840	14418	6726	12795	12885	9269	4389	-6.3	6.7	-10.2			
Oil	70653	79281	68704	62860	58963	55425	51303	-0.3	-1.5	-1.4			
Crude oil and Feedstocks	59023	60650	56496	66666	63011	59288	55209	-0.4	1.1	-1.3			
Oil products	11631	18630	12208	-3806	-4048	-3862	-3906	0.5	0.0	-0.4			
Natural gas	15467	30248	30950	25113	25466	20503	14074	7.2	-1.9	-5.8			
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4			
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	69.4	63.9						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275295	284589	283485	272689	3.0	-0.5	-0.4			
Nuclear energy	62206	57539	61990	58066	58066	57757	57521	0.0	-0.7	-0.1			
Solids	79094	84047	25493	57621	57999	34783	13947	-10.7	8.6	-13.3			
Oil (including refinery gas)	22578	24420	16562	4988	566	1701	1599	-3.1	-28.7	10.9			
Gas (including derived gases)	21942	80725	95840	53218	56380	36037	7408	15.9	-5.2	-18.4			
Biomass-waste	2100	3104	4674	4514	5972	7557	9447	8.3	2.5	4.7			
Hydro (pumping excluded)	28256	18393	42304	33177	33274	33454	33517	4.1	-2.4	0.1			
Wind	4727	21176	44271	51665	56322	61491	86422	25.1	2.4	4.4			
Solar	17	41	6423	12046	16011	50704	62829	80.6	9.6	14.6			
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	-100.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104566	119731	127422	6.6	0.5	2.0			
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0			
Renewable energy	17760	25774	41432	46783	51047	69939	83174	8.8	2.1	5.0			
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0			
Wind	2206	9918	20693	23025	24977	26619	34410	25.1	1.9	3.3			
Solar	12	60	4653	7126	9275	26525	31968	81.5	7.1	13.2			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	26776	39924	49994	50333	46121	42394	36850	6.4	-0.8	-2.2			
of which cogeneration units	4570	6597	3382	6233	4472	3735	5573	-3.0	2.8	2.2			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	11556	11359	10389	10316	9332	7377	3967	-1.1	-1.1	-8.2			
Gas fired	4713	17647	29569	31333	30272	29749	28057	20.2	0.2	-0.8			
Oil fired	10028	10043	8964	7496	4752	3422	2950	-1.1	-6.1	-4.7			
Biomass-waste fired	478	876	1072	1188	1764	1845	1875	8.4	5.1	0.6			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	29.9	26.3	24.0						
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.6	41.0	36.5						
% of gross electricity from CHP	9.2	4.0	7.4	9.7	7.1	5.3	6.6						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.6	74.4	91.6						
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24410	16804	7632	-0.5	-0.3	-11.0			
Solids	18245	17623	5561	13703	13709	8293	3365	-11.2	9.4	-13.1			
Oil (including refinery gas)	4455	5249	3391	948	133	402	379	-2.7	-27.7	11.0			
Gas (including derived gases)	3075	11140	14839	8684	9268	6270	1736	17.0	-4.6	-15.4			
Biomass & Waste	697	1391	1435	994	1300	1838	2152	7.5	-1.0	5.2			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	79871	79435	78129	80766	79041	75610	71685	-0.2	0.1	-1.0			
Refineries	60685	61323	58480	63161	60968	57801	54112	-0.4	0.4	-1.2			
Biofuels and hydrogen production	70	256	1412	1419	2061	1908	1959	35.0	3.9	-0.5			
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0			
Derived gases, cokeries etc.	19115	17857	18237	16187	16012	15902	15614	-0.5	-1.3	-0.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUCO+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	476	535	542	561	609	660	713	1.3	1.2	1.6
Public road transport	50	53	51	52	53	55	56	0.1	0.5	0.5
Private cars and motorcycles	310	346	352	354	372	395	422	1.3	0.5	1.3
Rail	25	28	29	29	37	44	52	1.2	2.5	3.4
Aviation ⁽³⁾	89	106	109	124	145	164	181	2.1	2.9	2.2
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.5
Freight transport activity (Gtkm)	180	265	227	228	247	263	280	2.3	0.9	1.3
Heavy goods and light commercial vehicles	138	217	190	191	206	217	230	3.2	0.8	1.1
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.6
Inland navigation	31	36	28	28	30	32	34	-1.1	0.6	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34463	33182	32667	1.2	-0.8	-0.5
Public road transport	1354	1408	1319	1329	1326	1311	1287	-0.3	0.0	-0.3
Private cars and motorcycles	18655	20608	19876	18098	16536	14774	14062	0.6	-1.8	-1.6
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8353	8235	8410	2.9	-0.3	0.1
Rail	708	1029	899	772	874	982	1057	2.4	-0.3	1.9
Aviation	4486	5323	5389	6005	6617	7059	6986	1.9	2.1	0.5
Inland navigation	1395	1555	1057	707	757	820	865	-2.7	-3.3	1.3
<i>By transport activity</i>										
Passenger transport	25151	27727	26960	25730	24835	23555	22786	0.7	-0.8	-0.9
Freight transport	7933	12069	10220	9303	9629	9627	9881	2.6	-0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	6.0	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119076	108056	94061	0.7	-0.3	-2.3
Final Energy Demand	79885	97754	89072	85314	86275	80540	72696	1.1	-0.3	-1.7
<i>by sector</i>										
Industry	25368	30967	21435	21275	22261	21457	19992	-1.7	0.4	-1.1
Energy intensive industries	17349	20338	13379	13268	14024	13272	12180	-2.6	0.5	-1.4
Other industrial sectors	8020	10628	8056	8007	8236	8185	7812	0.0	0.2	-0.5
Residential	12000	15132	16920	15550	15510	13627	10413	3.5	-0.9	-3.9
Tertiary	9287	11712	13526	13441	14025	12257	9606	3.8	0.4	-3.7
Transport ⁽⁵⁾	33230	39944	37192	35048	34479	33199	32685	1.1	-0.8	-0.5
<i>by fuel</i>										
Solids	1775	1712	1261	1123	1310	1304	742	-3.4	0.4	-5.5
Oil	46297	53449	46775	43129	40259	36756	33160	0.1	-1.5	-1.9
Gas	12141	17978	14645	14743	14338	12499	10472	1.9	-0.2	-3.1
Electricity	16205	20827	21049	20057	21316	21701	20910	2.7	0.1	-0.2
Heat (from CHP and District Heating)	0	0	0	8	118	296	523	0.0	0.0	16.1
Renewable energy forms	3469	3788	5343	6252	8925	7934	6753	4.4	5.3	-2.7
Other	0	0	0	3	10	50	135	0.0	1431.1	29.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	139	138	119	114	104	86	69	-1.5	-1.4	-3.9
Industry (Energy on Value added, index 2000=100)	100	114	87	87	83	75	64	-1.4	-0.5	-2.6
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	93	75	52	1.4	-2.1	-5.7
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	80	57	1.0	-0.9	-5.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	29	26	-1.1	-2.2	-2.6
Freight transport (toe/Mtkm)	44	46	45	41	39	37	35	0.3	-1.5	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	398.8	447.7	364.3	356.5	341.8	293.6	239.6	-0.9	-0.6	-3.5
of which ETS sectors (2013 scope) GHG emissions	216.2	146.4	157.9	157.6	126.3	89.3		0.7	-5.5	
of which ESD sectors (2013 scope) GHG emissions	231.5	218.0	198.6	184.2	167.3	150.4		-1.7	-2.0	
CO₂ Emissions (energy related)	291.6	347.3	272.6	271.0	259.0	213.8	163.2	-0.7	-0.5	-4.5
Power generation/District heating	98.8	117.7	70.3	81.2	79.9	51.9	20.9	-3.4	1.3	-12.5
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.6	11.5	1.9	-1.2	-2.1
Industry	50.4	59.2	42.3	39.8	39.5	35.6	29.0	-1.7	-0.7	-3.0
Residential	17.1	20.9	20.5	16.5	13.6	10.0	4.3	1.9	-4.0	-10.9
Tertiary	13.2	16.5	15.0	15.5	13.9	10.2	7.0	1.3	-0.7	-6.6
Transport	98.7	119.5	108.3	101.9	97.7	93.5	90.4	0.9	-1.0	-0.8
CO₂ Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	18.8	19.4	19.3	-1.8	-1.5	0.3
Non-CO₂ GHG emissions	81.1	71.0	69.9	67.7	64.0	60.5	57.1	-1.5	-0.9	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.3	99.1	80.9	-0.9	-0.6	-3.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.45	0.41	0.24	0.29	0.28	0.18	0.07	-6.2	1.7	-12.4
Final energy demand (t of CO ₂ /toe)	2.25	2.21	2.09	2.04	1.91	1.85	1.80	-0.7	-0.9	-0.6
Industry	1.99	1.91	1.97	1.87	1.78	1.66	1.45	-0.1	-1.1	-2.0
Residential	1.42	1.38	1.21	1.06	0.88	0.73	0.41	-1.6	-3.2	-7.3
Tertiary	1.43	1.41	1.11	1.15	0.99	0.83	0.73	-2.5	-1.1	-3.0
Transport	2.97	2.99	2.91	2.91	2.83	2.82	2.77	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	26.1	32.6			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	23.8	26.9			
RES-E share	16.6	19.1	29.8	36.9	38.5	52.8	69.5			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.1	12.5	18.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	98	90	81	2.5	2.7	-1.9
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	172	165	164	3.5	1.5	-0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.7	144.9	152.1	168.6	4.9	1.9	1.5
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.5	11.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EUCC+33			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	9	9	9	10	10	11	11	0.5	0.9	0.8	
GDP (in 000 M€13)	296	337	366	404	448	497	552	2.2	2.1	2.1	
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45905	44943	42573	0.4	-1.0	-0.8	
Solids	2452	2629	2492	2263	1974	1871	1288	0.2	-2.3	-4.2	
Oil	15377	14136	14199	11663	10827	9701	8674	-0.8	-2.7	-2.2	
Natural gas	816	886	1484	679	3065	2728	1524	6.2	7.5	-6.7	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Renewable energy forms	15066	15308	17512	19146	19602	20165	20823	1.5	1.1	0.6	
Energy Branch Consumption	1141	1326	1469	1414	1365	1338	1325	2.6	-0.7	-0.3	
Non-Energy Uses	3143	2460	2113	2183	2281	2398	2436	-3.9	0.8	0.7	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30052	34233	32685	33372	31489	31983	32526	0.8	-0.4	0.3	
Solids	162	211	238	210	86	87	0	4.0	-9.6	-100.0	
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0	
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Renewable energy sources	15066	15308	17512	18801	19211	19704	20334	1.5	0.9	0.6	
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1	
Biomass & Waste	8264	8961	11490	11434	11773	11068	11154	3.4	0.2	-0.5	
Wind	39	81	301	1147	1249	2498	2992	22.6	15.3	9.1	
Solar and others	5	6	11	17	31	53	88	7.4	10.9	11.0	
Geothermal	0	0	0	0	0	2	21	0.0	0.0	51.6	
Net Imports (ktoe)	20436	19460	19294	15820	16733	15389	12597	-0.6	-1.4	-2.8	
Solids	2409	2556	2548	2054	1888	1784	1288	0.6	-3.0	-3.8	
Oil	16849	16698	15102	13853	13097	12022	10844	-1.1	-1.4	-1.9	
Crude oil and Feedstocks	21606	19369	19139	15905	15012	13855	12742	-1.2	-2.4	-1.6	
Oil products	-4757	-2671	-4038	-2052	-1915	-1833	-1898	-1.6	-7.2	-0.1	
Natural gas	776	843	1466	679	3112	2836	1904	6.6	7.8	-4.8	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	32.5	27.9				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	173027	182485	185071	0.2	1.5	0.7	
Nuclear energy	57316	72377	57828	57851	49379	49379	49738	0.1	-1.6	0.1	
Solids	1706	1169	1770	1540	1118	1116	640	0.4	-4.5	-5.4	
Oil (including refinery gas)	1533	1379	1774	249	335	199	0	1.5	-15.4	-57.0	
Gas (including derived gases)	1292	1342	3782	471	15486	12813	5527	11.3	15.1	-9.8	
Biomass-waste	4342	8357	13397	14846	20507	19124	23610	11.9	4.3	1.4	
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1	
Wind	457	936	3502	13335	14526	29044	34794	22.6	15.3	9.1	
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37485	42442	44347	0.7	0.1	1.7	
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0	
Renewable energy	16718	16799	18654	22501	23533	28225	30022	1.1	2.4	2.5	
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0	
Wind	209	493	2019	6025	6507	11200	12996	25.5	12.4	7.2	
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7754	7256	8761	7643	7003	7268	7376	1.2	-2.2	0.5	
of which cogeneration units	4940	3488	5100	4504	6273	5609	4393	0.3	2.1	-3.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6	
Gas fired	547	469	1168	1168	3217	3337	3337	7.9	10.7	0.4	
Oil fired	4472	3974	3963	2958	843	843	843	-1.2	-14.3	0.0	
Biomass-waste fired	2398	2465	3274	3161	2808	2952	3068	3.2	-1.5	0.9	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.4	48.0	46.4				
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	39.6	37.7				
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.3	15.3	10.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.2	92.3	96.7				
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7852	7217	6789	6.2	1.9	-1.4	
Solids	462	508	597	566	266	273	162	2.6	-7.8	-4.9	
Oil (including refinery gas)	530	317	431	70	95	59	0	-2.0	-14.0	-100.0	
Gas (including derived gases)	508	591	998	225	2486	2114	949	7.0	9.6	-9.2	
Biomass & Waste	2084	3158	4491	4886	5005	4770	5679	8.0	1.1	1.3	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	40980	42243	39786	34628	31689	30579	29065	-0.3	-2.2	-0.9	
Refineries	22901	20082	21039	16927	16153	15214	14156	-0.8	-2.6	-1.3	
Biofuels and hydrogen production	0	134	376	733	817	865	1043	0.0	8.1	2.5	
District heating	1564	1525	1735	1424	1357	1061	624	1.0	-2.4	-7.5	
Derived gases, cokeries etc.	16516	20501	16636	15543	13362	13438	13243	0.1	-2.2	-0.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUOQ+33		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	142	148	151	160	167	175	186	0.7	1.0	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.3
Private cars and motorcycles	102	108	109	114	116	120	125	0.7	0.7	0.7
Rail	10	11	13	15	16	18	20	2.8	2.1	2.0
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.3	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.5
Freight transport activity (Gtkm)	70	78	81	81	90	97	105	1.5	1.1	1.5
Heavy goods and light commercial vehicles	43	47	45	46	49	52	54	0.4	1.1	0.8
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.2
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7891	7287	6904	0.5	-0.9	-1.3
Public road transport	189	179	184	187	193	204	212	-0.3	0.5	1.0
Private cars and motorcycles	4879	5236	5250	4890	4394	3726	3319	0.7	-1.8	-2.8
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1939	1886	1865	1.2	-0.1	-0.4
Rail	299	246	208	232	264	287	310	-3.6	2.4	1.6
Aviation	928	846	840	945	1002	1078	1081	-1.0	1.8	0.8
Inland navigation	156	142	188	85	98	107	115	1.8	-6.3	1.6
<i>By transport activity</i>										
Passenger transport	6165	6361	6387	6089	5666	5091	4700	0.4	-1.2	-1.9
Freight transport	2027	2248	2234	2171	2225	2196	2204	1.0	0.0	-0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.7	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.8	12.3	14.8			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43624	42545	40137	0.6	-1.1	-0.8
Final Energy Demand	33561	33492	34077	31885	31920	30365	27402	0.2	-0.7	-1.5
<i>by sector</i>										
Industry	12854	12464	12205	11531	12073	12093	11617	-0.5	-0.1	-0.4
Energy intensive industries	9198	9252	9141	8370	8729	8614	8221	-0.1	-0.5	-0.6
Other industrial sectors	3656	3212	3064	3161	3344	3479	3397	-1.8	0.9	0.2
Residential	7300	7305	7557	7197	7047	6308	4994	0.3	-0.7	-3.4
Tertiary	5214	5114	5720	4897	4909	4677	3887	0.9	-1.5	-2.3
Transport ⁽⁵⁾	8192	8609	8595	8260	7891	7287	6904	0.5	-0.9	-1.3
<i>by fuel</i>										
Solids	1114	1346	1202	1122	1128	963	582	0.8	-0.6	-6.4
Oil	11861	11256	10038	8856	7995	6820	5856	-1.7	-2.3	-3.1
Gas	673	765	728	677	798	878	828	0.8	0.9	0.4
Electricity	11068	11238	11283	11102	11594	12407	12320	0.2	0.3	0.6
Heat (from CHP and District Heating)	3550	4174	5141	4420	4466	3477	2297	3.8	-1.4	-6.4
Renewable energy forms	5294	4714	5685	5705	5936	5808	5436	0.7	0.4	-0.9
Other	0	0	0	3	3	13	83	0.0	0.0	38.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	165	151	139	116	102	90	77	-1.7	-3.0	-2.8
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	54	48	-3.5	-1.7	-2.1
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	49	35	-1.7	-3.0	-5.7
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	53	40	-0.9	-3.7	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	26	23	-0.5	-2.2	-3.0
Freight transport (toe/Mtkm)	29	29	28	27	25	23	21	-0.5	-1.2	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.6	50.9	41.8	-0.9	-1.4	-3.0
of which ETS sectors (2013 scope) GHG emissions	25.9	25.6	19.9	23.7	21.8	16.1			-0.8	-3.8
of which ESD sectors (2013 scope) GHG emissions	43.0	39.5	35.8	33.0	29.0	25.7			-1.8	-2.5
CO₂ Emissions (energy related)	52.2	52.1	49.0	40.6	42.2	37.0	28.4	-0.6	-1.5	-3.9
Power generation/District heating	7.7	7.7	9.1	4.4	8.6	8.0	4.3	1.7	-0.5	-6.7
Energy Branch	2.0	1.9	2.0	2.2	1.8	1.7	0.4	0.4	-1.0	-0.8
Industry	11.9	13.3	10.5	10.0	9.5	7.8	5.3	-1.2	-1.0	-5.6
Residential	3.0	1.5	0.4	0.2	0.2	0.1	0.0	-17.9	-6.6	-13.7
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.5	-4.2	-6.8	-9.3
Transport	23.2	24.6	24.1	22.0	20.5	18.5	16.5	0.4	-1.6	-2.1
CO₂ Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.4	3.4	3.3	1.5	-0.8	-0.3
Non-CO₂ GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	10.1	-2.7	-1.1	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.4	69.5	57.1	-0.9	-1.4	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.04	0.04	0.04	0.02	0.04	0.04	0.02	0.6	-1.2	-6.1
Final energy demand (t of CO ₂ /toe)	1.27	1.27	1.11	1.06	0.99	0.90	0.82	-1.3	-1.1	-1.9
Industry	0.93	1.07	0.86	0.87	0.79	0.65	0.46	-0.7	-0.9	-5.2
Residential	0.41	0.20	0.05	0.03	0.03	0.02	0.01	-18.2	-6.0	-10.7
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.14	-5.1	-5.4	-7.2
Transport	2.83	2.86	2.80	2.66	2.60	2.54	2.39	-0.1	-0.7	-0.8
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.7	60.8	64.8			
RES-H&C share	48.7	52.4	60.9	72.7	68.8	73.4	75.4			
RES-E share	51.7	51.6	56.6	67.3	69.2	72.6	78.8			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.0	39.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	62	56	58	-0.1	0.9	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	141	145	145	5.7	-0.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.1	52.9	60.7	3.9	0.6	2.1
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.7	11.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EUCC+33				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 M€13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	188346	173975	156367	-0.8	-1.2	-1.8	
Solids	36516	37737	30761	30896	18134	8232	4539	-1.7	-5.1	-12.9	
Oil	81031	84449	72986	71030	65590	59674	54263	-1.0	-1.1	-1.9	
Natural gas	87399	85473	85050	67578	61968	59360	38113	-0.3	-3.1	-4.7	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	25939	31683	34659	11.3	13.7	2.9	
Energy Branch Consumption	14909	16092	13761	10879	9775	8749	7816	-0.8	-3.4	-2.2	
Non-Energy Uses	11330	11213	7524	8461	8861	8961	8833	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	109743	98716	96465	-5.8	-2.9	-1.3	
Solids	18658	11899	10751	6067	5066	3116	1870	-5.4	-7.2	-9.5	
Oil	127939	87930	63788	48199	40962	32867	26182	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26705	22564	15419	-6.2	-6.4	-5.3	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10759	21637	26309	29221	8.6	14.5	3.1	
Hydro	437	423	307	477	453	457	457	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11792	15251	16457	8.4	10.6	3.4	
Wind	81	250	875	2969	8048	8978	10663	26.8	24.8	2.9	
Solar and others	11	30	101	878	1342	1612	1623	24.5	29.5	1.9	
Geothermal	1	1	1	1	3	11	22	0.0	13.3	22.7	
Net Imports (ktoe)	-39220	31596	61239	87711	81806	78421	63057	0.0	2.9	-2.6	
Solids	14454	27222	16045	24829	13068	5117	2669	1.0	-2.0	-14.7	
Oil	-45582	-2738	11181	25966	27796	29893	31038	0.0	9.5	1.1	
Crude oil and Feedstocks	-39093	4558	13213	20985	23615	26278	28079	0.0	6.0	1.7	
Oil products	-6489	-7296	-2032	4981	4182	3614	2960	-11.0	0.0	-3.4	
Natural gas	-9311	5973	32205	33331	35299	36872	22893	0.0	0.9	-4.2	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.7	44.3	39.5				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357131	372997	387534	397149	0.1	-0.1	0.6	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	49390	12099	3676	-1.1	-7.5	-22.9	
Oil (including refinery gas)	8446	5339	4804	4252	2867	2891	2864	-5.5	-5.0	0.0	
Gas (including derived gases)	150427	154339	176759	117631	98719	125292	73490	1.6	-5.7	-2.9	
Biomass-waste	4455	11658	13373	26283	51008	68361	71517	11.6	14.3	3.4	
Hydro (pumping excluded)	5086	4922	3568	5550	5264	5309	5314	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	93577	104400	123992	26.8	24.8	2.9	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	119525	113772	118731	1.2	3.1	-0.1	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	45744	49261	55384	14.1	20.4	1.9	
Hydro (pumping excluded)	1485	1501	1637	1693	1739	1739	1739	1.0	0.6	0.0	
Wind	412	1565	5396	13603	32861	36359	42480	29.3	19.8	2.6	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64896	56701	50240	1.1	-0.9	-2.5	
of which cogeneration units	5794	5440	6102	5052	5457	5753	11306	0.5	-1.1	7.6	
of which CCS units	0	0	0	0	833	833	833	0.0	0.0	0.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35273	35911	31364	3.1	0.6	-1.2	
Oil fired	9696	9323	9064	2227	1235	1223	1179	-0.7	-18.1	-0.5	
Biomass-waste fired	2403	2961	3335	3634	17238	17244	17196	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.1	37.4	36.7				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	43.0	46.4	44.2				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	4.9	4.3	4.5				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.5	1.6				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	59.5	63.8	79.8				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	40437	38659	29463	0.1	-3.8	-3.1	
Solids	28425	29812	23816	23961	12276	2974	779	-1.8	-6.4	-24.1	
Oil (including refinery gas)	1453	1060	789	920	641	647	641	-5.9	-2.1	0.0	
Gas (including derived gases)	28139	28415	31452	20339	16568	20227	12277	1.1	-6.2	-3.0	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15766	10.9	11.5	3.7	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83351	77136	81903	-1.9	-1.6	-0.2	
Refineries	88821	88399	75162	65526	61259	56316	51762	-1.7	-2.0	-1.7	
Biofuels and hydrogen production	0	80	1130	1361	2136	1975	1945	0.0	6.6	-0.9	
District heating	15	14	13	13	11	14	8	-0.9	-2.2	-3.4	
Derived gases, cokeries etc.	29623	26714	21187	21212	19946	18830	28187	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUO+33				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	822	872	849	878	935	964	1013	0.3	1.0	0.8	
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.4	
Private cars and motorcycles	644	673	649	659	702	717	749	0.1	0.8	0.6	
Rail	47	53	66	76	80	87	93	3.5	2.0	1.5	
Aviation ⁽³⁾	77	97	83	90	100	107	115	0.7	1.8	1.5	
Inland navigation	6	6	5	5	6	6	7	-0.3	0.8	1.2	
Freight transport activity (Gtkm)	237	248	216	242	253	261	274	-0.9	1.6	0.8	
Heavy goods and light commercial vehicles	183	183	164	187	195	199	208	-1.1	1.8	0.6	
Rail	18	21	19	22	23	25	26	0.3	2.1	1.5	
Inland navigation	36	43	33	34	35	37	39	-0.9	0.5	1.2	
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49595	45960	43766	-0.2	-0.4	-1.2	
Public road transport	559	499	515	511	505	494	479	-0.8	-0.2	-0.5	
Private cars and motorcycles	29150	30049	29058	27657	25099	21919	20496	0.0	-1.5	-2.0	
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9043	8807	8537	-1.5	0.7	-0.6	
Rail	821	988	966	1108	1155	1225	1279	1.6	1.8	1.0	
Aviation	11115	13069	11650	12400	12880	12551	11974	0.5	1.0	-0.7	
Inland navigation	933	1282	884	881	913	964	1001	-0.5	0.3	0.9	
By transport activity											
Passenger transport	41504	44033	41640	40984	38926	35419	33422	0.0	-0.7	-1.5	
Freight transport	10882	11467	9830	11030	10669	10542	10345	-1.0	0.8	-0.3	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.4	3.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.3	5.7				
ENERGY EFFICIENCY											
Primary energy consumption	219230	222779	204710	191181	179485	165014	147534	-0.7	-1.3	-1.9	
Final Energy Demand	153236	152728	142723	138484	135251	125487	107585	-0.7	-0.5	-2.3	
by sector											
Industry	36930	33388	26923	25432	25469	23388	20572	-3.1	-0.6	-2.1	
Energy intensive industries	19392	16472	12350	11464	11261	9746	7732	-4.4	-0.9	-3.7	
Other industrial sectors	17537	16916	14573	13968	14208	13642	12840	-1.8	-0.3	-1.0	
Residential	43034	44151	44715	40936	39852	37472	28342	0.4	-1.1	-3.4	
Tertiary	20377	19686	19633	20101	20335	18667	14905	-0.4	0.4	-3.1	
Transport ⁽⁵⁾	52895	55503	51452	52014	49595	45960	43766	-0.3	-0.4	-1.2	
by fuel											
Solids	5954	4530	4133	4583	3837	3107	1725	-3.6	-0.7	-7.7	
Oil	63674	65851	59524	58175	53014	47408	42472	-0.7	-1.2	-2.2	
Gas	52180	50380	47246	43853	42421	36894	24483	-1.0	-1.1	-5.3	
Electricity	28360	29998	28286	27707	28958	30009	30426	0.0	0.2	0.5	
Heat (from CHP and District Heating)	2439	1268	1266	1255	1334	1415	1397	-6.3	0.5	0.5	
Renewable energy forms	630	702	2268	2885	5589	6201	6379	13.7	9.4	1.3	
Other	0	0	0	26	97	453	703	-100.0	0.0	21.9	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	150	131	117	101	89	77	65	-2.4	-2.7	-3.1	
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	60	51	-2.3	-1.5	-2.9	
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	60	42	-1.4	-2.4	-4.7	
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	57	42	-2.6	-1.5	-4.5	
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.6	
Freight transport (toe/Mtkm)	46	46	46	46	42	40	38	-0.1	-0.8	-1.1	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	490.4	419.0	328.3	-1.2	-2.6	-3.9	
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	245.0	179.4	142.9	103.3		-4.1	-5.4	
of which ESD sectors (2013 scope) GHG emissions		413.6	362.5	340.9	311.0	276.1	225.0		-1.5	-3.2	
CO ₂ Emissions (energy related)	568.2	573.4	518.3	477.6	390.9	326.7	245.8	-0.9	-2.8	-4.5	
Power generation/District heating	194.2	199.6	178.4	155.5	93.1	64.5	36.4	-0.8	-6.3	-9.0	
Energy Branch	31.3	35.2	29.4	20.9	18.6	16.3	13.8	-0.6	-4.4	-3.0	
Industry	77.4	67.5	52.1	49.5	46.1	38.3	26.3	-3.9	-1.2	-5.4	
Residential	82.6	80.4	83.1	74.7	68.8	60.4	36.2	0.1	-1.9	-6.2	
Tertiary	27.0	25.3	24.8	25.3	22.6	17.8	12.5	-0.9	-0.9	-5.8	
Transport	155.6	165.4	150.6	151.7	141.6	129.3	120.7	-0.3	-0.6	-1.6	
CO ₂ Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	18.7	18.0	16.8	-2.8	1.8	-1.0	
Non-CO ₂ GHG emissions	131.6	133.2	102.5	90.5	80.9	74.3	65.6	-2.5	-2.3	-2.1	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	59.9	51.2	40.1	-1.2	-2.6	-3.9	
Carbon Intensity indicators											
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.49	0.45	0.42	0.24	0.16	0.09	-0.6	-6.2	-9.5	
Final energy demand (t of CO ₂ /toe)	2.24	2.22	2.18	2.18	2.06	1.96	1.82	-0.3	-0.5	-1.3	
Industry	2.10	2.02	1.93	1.95	1.81	1.64	1.28	-0.8	-0.7	-3.4	
Residential	1.92	1.82	1.86	1.82	1.73	1.61	1.28	-0.3	-0.7	-3.0	
Tertiary	1.32	1.29	1.26	1.26	1.11	0.96	0.84	-0.5	-1.3	-2.8	
Transport	2.94	2.98	2.93	2.92	2.86	2.81	2.76	-0.1	-0.2	-0.3	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.6	18.2	23.6				
RES-H&C share	0.8	0.8	1.8	3.4	7.0	8.8	14.1				
RES-E share	2.6	4.1	7.4	19.3	40.5	46.3	51.0				
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	17.0	22.9				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	114	114	113	3.4	6.9	-0.1	
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	169	177	179	0.3	2.8	0.5	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	231.0	254.4	292.5	1.5	2.5	2.4	
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.3	12.1				

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively. For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix I.d: EUCO+35 scenario - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 M€13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	1726888	1824722	1760315	1666602	1646365	1544795	1337596	0.2	-0.7	-2.1
Solids	321292	318127	282994	277891	260879	227550	167157	-1.3	-0.8	-4.4
Oil	660025	677021	612954	579805	545070	493664	440889	-0.7	-1.2	-2.1
Natural gas	396144	445263	447394	387731	382040	362099	257638	1.2	-1.6	-3.9
Nuclear	243841	257516	236562	213043	188974	174739	180288	-0.3	-2.2	-0.5
Electricity	2030	1412	712	1761	1247	523	-33	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206371	268154	286219	291656	5.7	4.1	0.8
Energy Branch Consumption	86261	91922	86455	81625	76144	69559	62594	0.0	-1.3	-1.9
Non-Energy Uses	113106	116080	110230	106709	112514	116488	116888	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	944996	903986	835772	758585	761348	723646	678402	-1.2	-0.9	-1.1
Solids	214596	196030	164837	148196	138885	124854	95265	-2.6	-1.7	-3.7
Oil	173901	135553	100408	78529	69713	57531	47301	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106189	91617	74492	-2.7	-4.0	-3.5
Nuclear	243841	257516	236562	213043	188974	174739	180288	-0.3	-2.2	-0.5
Renewable energy sources	103222	124116	174017	200380	257588	274905	281056	5.4	4.0	0.9
Hydro	30703	26859	32312	31168	32356	32407	32718	0.5	0.0	0.1
Biomass & Waste	65583	85060	119573	132613	164865	162875	146501	6.2	3.3	-1.2
Wind	1913	6058	12836	23588	39423	47646	62324	21.0	11.9	4.7
Solar and others	436	827	3775	11001	17730	28267	32927	24.1	16.7	6.4
Geothermal	4587	5312	5521	2009	3214	3711	6585	1.9	-5.3	7.4
Net Imports (ktoe)	826349	879676	955004	962880	941218	878862	719123	1.5	-0.1	-2.7
Solids	98320	125363	111814	129695	121994	102696	71892	1.3	0.9	-5.2
Oil	532226	597491	558847	556140	530810	491856	448294	0.5	-0.5	-1.7
Crude oil and Feedstocks	514686	578712	537586	515210	492829	460707	426246	0.4	-0.9	-1.4
Oil products	17540	18779	21261	40930	37980	31148	22048	1.9	6.0	-5.3
Natural gas	193432	254054	278015	269292	276601	272473	188371	3.7	-0.1	-3.8
Electricity	2030	1412	712	1761	1247	523	-33	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	54.8	51.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251324	3381224	3542413	3375364	1.0	0.1	0.0
Nuclear energy	944993	997699	916610	867402	772986	717746	747642	-0.3	-1.7	-0.3
Solids	933855	965565	830393	846893	807408	702941	509913	-1.2	-0.3	-4.5
Oil (including refinery gas)	181296	142772	86899	34610	21455	20303	13510	-7.1	-13.1	-4.5
Gas (including derived gases)	514267	705961	798645	566084	567256	638953	389637	4.5	-3.4	-3.7
Biomass-waste	46401	87831	145814	188752	214414	264351	289087	12.1	3.9	3.0
Hydro (pumping excluded)	357072	312372	375785	362420	376228	376822	380447	0.5	0.0	0.1
Wind	22254	70455	149278	274278	458412	554022	724700	21.0	11.9	4.7
Solar	117	1458	22502	103798	154603	258359	310030	69.1	21.3	7.2
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	10398	2.6	2.1	2.1
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1030157	1078846	1143237	2.3	1.8	1.0
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	473926	571966	671616	6.3	7.1	3.5
Hydro (pumping excluded)	115841	119177	122922	127470	131607	132302	133504	0.6	0.7	0.1
Wind	12730	40485	85701	141580	205897	235580	296646	21.0	9.2	3.7
Solar	178	2292	29774	97443	135936	203394	240430	66.9	16.4	5.9
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	442028	401829	361717	1.6	-1.0	-2.0
of which cogeneration units	92439	107819	107430	111941	85078	87703	84169	1.5	-2.3	-0.1
of which CCS units	0	0	0	0	833	1083	1083	0.0	0.0	2.7
Solids fired	194525	185353	180110	176559	146677	118231	99903	-0.8	-2.0	-3.8
Gas fired	123821	163333	215485	219628	211087	209083	191759	5.7	-0.2	-1.0
Oil fired	83315	74582	69295	53085	31474	20887	15460	-1.8	-7.6	-6.9
Biomass-waste fired	12657	16610	21719	27908	51746	52585	53435	5.5	9.1	0.3
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1147	2.4	3.1	1.1
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.7	35.9	32.5			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.3	41.0	40.1			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	10.4	9.8	8.8			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.3			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	58.7	61.5	72.9			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	345559	342712	259627	0.7	-1.8	-2.8
Solids	223608	229335	197694	200223	186821	160642	116202	-1.2	-0.6	-4.6
Oil (including refinery gas)	40868	32485	20566	7340	4932	4968	3757	-6.6	-13.3	-2.7
Gas (including derived gases)	105105	137667	151968	100069	96318	108944	68260	3.8	-4.5	-3.4
Biomass & Waste	14651	26766	41420	43077	55556	66227	68905	11.0	3.0	2.2
Geothermal heat	4114	4645	4828	1184	1932	1932	2504	1.6	-8.8	2.6
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997999	908897	859708	797664	749621	-0.7	-1.5	-1.4
Refineries	735106	756042	667606	609584	582744	541125	496805	-1.0	-1.4	-1.6
Biofuels and hydrogen production	709	3279	13086	16149	20791	18892	18839	33.8	4.7	-1.0
District heating	15899	17445	19101	16261	16230	13741	10732	1.9	-1.6	-4.1
Derived gases, cokeries etc.	316179	324441	298206	266904	239944	223906	223246	-0.6	-2.2	-0.7

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7158	7401	7769	0.8	1.0	0.8
Public road transport	549	541	528	546	569	579	595	-0.4	0.8	0.5
Private cars and motorcycles	4466	4721	4843	5001	5255	5328	5525	0.8	0.8	0.5
Rail	450	464	499	540	599	674	743	1.0	1.8	2.2
Aviation ⁽³⁾	458	528	539	608	693	774	858	1.7	2.5	2.2
Inland navigation	42	42	40	40	43	45	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2982	3151	3405	1.1	1.6	1.3
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2110	2174	2346	1.3	1.6	1.1
Rail	405	416	394	428	482	547	604	-0.3	2.0	2.3
Inland navigation	300	343	354	361	389	430	455	1.7	1.0	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350400	325173	313222	0.5	-0.3	-1.1
Public road transport	8775	8725	8834	9040	9255	9153	9048	0.1	0.5	-0.2
Private cars and motorcycles	206270	212102	211618	204765	189783	164580	151966	0.3	-1.1	-2.2
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81619	79183	79981	1.3	0.6	-0.2
Rail	8168	7668	7129	7395	7895	8536	8975	-1.4	1.0	1.3
Aviation	44876	49959	49230	53303	56506	58020	57297	0.9	1.4	0.1
Inland navigation	6156	6798	5673	5051	5342	5701	5954	-0.8	-0.6	1.1
By transport activity										
Passenger transport	266294	275041	273897	271237	259851	236318	223040	0.3	-0.5	-1.5
Freight transport	75231	89484	85505	86825	90549	88855	90182	1.3	0.6	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.1	2.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.5	6.6			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559892	1533851	1428307	1220708	0.2	-0.7	-2.3
Final Energy Demand	1129427	1186370	1155879	1133457	1135510	1049786	888262	0.2	-0.2	-2.4
by sector										
Industry	330627	327576	283437	284538	295014	284665	255876	-1.5	0.4	-1.4
Energy intensive industries	215899	215115	182721	182407	188847	179883	158006	-1.7	0.3	-1.8
Other industrial sectors	114728	112461	100716	102131	106166	104781	97870	-1.3	0.5	-0.8
Residential	288564	307594	313829	299747	298981	267358	191207	0.8	-0.5	-4.4
Tertiary	166677	183368	196770	188333	188228	169707	125226	1.7	-0.4	-4.0
Transport ⁽⁵⁾	343558	367831	361842	360838	353287	328056	315954	0.5	-0.2	-1.1
by fuel										
Solids	61977	53988	50512	47694	45704	40927	28059	-2.0	-1.0	-4.8
Oil	487065	502509	455207	437598	404641	353869	306066	-0.7	-1.2	-2.8
Gas	267588	281191	273366	265878	264183	234034	173246	0.2	-0.3	-4.1
Electricity	217644	239548	244471	241010	252077	265352	252814	1.2	0.3	0.0
Heat (from CHP and District Heating)	48044	52425	52875	49062	50721	47184	36504	1.4	-0.4	-3.2
Renewable energy forms	49109	56708	79448	92104	117809	106636	88398	4.9	4.0	-2.8
Other	0	0	0	111	375	1784	3174	0.0	0.0	23.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	154	148	137	124	113	99	80	-1.2	-1.9	-3.4
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	69	59	-2.2	-0.6	-2.5
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	66	44	-0.6	-1.7	-5.8
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	84	70	48	0.0	-1.8	-5.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	26	23	-0.8	-1.8	-2.6
Freight transport (toe/Mtkm)	33	34	33	32	30	28	26	0.2	-1.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4306.6	3913.1	3208.9	-0.9	-1.2	-2.9
of which ETS sectors (2013 scope) GHG emissions		2501.2	2175.1	2016.7	1919.0	1784.6	1402.5		-1.2	-3.1
of which ESD sectors (2013 scope) GHG emissions		2847.9	2699.9	2566.7	2387.6	2128.5	1806.4		-1.2	-2.8
CO ₂ Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3311.8	2957.1	2298.6	-0.5	-1.3	-3.6
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1095.5	1012.3	714.3	-0.5	-2.0	-4.2
Energy Branch	167.3	170.7	155.2	148.7	132.8	118.0	105.4	-0.7	-1.6	-2.3
Industry	691.0	634.1	511.8	505.4	495.2	438.9	341.5	-3.0	-0.3	-3.6
Residential	468.0	484.2	466.9	422.7	384.9	315.0	178.4	0.0	-1.9	-7.4
Tertiary	257.9	271.6	267.9	245.8	221.5	174.4	113.5	0.4	-1.9	-6.5
Transport	1001.7	1079.8	1036.6	1023.4	982.0	898.5	845.6	0.3	-0.5	-1.5
CO ₂ Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	248.7	249.1	246.7	-1.5	0.5	-0.1
Non-CO ₂ GHG emissions	1057.0	939.6	855.4	820.5	746.1	706.9	663.6	-2.1	-1.4	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	74.8	68.0	55.7	-0.9	-1.2	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.39	0.37	0.33	0.30	0.27	0.24	0.18	-1.6	-2.0	-3.7
Final energy demand (t of CO ₂ /toe)	2.14	2.08	1.98	1.94	1.83	1.74	1.66	-0.8	-0.7	-1.0
Industry	2.09	1.94	1.81	1.78	1.68	1.54	1.33	-1.5	-0.7	-2.3
Residential	1.62	1.57	1.49	1.41	1.29	1.18	0.93	-0.9	-1.4	-3.2
Tertiary	1.55	1.48	1.36	1.31	1.18	1.03	0.91	-1.3	-1.5	-2.6
Transport	2.92	2.94	2.86	2.84	2.78	2.74	2.68	-0.2	-0.3	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.0	24.1	29.1			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.5	29.4			
RES-E share	13.3	14.8	19.7	28.2	35.2	40.8	50.4			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	14.6	20.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	93	89	87	2.1	3.6	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	152	155	161	0.0	1.1	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1797.6	1953.6	2283.8	3.4	2.0	2.4
as % of GDP	9.4	10.4	11.4	11.2	12.4	12.5	13.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Austria: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5		
GDP (in 000 ME13)	257	279	298	316	345	373	400	1.5	1.5	1.5		
Gross Inland Consumption (ktoe)	28996	34373	34604	32933	33455	31696	27526	1.8	-0.3	-1.9		
Solids	3597	4000	3365	3333	3426	3022	2725	-0.7	0.2	-2.3		
Oil	12173	14448	12833	12275	11719	10505	9283	0.5	-0.9	-2.3		
Natural gas	6519	8159	8215	6454	7659	6992	4399	2.3	-0.7	-5.4		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Renewable energy forms	6825	7537	9991	9810	10212	10743	10817	3.9	0.2	0.6		
Energy Branch Consumption	1306	1566	1504	1593	1501	1382	1257	1.4	0.0	-1.8		
Non-Energy Uses	1718	1717	1850	2037	2202	2331	2362	0.7	1.8	0.7		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	9776	10012	12114	11277	11476	11271	10899	2.2	-0.5	-0.5		
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0		
Oil	1092	1003	1036	813	673	342	111	-0.5	-4.2	-16.5		
Natural gas	1533	1404	1486	1270	1141	666	430	-0.3	-2.6	-9.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	6859	7605	9592	9195	9662	10264	10358	3.4	0.1	0.7		
Hydro	3597	3154	3299	3527	3698	3812	3858	-0.9	1.1	0.4		
Biomass & Waste	3169	4214	5914	5018	5160	4822	4077	6.4	-1.4	-2.3		
Wind	6	114	178	340	382	774	1280	40.8	8.0	12.9		
Solar and others	63	93	168	260	359	771	1019	10.3	7.9	11.0		
Geothermal	25	30	35	49	64	84	125	3.4	6.3	7.0		
Net Imports (ktoe)	18970	24517	21577	21656	21979	20325	16627	1.3	0.2	-2.8		
Solids	3019	3971	3358	3333	3426	3022	2725	1.1	0.2	-2.3		
Oil	10850	13204	11510	11462	11046	10163	9172	0.6	-0.4	-1.8		
Crude oil and Feedstocks	7791	8100	7011	8001	7806	7461	6979	-1.1	1.1	-1.1		
Oil products	3059	5104	4499	3461	3239	2702	2193	3.9	-3.2	-3.8		
Natural gas	5253	7153	6115	5184	6518	6327	3969	1.5	0.6	-4.8		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Import Dependency (%)	65.4	71.3	62.4	65.8	65.7	64.3	60.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59621	71937	78781	79281	1.3	0.6	1.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	5727	7165	4918	4194	5019	3271	3152	-1.5	0.2	-4.5		
Oil (including refinery gas)	1702	1641	1273	208	215	71	66	-2.9	-16.3	-11.1		
Gas (including derived gases)	8864	14347	16137	6774	14521	12177	3296	6.2	-1.0	-13.8		
Biomass-waste	1675	2882	5088	2592	3557	4448	4411	11.8	-3.5	2.2		
Hydro (pumping excluded)	41836	36677	38363	41012	42996	44328	44856	-0.9	1.1	0.4		
Wind	67	1331	2064	3958	4443	9004	14884	40.9	8.0	12.9		
Solar	3	21	88	871	1174	5472	8605	38.2	29.5	22.0		
Geothermal and other renewables	0	2	2	11	11	11	11	0.0	21.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23325	28654	33377	1.8	0.8	3.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	11668	12440	13841	16437	17371	23228	28267	1.7	2.3	5.0		
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13703	13829	0.9	0.8	0.1		
Wind	50	778	981	2412	2583	4638	6688	34.7	10.2	10.0		
Solar	5	30	154	876	1090	4887	7750	40.9	21.6	21.7		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6243	6652	7662	6552	5953	5426	5111	2.1	-2.5	-1.5		
of which cogeneration units	2632	3253	3157	3005	3050	2896	2926	1.8	-0.3	-0.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1887	1660	1359	873	803	777	777	-3.2	-5.1	-0.3		
Gas fired	2816	3389	4512	4074	3555	3322	2992	4.8	-2.4	-1.7		
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4		
Biomass-waste fired	280	456	650	633	778	842	916	8.8	1.8	1.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	2	1	2	2	2	2	0.0	7.2	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	33.9	30.4	26.3					
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	43.9	40.2	32.9					
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.7	17.0	8.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.5	80.3	91.8					
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4574	4274	2863	4.0	-2.2	-4.6		
Solids	1216	1507	1019	908	1091	728	734	-1.8	0.7	-3.9		
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.9		
Gas (including derived gases)	1961	2836	2868	1406	2573	2411	842	3.9	-1.1	-10.6		
Biomass & Waste	421	814	1649	604	831	1101	1255	14.6	-6.6	4.2		
Geothermal heat	0	2	1	10	10	10	10	0.0	23.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	11349	11946	11472	12554	11801	10867	9702	0.1	0.3	-1.9		
Refineries	8865	9275	8040	9141	8770	8047	7286	-1.0	0.9	-1.8		
Biofuels and hydrogen production	16	50	495	571	445	404	398	41.2	-1.1	-1.1		
District heating	558	613	869	678	635	562	375	4.5	-3.1	-5.1		
Derived gases, cokeries etc.	1910	2009	2068	2164	1952	1853	1643	0.8	-0.6	-1.7		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	96	101	107	112	119	125	130	1.1	1.1	0.9
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.6
Private cars and motorcycles	68	72	75	78	80	83	85	1.0	0.7	0.5
Rail	12	13	15	16	18	20	22	1.9	2.2	1.8
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.4
Freight transport activity (Gtkm)	50	54	61	65	70	73	78	2.0	1.3	1.1
Heavy goods and light commercial vehicles	31	33	39	43	46	46	49	2.3	1.6	0.7
Rail	17	19	20	20	22	24	26	1.8	0.9	1.9
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8018	7290	6953	2.3	-0.6	-1.4
Public road transport	92	97	101	103	106	106	106	0.9	0.5	0.0
Private cars and motorcycles	4520	5616	5043	4708	4260	3673	3323	1.1	-1.7	-2.5
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2589	2408	2380	6.3	0.8	-0.8
Rail	267	242	247	249	264	276	283	-0.8	0.7	0.7
Aviation	591	679	707	776	774	799	833	1.8	0.9	0.7
Inland navigation	28	45	22	23	24	27	27	-2.1	0.8	1.2
By transport activity										
Passenger transport	5260	6438	5894	5634	5193	4634	4321	1.1	-1.3	-1.8
Freight transport	1527	2377	2613	2846	2825	2655	2632	5.5	0.8	-0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.1	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30897	31253	29265	25164	1.8	-0.5	-2.1
Final Energy Demand	23692	28185	28423	28425	28039	26167	22444	1.8	-0.1	-2.2
by sector										
Industry	7283	8825	9195	9724	9959	9665	8919	2.4	0.8	-1.1
Energy intensive industries	5321	6148	6212	6588	6662	6365	5769	1.6	0.7	-1.4
Other industrial sectors	1962	2676	2983	3136	3297	3300	3150	4.3	1.0	-0.5
Residential	6332	6828	6797	6669	6512	5856	4022	0.7	-0.4	-4.7
Tertiary	3070	3449	3686	3285	3266	3078	2297	1.8	-1.2	-3.5
Transport ⁽⁵⁾	7007	9082	8744	8746	8302	7568	7206	2.2	-0.5	-1.4
by fuel										
Solids	1403	1466	1169	1135	1188	1225	993	-1.8	0.2	-1.8
Oil	9818	12084	10539	9934	9319	8093	6941	0.7	-1.2	-2.9
Gas	4464	5125	5259	5142	5132	4577	3538	1.7	-0.2	-3.7
Electricity	4432	5013	5358	5436	5797	6223	6305	1.9	0.8	0.8
Heat (from CHP and District Heating)	1020	1353	1832	2008	1904	1833	1251	6.0	0.4	-4.1
Renewable energy forms	2555	3145	4266	4769	4694	4190	3367	5.3	1.0	-3.3
Other	0	0	0	2	5	27	50	0.0	0.0	25.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	113	123	116	104	97	85	69	0.3	-1.8	-3.4
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	95	83	0.8	-0.3	-2.3
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	76	63	40	-0.7	-1.9	-6.2
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	66	46	0.1	-2.7	-5.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	31	27	0.1	-2.6	-2.9
Freight transport (toe/Mtkm)	30	44	43	44	40	36	34	3.4	-0.5	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.1	96.8	89.0	82.8	82.3	73.8	61.2	0.3	-0.8	-2.9
of which ETS sectors (2013 scope) GHG emissions	38.3	35.2	32.8	32.8	34.4	31.1	24.9		-0.2	-3.2
of which ESD sectors (2013 scope) GHG emissions	58.4	58.4	53.7	50.0	47.8	42.7	36.3		-1.2	-2.7
CO2 Emissions (energy related)	65.6	78.6	71.5	65.7	65.9	58.1	46.6	0.9	-0.8	-3.4
Power generation/District heating	12.5	17.0	15.1	11.2	14.1	12.4	8.6	1.9	-0.7	-4.8
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.3	2.9	1.3	-0.3	-2.1
Industry	16.8	18.5	17.6	17.8	17.2	15.7	12.8	0.5	-0.2	-2.9
Residential	8.9	8.6	7.7	6.8	6.4	4.8	2.3	-1.5	-1.9	-9.5
Tertiary	3.9	4.4	3.2	2.0	1.8	1.5	0.9	-1.8	-5.8	-7.0
Transport	20.2	26.5	24.1	23.9	22.8	20.4	19.1	1.8	-0.6	-1.8
CO2 Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.2	5.2	1.6	-0.3	-0.2
Non-CO2 GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.5	-2.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.4	92.8	76.9	0.3	-0.8	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.17	0.21	0.17	0.13	0.15	0.12	0.09	-0.3	-1.2	-4.7
Final energy demand (t of CO2/toe)	2.10	2.06	1.85	1.77	1.72	1.62	1.56	-1.3	-0.8	-0.9
Industry	2.31	2.10	1.92	1.83	1.73	1.63	1.43	-1.9	-1.0	-1.9
Residential	1.41	1.26	1.13	1.02	0.98	0.82	0.58	-2.2	-1.4	-5.1
Tertiary	1.26	1.27	0.88	0.60	0.54	0.47	0.37	-3.6	-4.7	-3.7
Transport	2.88	2.91	2.76	2.73	2.74	2.70	2.65	-0.4	0.0	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.2	38.3	44.3			
RES-H&C share	20.4	22.0	29.7	37.0	36.4	35.1	38.6			
RES-E share	66.9	62.4	65.7	68.0	68.5	77.5	89.1			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.6	16.8	24.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	65	70	72	0.0	-0.6	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	140	149	152	0.9	-0.2	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.6	43.4	50.2	4.2	1.6	2.6
as % of GDP	8.5	10.2	11.0	10.2	11.2	11.6	12.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Belgium: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	10	10	11	11	12	12	13	0.8	0.9	0.9		
GDP (in 000 M€13)	324	350	372	385	414	443	479	1.4	1.1	1.5		
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54725	49202	42425	0.3	-1.1	-2.5		
Solids	7922	5081	3673	3205	2007	2085	1760	-7.4	-5.9	-1.3		
Oil	24136	24721	24699	23472	21996	20326	18324	0.2	-1.2	-1.8		
Natural gas	13369	14728	16999	14941	14142	16687	12812	2.4	-1.8	-1.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Renewable energy forms	1081	1658	3560	4242	6208	6694	7075	12.7	5.7	1.3		
Energy Branch Consumption	2366	2403	2246	2406	2216	2130	2033	-0.5	-0.1	-0.9		
Non-Energy Uses	6739	7516	8541	8464	8523	8620	8528	2.4	0.0	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14088	7243	6518	1.2	-0.9	-7.4		
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0		
Oil	0	6	-7	-14	-14	-13	-13	1692.2	7.2	-0.6		
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Renewable energy sources	977	1377	2996	3725	5470	6016	6531	11.9	6.2	1.8		
Hydro	40	25	27	31	32	45	49	-3.8	1.7	4.5		
Biomass & Waste	931	1327	2793	2944	3958	3836	3605	11.6	3.5	-0.9		
Wind	1	20	111	431	1032	1548	2029	54.9	25.0	7.0		
Solar and others	1	3	60	313	441	576	823	50.7	22.0	6.4		
Geothermal	3	3	4	6	8	11	25	3.0	6.0	12.7		
Net Imports (ktoe)	50502	53396	53753	52611	49716	61383	45696	0.6	-0.8	-0.8		
Solids	7220	5150	3591	3205	2007	2085	1760	-6.7	-5.7	-1.3		
Oil	29527	32605	32752	32035	31042	29307	26922	1.0	-0.5	-1.4		
Crude oil and Feedstocks	34177	32251	31004	27409	27195	26529	25434	-1.0	-1.3	-0.7		
Oil products	-4650	354	1749	4626	3847	2777	1489	0.0	8.2	-9.1		
Natural gas	13278	14817	16791	14941	14188	17143	14015	2.4	-1.7	-0.1		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.6	87.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	73909	75063	73577	1.3	-2.4	0.0		
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0		
Solids	12916	8199	4190	2975	195	323	56	-10.6	-26.4	-11.8		
Oil (including refinery gas)	797	1740	406	96	674	698	720	-6.5	5.2	0.7		
Gas (including derived gases)	19091	25143	33178	23812	18216	40730	34821	5.7	-5.8	6.7		
Biomass-waste	1336	2516	5882	5914	3238	4384	5879	16.0	-5.8	6.1		
Hydro (pumping excluded)	460	288	312	365	368	522	571	-3.8	1.7	4.5		
Wind	16	227	1292	5009	11998	18000	23594	55.1	25.0	7.0		
Solar	0	1	560	3376	4013	5336	7937	0.0	21.8	7.1		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	14674	14867	17071	18515	20997	23513	27738	1.5	2.1	2.8		
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0		
Renewable energy	117	274	1934	5560	8494	11636	16257	32.4	15.9	6.7		
Hydro (pumping excluded)	103	105	118	119	119	163	177	1.4	0.1	4.1		
Wind	14	167	912	2229	4558	6417	8616	51.8	17.5	6.6		
Solar	0	2	904	3212	3818	5056	7463	0.0	15.5	6.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	8636	8672	9216	9048	7447	8836	11481	0.7	-2.1	4.4		
of which cogeneration units	1112	1893	2575	1552	656	1423	1245	8.8	-12.8	6.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2290	1450	1184	825	43	43	16	-6.4	-28.2	-9.7		
Gas fired	4392	5201	6468	6799	6270	7754	10358	3.9	-0.3	5.1		
Oil fired	1581	1494	836	646	266	266	235	-6.2	-10.8	-1.2		
Biomass-waste fired	373	527	727	777	868	772	872	6.9	1.8	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.8	35.6	29.7					
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.3	48.5	51.4					
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.0	15.4	16.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.2	44.4	51.6					
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4331	8185	6939	1.7	-6.4	4.8		
Solids	2629	1833	936	761	47	77	11	-9.8	-25.8	-13.3		
Oil (including refinery gas)	180	411	57	29	223	231	238	-10.8	14.6	0.7		
Gas (including derived gases)	3790	4612	5671	4111	2940	6535	5102	4.1	-6.4	5.7		
Biomass & Waste	492	821	1722	1414	1121	1342	1587	13.4	-4.2	3.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	54711	52964	50595	41255	42571	34716	32105	-0.8	-1.7	-2.8		
Refineries	38602	37483	35454	31882	31698	31051	29864	-0.8	-1.1	-0.6		
Biofuels and hydrogen production	0	0	352	341	871	756	721	0.0	9.5	-1.9		
District heating	45	29	6	15	19	17	19	-18.1	11.8	0.0		
Derived gases, cokeries etc.	16064	15452	14782	9016	9984	2892	1501	-0.8	-3.8	-17.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Belgium: EUO0+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	137	145	154	158	169	174	183	1.2	1.0	0.8
Public road transport	13	18	17	18	18	18	18	1.8	2.7	0.2
Private cars and motorcycles	107	109	115	117	126	127	133	0.8	0.9	0.5
Rail	9	10	12	12	13	15	17	3.1	1.2	2.4
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.5
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.6
Freight transport activity (Gtkm)	70	65	63	66	76	82	91	-1.1	1.8	1.8
Heavy goods and light commercial vehicles	55	48	46	47	54	57	62	-1.7	1.6	1.4
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.6
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	10009	9466	9415	0.8	-0.6	-0.6
Public road transport	158	204	292	290	287	277	267	6.4	-0.2	-0.7
Private cars and motorcycles	4815	4463	5177	4757	4252	3646	3458	0.7	-1.9	-2.0
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3642	3576	3667	1.8	0.7	0.1
Rail	184	186	177	181	210	239	264	-0.4	1.7	2.3
Aviation	1530	1281	1382	1389	1443	1535	1547	-1.0	0.4	0.7
Inland navigation	204	219	152	164	175	192	211	-2.9	1.4	1.9
By transport activity										
Passenger transport	6608	6016	6932	6518	6071	5558	5380	0.5	-1.3	-1.2
Freight transport	3139	3956	3661	3660	3938	3908	4035	1.6	0.7	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.1	2.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.3	9.2			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46201	40582	33897	0.0	-1.3	-3.0
Final Energy Demand	37766	36705	37534	36239	36446	33929	28930	-0.1	-0.3	-2.3
by sector										
Industry	14218	11775	11688	11055	11238	10714	9555	-1.9	-0.4	-1.6
Energy intensive industries	10700	9088	8641	8013	8023	7686	6737	-2.1	-0.7	-1.7
Other industrial sectors	3518	2686	3047	3042	3215	3028	2818	-1.4	0.5	-1.3
Residential	8974	9299	9266	9230	9323	8558	5886	0.3	0.1	-4.5
Tertiary	4827	5658	5982	5722	5826	5139	4028	2.2	-0.3	-3.6
Transport ⁽⁵⁾	9747	9973	10598	10232	10060	9518	9461	0.8	-0.5	-0.6
by fuel										
Solids	3403	2019	1621	1505	1358	1265	1042	-7.2	-1.8	-2.6
Oil	16661	16586	15314	14610	13010	11305	9489	-0.8	-1.6	-3.1
Gas	10010	10009	11147	10465	10571	9614	7119	1.1	-0.5	-3.9
Electricity	6667	6896	7163	7033	7240	7796	7945	0.7	0.1	0.9
Heat (from CHP and District Heating)	492	428	640	567	607	664	610	2.7	-0.5	0.1
Renewable energy forms	533	767	1650	2058	3637	3180	2579	12.0	8.2	-3.4
Other	0	0	0	3	23	105	147	0.0	0.0	20.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	183	168	165	142	132	111	89	-1.0	-2.2	-3.9
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	69	58	-1.3	-1.3	-2.8
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	66	42	-1.1	-1.4	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	75	54	0.5	-1.4	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	26	24	-1.1	-2.5	-2.2
Freight transport (toe/Mtkm)	45	61	58	55	52	47	44	2.6	-1.1	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	154.0	148.3	136.1	127.3	112.1	112.1	94.1	-1.2	-1.9	-1.7
of which ETS sectors (2013 scope) GHG emissions	70.1	58.6	52.1	42.8	51.0	44.3			-3.1	0.4
of which ESD sectors (2013 scope) GHG emissions	78.3	77.6	75.2	69.3	61.1	49.8			-1.1	-3.3
CO2 Emissions (energy related)	122.7	114.2	106.4	97.8	84.7	86.4	70.0	-1.4	-2.3	-1.9
Power generation/District heating	25.1	24.0	20.4	15.8	9.0	19.4	15.8	-2.0	-7.9	5.8
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.6	-2.3	0.4	-1.0
Industry	34.5	24.8	22.1	19.7	18.4	16.2	13.5	-4.4	-1.8	-3.1
Residential	20.3	20.5	18.9	18.4	16.8	14.2	7.2	-0.7	-1.1	-8.2
Tertiary	8.7	10.6	10.2	9.5	9.0	7.2	5.0	1.6	-1.3	-5.7
Transport	29.2	29.9	30.9	29.7	27.4	25.6	24.9	0.6	-1.2	-0.9
CO2 Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.4	8.9	1.6	0.4	-1.0
Non-CO2 GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	15.2	-1.3	-1.4	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	74.6	62.6	-1.2	-1.9	-1.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.26	0.20	0.20	0.11	0.23	0.19	-3.5	-5.8	5.8
Final energy demand (t of CO2/toe)	2.45	2.34	2.19	2.14	1.97	1.86	1.75	-1.1	-1.1	-1.2
Industry	2.43	2.11	1.89	1.79	1.64	1.52	1.41	-2.5	-1.4	-1.5
Residential	2.26	2.21	2.04	2.00	1.81	1.66	1.22	-1.0	-1.2	-3.9
Tertiary	1.80	1.87	1.71	1.66	1.55	1.41	1.25	-0.5	-1.0	-2.1
Transport	2.99	3.00	2.91	2.91	2.72	2.69	2.63	-0.3	-0.7	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.0	16.1	19.7			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	13.9	15.0			
RES-E share	1.1	2.4	7.1	15.2	20.0	27.4	36.4			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	12.7	17.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	105	111	109	3.2	5.9	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	146	155	166	0.9	0.5	1.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	59.2	66.0	79.0	4.0	2.0	2.9
as % of GDP	10.2	10.3	13.1	12.3	14.3	14.9	16.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EU00+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7	
GDP (in 000 ME13)	25	33	38	40	45	50	53	4.1	1.8	1.7	
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16441	15407	13636	-0.4	-0.8	-1.9	
Solids	6433	6895	6887	5983	5875	4805	3501	0.7	-1.6	-5.0	
Oil	4068	4725	3888	3732	3541	3402	3165	-0.5	-0.9	-1.1	
Natural gas	2931	2804	2300	2118	1997	1737	1302	-2.4	-1.4	-4.2	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Electricity	-397	-652	-726	-1011	-914	-915	-852	6.2	2.3	-0.7	
Renewable energy forms	788	1156	1465	1870	2166	2602	2746	6.4	4.0	2.4	
Energy Branch Consumption	905	911	1032	907	875	780	701	1.3	-1.6	-2.2	
Non-Energy Uses	980	851	422	427	498	571	605	-8.1	1.7	2.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	9867	10629	10531	9856	10911	10375	9865	0.7	0.4	-1.0	
Solids	4295	4178	4942	4055	4859	3886	3245	1.4	-0.2	-4.0	
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9	
Natural gas	12	384	59	125	125	126	132	17.0	7.8	0.5	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Renewable energy sources	792	1182	1512	1883	2132	2562	2683	6.7	3.5	2.3	
Hydro	230	373	435	350	372	364	363	6.6	-1.5	-0.3	
Biomass & Waste	562	776	975	1283	1483	1393	1119	5.7	4.3	-2.8	
Wind	0	0	59	98	102	394	674	0.0	5.7	20.8	
Solar and others	0	0	12	118	139	384	446	0.0	28.3	12.4	
Geothermal	0	33	33	34	36	26	81	0.0	0.8	8.6	
Net Imports (ktoe)	8544	9276	7075	6717	5676	5193	3946	-1.9	-2.2	-3.6	
Solids	2258	2553	1700	1928	1016	920	255	-2.8	-5.0	-12.9	
Oil	3944	4943	4025	3820	3667	3536	3297	0.2	-0.9	-1.1	
Crude oil and Feedstocks	5228	6145	5916	6308	5990	5691	5330	1.2	0.1	-1.2	
Oil products	-1284	-1202	-1891	-2489	-2323	-2155	-2033	3.9	2.1	-1.3	
Natural gas	2742	2458	2131	1993	1873	1614	1182	-2.5	-1.3	-4.5	
Electricity	-397	-652	-726	-1011	-914	-915	-852	6.2	2.3	-0.7	
Import Dependency (%)	46.0	46.7	39.6	40.5	34.2	33.4	28.6				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48848	48911	49030	45950	1.2	0.6	-0.6	
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0	
Solids	16941	18458	22606	23317	23729	19301	14007	2.9	0.5	-5.1	
Oil (including refinery gas)	661	606	393	440	70	0	0	-5.1	-15.8	-100.0	
Gas (including derived gases)	2178	1896	1967	3035	2955	1639	84	-1.0	4.2	-30.0	
Biomass-waste	15	17	49	54	164	389	456	12.6	12.9	10.8	
Hydro (pumping excluded)	2673	4337	5057	4066	4331	4236	4218	6.6	-1.5	-0.3	
Wind	0	5	681	1144	1183	4585	7835	0.0	5.7	20.8	
Solar	0	0	15	1129	1152	3553	4024	0.0	54.2	13.3	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11800	13436	14587	-0.5	1.7	2.1	
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0	
Renewable energy	1016	1992	2697	4081	4110	7053	8397	10.3	4.3	7.4	
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0	
Wind	0	8	488	691	703	1971	2990	0.0	3.7	15.6	
Solar	0	0	25	1052	1069	2744	3069	0.0	45.6	11.1	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	5845	5878	5326	5967	5770	4462	4270	-0.9	0.8	-3.0	
of which cogeneration units	1129	1191	1017	1814	1699	1559	947	-1.0	5.3	-5.7	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	5100	5100	4703	5313	4934	3616	3506	-0.8	0.5	-3.4	
Gas fired	689	737	607	626	783	751	664	-1.3	2.6	-1.6	
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0	
Biomass-waste fired	0	0	3	15	51	94	98	0.0	32.3	6.8	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.4	38.9	33.9				
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	38.7	38.0	36.9				
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.3	8.6	7.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.2	45.3	57.3	69.3				
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7583	6282	5985	4828	3389	2.4	-2.3	-5.5	
Solids	4928	5817	6610	5466	5436	4474	3261	3.0	-1.9	-5.0	
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0	
Gas (including derived gases)	884	697	720	692	493	263	25	-2.0	-3.7	-25.7	
Biomass & Waste	3	2	4	15	38	91	103	1.4	26.0	10.4	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	12213	13505	11285	10638	10376	10050	9696	-0.8	-0.8	-0.7	
Refineries	5310	6421	6041	6617	6289	5988	5606	1.3	0.4	-1.1	
Biofuels and hydrogen production	0	0	13	106	188	178	183	0.0	30.2	-0.3	
District heating	324	368	304	96	98	94	122	-0.6	-10.7	2.2	
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3790	3784	-2.9	-2.6	0.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUO0+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	48	56	65	72	76	80	84	3.2	1.4	1.0
Public road transport	15	14	11	11	11	11	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	57	58	5.7	1.3	0.6
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.9
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.4
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	2.0	2.5
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2879	2796	2755	4.0	0.6	-0.4
Public road transport	399	362	262	263	270	267	263	-4.1	0.3	-0.2
Private cars and motorcycles	956	1389	1581	1628	1559	1397	1318	5.2	-0.1	-1.7
Heavy goods and light commercial vehicles	305	652	590	646	699	712	700	6.8	1.7	0.0
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.4
Aviation	101	201	182	207	244	302	349	6.1	3.0	3.6
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
By transport activity										
Passenger transport	1473	1965	2034	2106	2083	1977	1942	3.3	0.2	-0.7
Freight transport	369	718	685	731	796	819	814	6.4	1.5	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.5	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.6	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	15944	14837	13033	-0.1	-0.8	-2.0
Final Energy Demand	9106	10184	8843	9205	9472	9131	8085	-0.3	0.7	-1.6
by sector										
Industry	3967	4037	2561	2709	2787	2812	2664	-4.3	0.9	-0.5
Energy intensive industries	3124	3161	1789	1929	1932	1905	1790	-5.4	0.8	-0.8
Other industrial sectors	843	876	772	780	856	907	875	-0.9	1.0	0.2
Residential	2155	2117	2246	2307	2372	2190	1613	0.4	0.5	-3.8
Tertiary	972	1128	1174	1179	1269	1180	915	1.9	0.8	-3.2
Transport ⁽⁵⁾	2013	2903	2862	3011	3044	2949	2892	3.6	0.6	-0.5
by fuel										
Solids	879	979	414	487	415	311	227	-7.3	0.0	-5.8
Oil	3026	3712	3125	3134	3043	2913	2694	0.3	-0.3	-1.2
Gas	1681	1565	1058	1052	1087	1024	854	-4.5	0.3	-2.4
Electricity	2085	2211	2331	2382	2511	2599	2489	1.1	0.7	-0.1
Heat (from CHP and District Heating)	880	939	960	841	863	851	667	0.9	-1.1	-2.5
Renewable energy forms	555	778	956	1309	1552	1429	1147	5.6	5.0	-3.0
Other	0	0	0	0	0	3	6	0.0	0.0	34.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	733	599	472	415	364	308	255	-4.3	-2.5	-3.5
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	28	-9.4	-0.6	-2.2
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	48	33	-3.9	-1.4	-5.6
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	60	43	-2.1	-1.3	-4.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	23	22	0.0	-1.3	-1.9
Freight transport (toe/Mtkm)	35	44	37	37	36	33	31	0.7	-0.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	64.4	67.0	61.2	55.6	51.7	45.6	38.3	-0.5	-1.7	-3.0
of which ETS sectors (2013 scope) GHG emissions	39.4	35.6	30.0	29.0	24.2	18.0		-2.0	-4.6	
of which ESD sectors (2013 scope) GHG emissions	27.6	25.6	25.6	22.7	21.5	20.2		-1.2	-1.1	
CO2 Emissions (energy related)	44.3	49.1	45.9	40.1	38.7	33.0	25.7	0.4	-1.7	-4.0
Power generation/District heating	24.6	27.9	31.2	25.1	24.4	19.7	13.9	2.4	-2.4	-5.4
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.8	-1.8	-1.4
Industry	10.6	9.8	3.7	4.0	3.9	3.6	2.8	-10.0	0.7	-3.2
Residential	1.4	1.2	1.0	1.0	0.7	0.4	0.2	-3.1	-4.0	-12.7
Tertiary	1.2	1.1	0.8	0.7	0.7	0.6	0.4	-4.0	-1.6	-6.1
Transport	5.7	8.3	8.3	8.4	8.3	8.0	7.8	3.7	0.1	-0.6
CO2 Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.4
Non-CO2 GHG emissions	16.7	14.0	12.3	12.5	9.8	9.4	9.3	-3.0	-2.2	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	46.9	41.5	34.8	-0.5	-1.7	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.46	0.49	0.51	0.41	0.40	0.32	0.25	1.2	-2.5	-4.5
Final energy demand (t of CO2/toe)	2.07	2.01	1.55	1.53	1.44	1.39	1.38	-2.8	-0.8	-0.4
Industry	2.67	2.43	1.44	1.47	1.42	1.29	1.07	-6.0	-0.2	-2.8
Residential	0.63	0.58	0.44	0.41	0.28	0.19	0.11	-3.5	-4.5	-9.2
Tertiary	1.24	0.97	0.69	0.61	0.54	0.47	0.40	-5.8	-2.4	-3.0
Transport	2.85	2.88	2.88	2.80	2.73	2.73	2.70	0.1	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	21.0	25.9	30.2			
RES-H&C share	10.5	14.1	25.2	30.8	33.8	34.1	35.9			
RES-E share	4.0	8.5	12.3	17.4	18.0	33.5	46.3			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	10.8	13.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	66	70	73	0.8	1.4	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	103	119	125	5.4	3.2	2.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.5	17.7	6.2	3.0	3.3
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.1	33.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EUCo+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3	
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3	
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8285	7752	6445	0.9	-0.3	-2.5	
Solids	431	683	683	751	852	459	290	4.7	2.2	-10.2	
Oil	3929	4490	3699	3414	3229	2993	2665	-0.6	-1.3	-1.9	
Natural gas	2210	2370	2632	2144	2374	2447	1448	1.8	-1.0	-4.8	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1	
Renewable energy forms	880	906	1138	1195	1416	1503	1632	2.6	2.2	1.4	
Energy Branch Consumption	821	825	745	726	712	616	562	-1.0	-0.5	-2.3	
Non-Energy Uses	656	675	596	514	529	536	535	-0.9	-1.2	0.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	3580	3799	4222	3368	3596	3414	3193	1.7	-1.6	-1.2	
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Oil	1345	1029	767	466	461	435	389	-5.5	-5.0	-1.7	
Natural gas	1355	1865	2215	1431	1485	1275	1039	5.0	-3.9	-3.5	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	880	906	1240	1471	1650	1705	1766	3.5	2.9	0.7	
Hydro	505	545	716	533	544	549	550	3.6	-2.7	0.1	
Biomass & Waste	375	360	500	859	1020	920	712	2.9	7.4	-3.5	
Wind	0	1	12	56	56	56	194	0.0	16.6	13.2	
Solar and others	0	0	5	16	23	173	297	0.0	16.0	29.2	
Geothermal	0	0	7	7	8	7	13	0.0	1.3	5.7	
Net Imports (ktoe)	4134	5208	4461	4657	4696	4345	3259	0.8	0.5	-3.6	
Solids	478	624	699	751	852	459	290	3.9	2.0	-10.2	
Oil	2406	3583	2980	2955	2775	2565	2283	2.2	-0.7	-1.9	
Crude oil and Feedstocks	3952	4334	3647	2979	2837	2703	2500	-0.8	-2.5	-1.3	
Oil products	-1546	-751	-667	-24	-62	-138	-217	-8.1	-21.1	13.3	
Natural gas	905	562	476	713	889	1172	410	-6.2	6.5	-7.5	
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1	
Import Dependency (%)	52.9	58.4	52.1	58.0	56.6	56.0	50.5				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14199	15440	13858	2.7	0.1	-0.2	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	1551	2328	2385	2671	3442	1638	868	4.4	3.7	-12.9	
Oil (including refinery gas)	1687	1855	560	77	24	231	209	-10.4	-27.0	24.1	
Gas (including derived gases)	1571	1814	2553	2232	3414	4558	1000	5.0	2.9	-11.6	
Biomass-waste	1	14	33	98	278	374	279	41.9	23.7	0.0	
Hydro (pumping excluded)	5874	6333	8329	6200	6324	6386	6393	3.6	-2.7	0.1	
Wind	0	10	139	650	650	650	2252	0.0	16.7	13.2	
Solar	0	0	0	68	68	1601	2857	0.0	0.0	45.3	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4881	5767	7320	1.1	1.5	4.1	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	2079	2066	2220	2668	2668	3738	5440	0.7	1.9	7.4	
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2190	0.3	0.2	0.0	
Wind	0	6	79	423	423	423	1258	0.0	18.3	11.5	
Solar	0	0	0	55	55	1125	1992	0.0	0.0	43.1	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	1707	1879	1996	2216	2213	2029	1880	1.6	1.0	-1.6	
of which cogeneration units	558	515	486	298	628	610	649	-1.4	2.6	0.3	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0	
Gas fired	781	919	1031	1706	1383	1190	1080	2.8	3.0	-2.4	
Oil fired	615	646	649	185	150	156	112	0.5	-13.6	-2.9	
Biomass-waste fired	0	3	5	13	24	27	32	0.0	17.3	2.9	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	32.2	30.0	21.4				
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	46.3	45.4	36.8				
% of gross electricity from CHP	16.8	0.0	14.3	15.5	17.1	15.6	13.0				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	51.5	58.4	85.0				
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1329	1288	551	0.2	0.5	-8.4	
Solids	357	537	532	612	725	356	229	4.1	3.1	-10.9	
Oil (including refinery gas)	395	447	120	14	8	66	63	-11.3	-23.7	22.9	
Gas (including derived gases)	497	490	611	350	543	793	200	2.1	-1.2	-9.5	
Biomass & Waste	0	4	7	17	54	72	60	36.6	22.9	1.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	5394	5327	4409	3555	3567	3382	3099	-2.0	-2.1	-1.4	
Refineries	5299	5210	4304	3414	3268	3109	2869	-2.1	-2.7	-1.3	
Biofuels and hydrogen production	0	0	3	70	223	197	175	0.0	56.1	-2.4	
District heating	83	104	97	70	74	65	41	1.6	-2.7	-5.6	
Derived gases, cokeries etc.	12	13	4	1	2	11	14	-10.0	-5.6	19.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	0.9
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.4
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.8
Rail	2	2	2	2	3	3	3	2.7	1.3	0.9
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.8	2.7
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.8
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.4
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.4
Rail	2	3	3	3	3	3	3	3.9	1.4	1.4
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2133	2023	1967	3.0	0.3	-0.8
Public road transport	41	39	61	63	66	64	64	3.9	0.8	-0.3
Private cars and motorcycles	1192	1192	1332	1324	1319	1200	1130	1.1	-0.1	-1.5
Heavy goods and light commercial vehicles	161	508	479	465	510	506	510	11.5	0.6	0.0
Rail	46	52	50	48	52	53	55	0.8	0.5	0.5
Aviation	76	98	108	134	144	154	161	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	1.0
By transport activity										
Passenger transport	1329	1340	1514	1535	1542	1432	1370	1.3	0.2	-1.2
Freight transport	215	581	554	540	591	590	597	9.9	0.7	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.9	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.5	9.9			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7756	7216	5910	1.1	-0.3	-2.7
Final Energy Demand	5371	6343	6347	6190	6307	5888	4988	1.7	-0.1	-2.3
by sector										
Industry	1378	1563	1366	1394	1397	1311	1164	-0.1	0.2	-1.8
Energy intensive industries	847	907	752	745	735	676	588	-1.2	-0.2	-2.2
Other industrial sectors	531	656	614	649	661	635	577	1.5	0.8	-1.4
Residential	1666	1922	1893	1784	1777	1625	1135	1.3	-0.6	-4.4
Tertiary	781	935	1018	934	997	926	719	2.7	-0.2	-3.2
Transport ⁽⁵⁾	1547	1923	2070	2078	2137	2026	1969	3.0	0.3	-0.8
by fuel										
Solids	74	146	150	139	128	103	61	7.3	-1.6	-7.1
Oil	2683	3108	2902	2754	2563	2317	2022	0.8	-1.2	-2.3
Gas	1009	1236	1288	1170	1233	1115	778	2.5	-0.4	-4.5
Electricity	1018	1240	1364	1317	1396	1451	1401	3.0	0.2	0.0
Heat (from CHP and District Heating)	213	258	246	226	239	231	166	1.4	-0.3	-3.6
Renewable energy forms	375	356	397	582	746	661	545	0.6	6.5	-3.1
Other	0	0	0	1	2	11	15	0.0	0.0	19.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	214	196	184	179	169	150	116	-1.5	-0.8	-3.7
Industry (Energy on Value added, index 2000=100)	100	97	88	93	87	79	67	-1.3	-0.1	-2.6
Residential (Energy on Private Income, index 2000=100)	100	91	88	84	76	65	42	-1.2	-1.6	-5.6
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	91	80	57	-0.1	-0.8	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	34	30	-1.2	-1.3	-2.1
Freight transport (toe/Mtkm)	48	49	47	45	43	40	38	-0.2	-0.8	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	25.4	22.9	18.7	0.8	-1.2	-3.0
of which ETS sectors (2013 scope) GHG emissions		12.7	10.8	9.7	10.4	9.2	6.7		-0.4	-4.4
of which ESD sectors (2013 scope) GHG emissions		17.9	17.7	15.7	14.9	13.8	12.1		-1.7	-2.1
CO ₂ Emissions (energy related)	17.0	20.2	18.6	17.0	17.4	15.2	11.2	0.9	-0.6	-4.3
Power generation/District heating	4.1	5.1	4.3	3.5	4.4	3.6	1.6	0.3	0.4	-9.5
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.5	1.3	-1.0	-0.5	-2.5
Industry	2.9	3.5	2.8	2.9	2.7	2.4	1.7	-0.2	-0.5	-4.6
Residential	1.9	2.4	2.1	1.7	1.7	1.4	0.7	1.0	-2.1	-9.1
Tertiary	1.5	1.5	1.4	1.2	1.2	1.0	0.7	-0.6	-1.7	-4.7
Transport	4.5	5.7	6.2	6.0	5.7	5.3	5.1	3.1	-0.8	-1.0
CO ₂ Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.5	2.5	-0.3	0.1	-0.1
Non-CO2 GHG emissions	6.7	7.4	7.4	5.9	5.4	5.2	5.0	0.9	-3.1	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	71.6	64.6	52.8	0.8	-1.2	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.30	0.32	0.25	0.23	0.25	0.20	0.10	-2.1	0.3	-8.9
Final energy demand (t of CO ₂ /toe)	2.01	2.06	1.97	1.90	1.79	1.72	1.65	-0.2	-1.0	-0.8
Industry	2.09	2.23	2.08	2.08	1.94	1.79	1.45	-0.1	-0.7	-2.8
Residential	1.15	1.24	1.12	0.95	0.96	0.86	0.58	-0.3	-1.5	-5.0
Tertiary	1.89	1.57	1.37	1.26	1.18	1.11	1.02	-3.2	-1.4	-1.5
Transport	2.94	2.97	2.97	2.88	2.65	2.64	2.61	0.1	-1.1	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.2	24.3	31.6			
RES-H&C share	13.0	10.9	13.1	18.0	18.7	20.1	25.7			
RES-E share	36.2	32.8	34.2	39.1	38.6	46.3	63.4			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.0	12.2	16.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	65	75	81	-2.1	-0.3	2.3
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	120	127	131	1.3	0.9	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.5	12.5	5.5	1.7	3.3
as % of GDP	12.2	12.9	16.4	16.8	18.4	20.2	22.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Cyprus: EUCo+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3		
GDP (in 000 ME13)	14	16	18	16	19	21	22	2.8	0.2	1.9		
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2151	1993	1786	1.3	-2.4	-1.8		
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-13.7		
Oil	2334	2446	2611	1995	1347	1182	1082	1.1	-6.4	-2.2		
Natural gas	0	0	0	0	558	538	447	0.0	0.0	-2.2		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	0	0	0	0	0.0	0.0	-0.5		
Renewable energy forms	46	57	112	162	246	272	257	9.4	8.1	0.4		
Energy Branch Consumption	54	22	19	17	15	8	6	-9.7	-2.4	-8.5		
Non-Energy Uses	86	73	85	38	42	44	44	-0.1	-7.0	0.6		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	44	51	89	137	195	2111	2911	7.2	8.2	31.0		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	1885	2697	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	44	51	89	137	195	226	214	7.2	8.2	0.9		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	9	10	24	28	37	45	44	10.5	4.4	1.9		
Wind	0	0	3	21	36	36	39	0.0	29.7	0.7		
Solar and others	36	41	61	86	118	141	129	5.6	6.8	0.9		
Geothermal	0	0	1	2	4	5	2	0.0	18.7	-6.8		
Net imports (ktoe)	2565	2843	2945	2243	2199	147	-840	1.4	-2.9	0.0		
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-13.7		
Oil	2531	2794	2910	2218	1588	1443	1343	1.4	-5.9	-1.7		
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0		
Oil products	1371	2794	2910	2218	1588	1443	1343	7.8	-5.9	-1.7		
Natural gas	0	0	0	0	561	-1341	-2225	0.0	0.0	0.0		
Electricity	0	0	0	0	0	0	0	0.0	0.0	-6.7		
Import Dependency (%)	98.6	100.7	100.8	94.3	91.8	6.5	-40.6					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4940	5253	4662	4.7	-0.7	-0.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	3370	4376	5249	4086	442	22	22	4.5	-21.9	-25.8		
Gas (including derived gases)	0	0	0	0	3441	3807	3107	0.0	0.0	-1.0		
Biomass-waste	0	0	35	45	59	102	115	0.0	5.4	6.9		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	31	248	422	422	454	0.0	29.8	0.7		
Solar	0	0	6	195	576	899	964	0.0	58.4	5.3		
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	2169	2213	4.3	2.8	1.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	89	292	554	715	758	0.0	20.1	3.2		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	82	158	216	216	229	0.0	10.2	0.6		
Solar	0	0	7	135	338	499	529	0.0	47.4	4.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	983	1119	1409	1462	1426	1455	1455	3.7	0.1	0.2		
of which cogeneration units	0	5	22	2	2	1	2	0.0	-21.7	-1.1		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	34	514	514	0.0	0.0	31.3		
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9		
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.2		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.5	27.1	23.7					
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.8	60.8	60.1					
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	0.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.4	27.1	32.9					
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	654	556	465	3.0	-5.7	-3.4		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	881	1077	1178	731	83	0	0	2.9	-23.3	-100.0		
Gas (including derived gases)	0	0	0	0	558	537	445	0.0	0.0	-2.2		
Biomass & Waste	0	0	4	10	13	19	19	0.0	12.6	4.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	1178	0	15	17	41	37	33	-35.4	10.5	-2.1		
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0		
Biofuels and hydrogen production	0	0	15	17	41	36	32	0.0	10.5	-2.2		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	16.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUO0+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.3	1.9
Public road transport	1	1	1	1	1	1	1	1.4	0.8	0.2
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.2
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.2
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	963	938	924	2.0	-0.9	-0.4
Public road transport	32	35	37	37	38	37	35	1.5	0.3	-0.7
Private cars and motorcycles	373	444	577	490	483	422	374	4.5	-1.8	-2.5
Heavy goods and light commercial vehicles	173	197	152	125	126	124	125	-1.3	-1.8	-0.1
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	316	355	389	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	687	785	898	791	837	813	799	2.7	-0.7	-0.5
Freight transport	173	197	152	125	126	124	125	-1.3	-1.8	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.8	3.2			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2110	1949	1742	1.3	-2.3	-1.9
Final Energy Demand	1650	1834	1926	1700	1762	1703	1533	1.6	-0.9	-1.4
by sector										
Industry	445	320	235	202	205	200	189	-6.2	-1.4	-0.8
Energy intensive industries	240	221	171	141	146	147	144	-3.3	-1.6	-0.1
Other industrial sectors	205	98	63	61	59	53	45	-11.1	-0.7	-2.8
Residential	211	322	333	323	315	285	212	4.7	-0.5	-3.9
Tertiary	134	209	309	259	279	280	208	8.7	-1.0	-2.9
Transport ⁽⁵⁾	860	983	1050	916	963	938	924	2.0	-0.9	-0.4
by fuel										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-13.7
Oil	1317	1403	1384	1226	1223	1139	1038	0.5	-1.2	-1.6
Gas	0	0	0	0	0	1	2	0.0	0.0	16.8
Electricity	258	341	420	360	391	423	373	5.0	-0.7	-0.5
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.5	-3.7
Renewable energy forms	42	54	105	114	146	139	114	9.6	3.4	-2.4
Other	0	0	0	0	0	1	4	-100.0	0.0	35.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	175	157	151	131	115	97	80	-1.5	-2.6	-3.6
Industry (Energy on Value added, index 2000=100)	100	70	56	57	53	48	42	-5.6	-0.6	-2.2
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	84	59	1.3	-1.1	-5.4
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	143	128	88	5.2	-1.5	-4.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	33	30	0.5	-3.2	-2.5
Freight transport (toe/Mtkm)	129	135	133	109	104	96	91	0.3	-2.5	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	11.3	10.4	10.3	8.2	7.3	6.8	6.5	-0.9	-3.4	-1.2
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.3	3.3		-4.9	-0.7
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.5	3.2		-1.8	-1.7
CO2 Emissions (energy related)	7.2	8.0	8.1	6.1	5.3	4.8	4.3	1.2	-4.1	-2.2
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.3	1.0	2.9	-8.4	-4.0
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.5	0.4	-7.6	-1.6	-2.8
Residential	0.2	0.5	0.4	0.3	0.3	0.2	0.1	4.7	-2.4	-14.7
Tertiary	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	-1.9	-6.2
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.6	1.8	-1.2	-0.4
CO2 Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.7	-3.5	-0.5	2.3
Non-CO2 GHG emissions	3.2	1.5	1.6	1.6	1.4	1.4	1.5	-6.9	-1.5	0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	115.7	108.8	102.6	-0.9	-3.4	-1.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.85	0.80	0.71	0.52	0.32	0.24	0.22	-1.7	-7.7	-3.5
Final energy demand (t of CO2/toe)	2.57	2.45	2.24	2.22	2.13	2.06	2.09	-1.3	-0.5	-0.2
Industry	3.16	3.11	2.70	2.73	2.63	2.47	2.16	-1.6	-0.3	-1.9
Residential	1.11	1.44	1.11	1.04	0.91	0.65	0.28	0.0	-1.9	-11.3
Tertiary	0.00	0.43	0.69	0.73	0.63	0.50	0.44	0.0	-0.9	-3.5
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.87	-0.2	-0.3	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.9	17.5	19.3			
RES-H&C share	7.9	10.0	18.2	21.8	24.3	27.3	31.1			
RES-E share	0.0	0.0	1.4	10.6	21.4	27.1	32.9			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	11.0	12.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	111	107	114	3.1	-3.2	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	196	179	189	3.2	0.8	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.5	3.1	3.4	3.9	8.1	2.1	2.5
as % of GDP	8.3	12.0	13.7	14.9	16.4	16.3	17.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EUCC+35					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1		
GDP (in 000 ME13)	112	137	157	165	181	197	216	3.4	1.4	1.8		
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	41190	40565	37320	0.8	-0.8	-1.0		
Solids	21643	20248	18364	15061	15094	14975	13624	-1.6	-1.9	-1.0		
Oil	7881	9899	9306	8965	8808	8376	8114	1.7	-0.5	-0.8		
Natural gas	7500	7703	8070	7797	7217	6661	4473	0.7	-1.1	-4.7		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Renewable energy forms	1429	1955	2980	3521	3864	4367	5007	7.6	2.6	2.8		
Energy Branch Consumption	1768	1796	2068	1808	1781	1789	1701	1.6	-1.5	-0.5		
Non-Energy Uses	2093	2948	2783	2447	2583	2674	2724	2.9	-0.7	0.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	28052	29207	28060	0.3	-1.2	0.0		
Solids	25049	23570	20730	16524	17059	17706	15984	-1.9	-1.9	-0.6		
Oil	386	591	290	223	222	210	189	-2.8	-2.7	-1.6		
Natural gas	169	154	202	191	181	170	156	1.8	-1.1	-1.5		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Renewable energy sources	1426	2142	3101	3560	3793	4322	4933	8.1	2.0	2.7		
Hydro	151	205	240	208	218	212	236	4.7	-0.9	0.8		
Biomass & Waste	1275	1933	2770	3106	3242	3559	3165	8.1	1.6	-0.2		
Wind	0	2	29	44	65	231	546	76.2	8.5	23.7		
Solar and others	0	3	62	202	265	317	357	0.0	15.7	3.0		
Geothermal	0	0	0	0	2	3	629	0.0	0.0	78.1		
Net Imports (ktoe)	9414	12641	11447	13826	13138	11358	9260	2.0	1.4	-3.4		
Solids	-4721	-3270	-2968	-1463	-1965	-2731	-2360	-4.5	-4.0	1.8		
Oil	7512	9649	8974	8742	8586	8167	7925	1.8	-0.4	-0.8		
Crude oil and Feedstocks	5596	7730	7837	6115	6048	5830	5720	3.4	-2.6	-0.6		
Oil products	1916	1919	1137	2627	2538	2337	2205	-5.1	8.4	-1.4		
Natural gas	7482	7535	6846	7606	7036	6491	4318	-0.9	0.3	-4.8		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Import Dependency (%)	22.9	28.0	25.6	33.6	31.9	28.0	24.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	80739	85938	86592	1.6	-0.6	0.7		
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0		
Solids	52752	49522	47113	41095	42894	42895	39381	-1.1	-0.9	-0.9		
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0		
Gas (including derived gases)	3907	4215	4121	5853	3638	5022	3108	0.5	-1.2	-1.6		
Biomass-waste	531	739	2188	2214	1094	2810	3643	15.2	-6.7	12.8		
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2460	2739	4.7	-0.9	0.8		
Wind	1	21	335	508	759	2687	6351	78.9	8.5	23.7		
Solar	0	0	615	2149	2214	2466	3109	0.0	13.7	3.5		
Geothermal and other renewables	0	0	1	0	2	2	667	0.0	9.0	78.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18569	19663	21406	2.5	0.3	1.4		
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0		
Renewable energy	953	1043	2989	3628	3816	4766	7164	12.1	2.5	6.5		
Hydro (pumping excluded)	952	1020	1049	1080	1080	1087	1147	1.0	0.3	0.6		
Wind	1	22	213	282	408	1116	2716	70.9	6.7	20.9		
Solar	0	1	1727	2266	2328	2563	3301	0.0	3.0	3.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	11079	11265	11000	11182	10748	10891	10236	-0.1	-0.2	-0.5		
of which cogeneration units	3733	5199	4792	3848	3868	3003	2284	2.5	-2.1	-5.1		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	9823	9935	9571	9656	9487	9414	8798	-0.3	-0.1	-0.8		
Gas fired	1097	1110	1176	1220	931	1155	770	0.7	-2.3	-1.9		
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2		
Biomass-waste fired	19	80	136	171	258	258	488	21.7	6.6	6.6		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	117	0.0	0.0	78.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	46.1	46.4	43.2					
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	32.8	32.6	31.7					
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.2	14.3	11.2					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	42.4	44.2	50.9					
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12488	13401	12918	-0.3	-2.0	0.3		
Solids	13945	14025	13445	10677	11222	11421	10642	-0.4	-1.8	-0.5		
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0		
Gas (including derived gases)	1236	1292	1134	1938	979	1226	873	-0.9	-1.5	-1.1		
Biomass & Waste	253	224	562	626	286	752	829	8.3	-6.5	11.2		
Geothermal heat	0	0	0	0	2	2	574	0.0	0.0	78.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	15035	19758	20049	17183	17144	16765	16256	2.9	-1.6	-0.5		
Refineries	6151	8144	8337	6497	6443	6221	6090	3.1	-2.5	-0.6		
Biofuels and hydrogen production	62	3	231	285	594	516	505	14.1	9.9	-1.6		
District heating	975	916	787	650	692	648	433	-2.1	-1.3	-4.6		
Derived gases, cokeries etc.	7846	10696	10693	9751	9414	9380	9228	3.1	-1.3	-0.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Czech Republic: EUOQ+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
							Annual % Change				
TRANSPORT											
Passenger transport activity (Gpkm)	103	112	108	113	124	134	145	0.5	1.4	1.5	
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.2	
Private cars and motorcycles	67	72	67	68	75	80	85	0.0	1.1	1.3	
Rail	15	15	16	18	20	22	24	0.1	2.6	2.0	
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.5	
Heavy goods and light commercial vehicles	29	34	34	35	38	40	43	1.7	1.1	1.2	
Rail	17	15	14	15	17	19	21	-2.4	2.1	2.0	
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.2	
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6304	5928	5846	3.7	0.3	-0.8	
Public road transport	233	296	379	385	401	406	412	5.0	0.6	0.3	
Private cars and motorcycles	2563	3389	3394	3319	3294	2921	2754	2.8	-0.3	-1.8	
Heavy goods and light commercial vehicles	1038	1753	1810	1914	1996	1942	1967	5.7	1.0	-0.1	
Rail	216	197	193	211	235	249	266	-1.1	2.0	1.2	
Aviation	197	343	341	345	373	405	443	5.6	0.9	1.7	
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	2.0	
By transport activity											
Passenger transport	3107	4132	4229	4175	4214	3887	3774	3.1	0.0	-1.1	
Freight transport	1145	1850	1892	2003	2090	2041	2071	5.1	1.0	-0.1	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.5				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.1				
ENERGY EFFICIENCY											
Primary energy consumption	39004	42175	41899	38675	38607	37891	34596	0.7	-0.8	-1.1	
Final Energy Demand	24798	26026	24853	24635	25370	24030	20637	0.0	0.2	-2.0	
by sector											
Industry	10129	9681	7933	7883	8173	8019	7477	-2.4	0.3	-0.9	
Energy intensive industries	6420	6748	5015	5079	5141	5008	4499	-2.4	0.2	-1.3	
Other industrial sectors	3709	2934	2919	2804	3032	3011	2977	-2.4	0.4	-0.2	
Residential	6150	6345	6665	6340	6584	6110	4292	0.8	-0.1	-4.2	
Tertiary	4151	3904	3979	4098	4157	3815	2862	-0.4	0.4	-3.7	
Transport ⁽⁵⁾	4368	6095	6276	6315	6457	6087	6006	3.7	0.3	-0.7	
by fuel											
Solids	5134	3769	2424	2616	2242	1926	1407	-7.2	-0.8	-4.6	
Oil	5322	6817	6541	6366	6149	5640	5335	2.1	-0.6	-1.4	
Gas	6491	6741	6662	6128	6373	5681	4205	0.3	-0.4	-4.1	
Electricity	4246	4754	4919	5012	5315	5701	5714	1.5	0.8	0.7	
Heat (from CHP and District Heating)	2624	2478	2249	2102	2275	2257	1665	-1.5	0.1	-3.1	
Renewable energy forms	981	1467	2058	2411	3014	2809	2279	7.7	3.9	-2.8	
Other	0	0	0	1	2	15	32	-100.0	0.0	31.5	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	366	329	285	250	228	206	173	-2.5	-2.2	-2.7	
Industry (Energy on Value added, index 2000=100)	100	69	44	43	40	37	31	-7.8	-0.9	-2.5	
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	59	37	-2.2	-1.4	-6.2	
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	67	56	38	-2.7	-1.2	-5.5	
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	27	24	2.2	-1.5	-2.7	
Freight transport (toe/Mtkm)	25	38	40	40	38	35	33	4.8	-0.4	-1.6	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	122.6	118.5	105.2	-0.8	-1.4	-1.5	
of which ETS sectors (2013 scope) GHG emissions	87.1	79.4	68.7	66.9	67.8	61.6	61.6		-1.7	-0.8	
of which ESD sectors (2013 scope) GHG emissions	63.6	61.4	59.9	55.7	50.8	43.6	43.6		-1.0	-2.4	
CO2 Emissions (energy related)	125.7	124.3	114.6	102.9	100.2	96.9	85.2	-0.9	-1.3	-1.6	
Power generation/District heating	66.8	66.2	63.2	52.9	52.4	53.7	48.8	-0.6	-1.9	-0.7	
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.6	2.4	1.6	-1.6	-0.6	
Industry	28.3	24.7	17.5	17.0	16.0	15.0	12.6	-4.7	-0.9	-2.4	
Residential	8.8	8.4	8.3	7.8	7.5	6.2	3.6	-0.6	-0.9	-7.1	
Tertiary	6.8	4.9	4.9	4.8	4.7	3.5	2.2	-3.3	-0.4	-7.3	
Transport	12.4	17.8	17.6	17.6	17.0	16.0	15.5	3.6	-0.4	-0.9	
CO2 Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.2	5.1	-1.7	1.1	-0.5	
Non-CO2 GHG emissions	21.7	21.1	21.5	20.5	17.1	16.4	14.9	-0.1	-2.3	-1.3	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	62.1	60.0	53.2	-0.8	-1.4	-1.5	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.60	0.55	0.52	0.46	0.45	0.45	0.44	-1.4	-1.3	-0.4	
Final energy demand (t of CO2/toe)	2.27	2.15	1.94	1.92	1.78	1.69	1.64	-1.6	-0.9	-0.8	
Industry	2.79	2.55	2.21	2.16	1.96	1.87	1.68	-2.3	-1.2	-1.5	
Residential	1.43	1.33	1.24	1.24	1.14	1.02	0.84	-1.4	-0.8	-3.1	
Tertiary	1.63	1.26	1.22	1.18	1.12	0.91	0.77	-2.9	-0.9	-3.7	
Transport	2.85	2.92	2.81	2.79	2.63	2.62	2.58	-0.1	-0.7	-0.2	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.6	15.4	18.3				
RES-H&C share	5.9	9.1	12.6	15.5	17.3	19.1	21.5				
RES-E share	3.4	3.8	7.5	10.3	8.9	13.2	21.0				
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.3	11.7				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	81	81	74	2.0	3.0	-0.8	
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	128	123	122	7.9	-1.0	-0.5	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.1	35.5	42.4	6.8	1.3	2.8	
as % of GDP	13.1	14.8	18.1	16.7	17.8	18.1	19.7				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	6	6	6	6	6	0.4	0.4	0.5
GDP (in 000 ME13)	233	248	247	256	289	321	350	0.6	1.6	1.9
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16828	15634	13987	0.2	-1.7	-1.8
Solids	3985	3713	3809	1860	1694	876	370	-0.5	-7.8	-14.1
Oil	9101	8063	7568	6738	6246	5667	5037	-1.3	-1.9	-2.1
Natural gas	4465	4413	4435	3680	2629	2390	1789	-0.1	-5.1	-3.8
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Renewable energy forms	2124	3246	4326	3795	5643	5996	6426	7.4	2.7	1.3
Energy Branch Consumption	1121	1205	1132	911	890	742	611	0.1	-2.4	-3.7
Non-Energy Uses	301	289	263	283	313	339	345	-1.3	1.8	1.0
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	27958	30781	22915	15259	15901	13536	11516	-2.0	-3.6	-3.2
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil	18465	18464	12040	8158	7711	6401	4407	-4.2	-4.4	-5.4
Natural gas	7428	9397	7356	4188	3856	2448	1754	-0.1	-6.3	-7.6
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	2065	2920	3520	2913	4334	4688	5355	5.5	2.1	2.1
Hydro	3	2	2	2	2	2	2	-3.6	0.2	0.0
Biomass & Waste	1688	2335	2825	1819	2829	2949	2699	5.3	0.0	-0.5
Wind	365	569	672	1007	1318	1495	1948	6.3	7.0	4.0
Solar and others	8	10	16	80	100	124	147	7.2	19.9	4.0
Geothermal	1	4	5	6	85	117	560	13.8	32.6	20.7
Net Imports (ktoe)	-7370	-10130	-3257	2304	1729	2948	3377	-7.8	0.0	6.9
Solids	3783	3505	2642	1860	1694	876	370	-3.5	-4.3	-14.1
Oil	-8386	-9068	-3586	-676	-670	99	1451	-8.1	-15.4	0.0
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-740	31	1463	-5.4	-17.4	0.0
Oil products	397	1865	1447	-7	70	68	-12	13.8	-26.1	0.0
Natural gas	-2882	-5010	-3022	-508	-1219	-40	119	0.5	-8.7	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	9.8	17.9	22.7			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30711	30754	34717	0.8	-2.3	1.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	16673	15463	17006	6498	5421	2620	1406	0.2	-10.8	-12.6
Oil (including refinery gas)	4439	1375	774	214	7	79	51	-16.0	-37.5	21.8
Gas (including derived gases)	8774	8780	7906	4589	710	1386	1040	-1.0	-21.4	3.9
Biomass-waste	1895	3989	5340	3164	8458	8495	8784	10.9	4.7	0.4
Hydro (pumping excluded)	30	23	21	21	21	21	21	-3.5	0.2	0.0
Wind	4241	6614	7809	11709	15325	17385	22647	6.3	7.0	4.0
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13231	13392	1.3	0.2	-0.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2401	3141	3818	5910	6456	6682	8092	4.7	5.4	2.3
Hydro (pumping excluded)	10	11	9	9	9	9	9	-1.0	0.0	0.0
Wind	2390	3127	3802	5064	5609	5835	7245	4.8	4.0	2.6
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	9386	9880	9601	9297	7179	6550	5301	0.2	-2.9	-3.0
of which cogeneration units	5578	5685	5806	7114	6106	5124	2833	0.4	0.5	-7.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6
Gas fired	1862	2278	2274	2274	1135	1123	741	2.0	-6.7	-4.2
Oil fired	860	860	1017	1017	492	224	218	1.7	-7.0	-7.8
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2870	2.4	5.6	-1.0
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.7	25.7	28.8			
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.3	33.1	35.2			
% of gross electricity from CHP	52.6	52.1	49.2	53.6	46.5	38.4	25.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.1	80.0	86.7	92.8			
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3774	3267	2753	-0.3	-6.8	-3.1
Solids	3669	3444	3770	1696	1545	780	299	0.3	-8.5	-15.2
Oil (including refinery gas)	1354	346	221	65	2	22	16	-16.6	-39.0	25.9
Gas (including derived gases)	2112	1996	1812	1197	203	344	251	-1.5	-19.6	2.1
Biomass & Waste	699	1341	1821	880	2024	2120	2187	10.0	1.1	0.8
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	9001	8288	8139	8416	8102	7470	7085	-1.0	0.0	-1.3
Refineries	8435	7700	7175	7493	6971	6427	5864	-1.6	-0.3	-1.7
Biofuels and hydrogen production	0	0	27	277	433	358	306	0.0	32.1	-3.4
District heating	549	575	923	644	688	640	856	5.3	-2.9	2.2
Derived gases, cokeries etc.	17	13	13	3	10	45	59	-2.9	-2.2	19.0

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Denmark: EUOQ+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0	
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.5	
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6	
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3	
Aviation ⁽³⁾	8	9	10	12	13	14	17	2.7	2.5	2.2	
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1	
Freight transport activity (Gtkm)	21	22	23	25	29	30	32	0.6	2.3	1.2	
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.1	
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9	
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.0	
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4962	4637	4484	0.7	-0.4	-1.0	
Public road transport	203	202	199	204	213	211	208	-0.2	0.7	-0.2	
Private cars and motorcycles	2627	2866	2828	2599	2396	2057	1909	0.7	-1.6	-2.2	
Heavy goods and light commercial vehicles	864	1003	1011	971	1059	1044	1026	1.6	0.5	-0.3	
Rail	103	107	113	118	125	131	136	0.9	1.0	0.8	
Aviation	856	955	874	960	997	1014	1019	0.2	1.3	0.2	
Inland navigation	163	192	156	158	171	180	186	-0.4	0.9	0.9	
By transport activity											
Passenger transport	3874	4197	4049	3915	3772	3458	3319	0.4	-0.7	-1.3	
Freight transport	942	1128	1132	1094	1190	1180	1166	1.9	0.5	-0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.0	2.5				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.9	8.2				
ENERGY EFFICIENCY											
Primary energy consumption	19432	19264	19777	16536	16515	15296	13642	0.2	-1.8	-1.9	
Final Energy Demand	14717	15497	15606	14800	14757	13904	11791	0.6	-0.6	-2.2	
by sector											
Industry	2934	2864	2417	2568	2707	2648	2351	-1.9	1.1	-1.4	
Energy intensive industries	1156	1107	849	908	933	857	741	-3.0	1.0	-2.3	
Other industrial sectors	1778	1757	1569	1659	1774	1791	1610	-1.2	1.2	-1.0	
Residential	4162	4453	4916	4345	4185	3913	2884	1.7	-1.6	-3.7	
Tertiary	2805	2856	3094	2879	2903	2705	2072	1.0	-0.6	-3.3	
Transport ⁽⁵⁾	4816	5324	5179	5009	4962	4637	4484	0.7	-0.4	-1.0	
by fuel											
Solids	290	253	166	163	150	95	71	-5.4	-1.0	-7.3	
Oil	7058	7293	6759	6083	5654	5057	4454	-0.4	-1.8	-2.4	
Gas	1667	1708	1771	1744	1823	1617	1220	0.6	0.3	-3.9	
Electricity	2791	2877	2783	2733	2842	2950	2994	0.0	0.2	0.5	
Heat (from CHP and District Heating)	2255	2424	2840	2556	2498	2334	1551	2.3	-1.3	-4.7	
Renewable energy forms	656	943	1287	1519	1779	1805	1436	7.0	3.3	-2.1	
Other	0	0	0	3	10	46	66	-100.0	0.0	20.2	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	85	79	81	66	58	49	40	-0.4	-3.3	-3.7	
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	81	66	-0.9	-0.1	-3.0	
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	59	40	0.2	-3.5	-5.6	
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	67	47	0.1	-2.3	-5.3	
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	30	27	-0.4	-2.2	-2.5	
Freight transport (toe/Mtkm)	44	51	50	44	42	39	36	1.3	-1.7	-1.4	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	71.7	66.3	63.9	50.5	45.7	39.6	33.7	-1.1	-3.3	-3.0	
of which ETS sectors (2013 scope) GHG emissions	29.3	27.9	18.0	14.7	11.2	8.3			-6.2	-5.5	
of which ESD sectors (2013 scope) GHG emissions	37.0	36.0	32.5	31.1	28.4	25.4			-1.5	-2.0	
CO ₂ Emissions (energy related)	53.3	50.0	48.8	35.8	31.1	25.3	19.9	-0.9	-4.4	-4.4	
Power generation/District heating	24.5	20.3	21.2	10.6	7.1	4.2	2.0	-1.4	-10.3	-11.9	
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.4	
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.4	-3.2	0.4	-5.4	
Residential	3.9	3.6	3.2	2.6	2.2	1.9	1.1	-2.0	-3.7	-6.4	
Tertiary	3.0	2.7	2.9	2.5	2.4	1.8	1.2	-0.3	-1.8	-6.7	
Transport	14.3	15.9	15.5	14.2	13.5	12.6	12.1	0.8	-1.3	-1.1	
CO ₂ Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.5	1.5	1.5	-6.1	1.1	-0.3	
Non-CO ₂ GHG emissions	15.8	14.0	13.7	13.3	13.1	12.7	12.3	-1.4	-0.4	-0.6	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.3	54.8	46.6	-1.1	-3.3	-3.0	
Carbon Intensity indicators											
Electricity and Steam production (t of CO ₂ /MWh)	0.36	0.28	0.26	0.17	0.11	0.07	0.04	-3.0	-8.3	-10.5	
Final energy demand (t of CO ₂ /toe)	1.81	1.76	1.63	1.58	1.51	1.42	1.42	-1.0	-0.8	-0.6	
Industry	1.85	1.79	1.63	1.58	1.52	1.31	1.01	-1.3	-0.7	-4.0	
Residential	0.95	0.80	0.66	0.59	0.53	0.48	0.40	-3.6	-2.1	-2.9	
Tertiary	1.05	0.95	0.93	0.88	0.83	0.65	0.58	-1.2	-1.2	-3.5	
Transport	2.97	2.99	2.99	2.83	2.72	2.71	2.69	0.0	-0.9	-0.1	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	34.0	39.7	45.7				
RES-H&C share	15.3	22.2	30.8	28.3	36.9	45.5	51.6				
RES-E share	15.0	25.0	33.1	41.9	62.7	66.6	80.9				
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	16.5	23.9				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	107	110	98	1.8	1.9	-0.9	
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	206	210	218	1.4	0.5	0.6	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.6	34.5	2.4	1.0	3.0	
as % of GDP	7.9	8.8	9.4	8.2	8.8	8.9	9.8				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Estonia: EUCo+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.8		
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6		
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6440	6218	5166	2.1	0.5	-2.2		
Solids	2968	3190	3917	3589	3688	3598	2824	2.8	-0.6	-2.6		
Oil	916	1182	1109	1065	974	877	805	1.9	-1.3	-1.9		
Natural gas	662	800	563	796	854	796	414	-1.6	4.3	-7.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-80	-138	-280	-100	-114	-98	69	13.4	-8.6	0.0		
Renewable energy forms	513	589	847	995	1037	1044	1054	5.1	2.1	0.2		
Energy Branch Consumption	163	193	199	190	186	179	142	2.0	-0.7	-2.7		
Non-Energy Uses	180	229	90	280	295	301	306	-6.7	12.6	0.4		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	3435	4250	5467	5368	5412	5279	4456	4.8	-0.1	-1.9		
Solids	2669	3176	3943	3594	3689	3607	2833	4.0	-0.7	-2.6		
Oil	249	375	532	681	648	581	511	7.9	2.0	-2.4		
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	512	692	988	1093	1075	1091	1113	6.8	0.9	0.3		
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0		
Biomass & Waste	512	686	962	1040	1013	1024	1042	6.5	0.5	0.3		
Wind	0	5	24	49	57	61	61	0.0	9.2	0.6		
Solar and others	0	0	0	0	2	3	6	0.0	0.0	13.9		
Geothermal	0	0	0	0	0	0	1	0.0	0.0	20.5		
Net Imports (ktoe)	1628	1489	862	1219	1262	1173	946	-6.2	3.9	-2.8		
Solids	270	23	-22	-5	-1	-9	-9	0.0	-24.4	21.1		
Oil	786	917	760	625	555	518	498	-0.3	-3.1	-1.1		
Crude oil and Feedstocks	-125	-225	-394	-560	-523	-460	-397	12.2	2.9	-2.7		
Oil products	911	1142	1153	1185	1078	978	896	2.4	-0.7	-1.8		
Natural gas	657	792	558	796	860	810	447	-1.6	4.4	-6.3		
Electricity	-80	-138	-280	-100	-114	-98	69	13.4	-8.6	0.0		
Import Dependency (%)	32.0	25.9	13.5	18.5	18.9	18.2	17.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11383	11459	8705	4.3	-1.3	-2.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	7682	9302	11167	8608	9151	9130	6600	3.8	-2.0	-3.2		
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0		
Gas (including derived gases)	757	760	712	689	658	682	446	-0.6	-0.8	-3.8		
Biomass-waste	13	35	740	859	873	906	915	49.8	1.7	0.5		
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0		
Wind	0	54	277	575	668	707	710	0.0	9.2	0.6		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2286	2227	2188	-0.3	-2.1	-0.4		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	2	36	114	312	343	362	362	49.8	11.6	0.6		
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0		
Wind	0	31	108	303	334	353	353	0.0	12.0	0.6		
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2910	2648	2713	2377	1943	1865	1826	-0.7	-3.3	-0.6		
of which cogeneration units	452	1604	447	437	265	239	305	-0.1	-5.1	1.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2684	2411	2430	1871	1423	1423	1423	-1.0	-5.2	0.0		
Gas fired	218	224	224	362	372	293	249	0.3	5.2	-3.9		
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0		
Biomass-waste fired	0	5	51	144	148	148	154	0.0	11.2	0.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	51.3	53.1	41.2					
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.3	33.9	33.7					
% of gross electricity from CHP	11.0	10.2	10.3	12.7	10.9	9.0	11.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.8	14.4	19.1					
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2678	2720	2029	2.5	-1.5	-2.7		
Solids	2199	2353	2715	2171	2304	2326	1676	2.1	-1.6	-3.1		
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0		
Gas (including derived gases)	226	227	209	168	166	177	135	-0.8	-2.3	-2.0		
Biomass & Waste	2	10	179	205	208	218	218	55.3	1.5	0.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	926	1271	1523	1753	1788	1642	1413	5.1	1.6	-2.3		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	0	10	65	54	44	0.0	0.0	-3.7		
District heating	454	489	446	418	435	401	297	-0.2	-0.3	-3.7		
Derived gases, cokeries etc.	473	782	1077	1325	1288	1187	1071	8.6	1.8	-1.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.7
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.5
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.5
Rail	0	0	0	0	0	0	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.7
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.2
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	794	726	688	3.0	0.2	-1.4
Public road transport	62	62	67	74	76	75	73	0.7	1.3	-0.3
Private cars and motorcycles	349	475	499	524	483	403	354	3.6	-0.3	-3.1
Heavy goods and light commercial vehicles	95	135	116	132	139	141	143	2.0	1.9	0.2
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	66	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
By transport activity										
Passenger transport	441	589	614	647	618	546	503	3.4	0.1	-2.0
Freight transport	138	178	167	164	176	180	185	1.9	0.5	0.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.1	2.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.8	7.0			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6145	5917	4860	2.4	0.1	-2.3
Final Energy Demand	2434	2877	2907	3036	3093	2949	2499	1.8	0.6	-2.1
by sector										
Industry	571	718	575	713	747	742	675	0.1	2.7	-1.0
Energy intensive industries	245	273	231	294	305	303	275	-0.6	2.8	-1.0
Other industrial sectors	327	446	343	419	442	440	400	0.5	2.6	-1.0
Residential	929	890	1028	963	987	943	715	1.0	-0.4	-3.2
Tertiary	348	495	520	544	558	532	414	4.1	0.7	-3.0
Transport ⁽⁵⁾	586	774	785	816	800	732	695	3.0	0.2	-1.4
by fuel										
Solids	118	118	83	64	57	47	38	-3.4	-3.8	-4.0
Oil	772	982	941	966	859	751	672	2.0	-0.9	-2.4
Gas	177	263	207	286	328	320	187	1.6	4.7	-5.4
Electricity	431	519	594	614	658	687	648	3.3	1.0	-0.1
Heat (from CHP and District Heating)	511	547	531	484	513	486	373	0.4	-0.4	-3.1
Renewable energy forms	425	447	550	622	679	655	574	2.6	2.1	-1.7
Other	0	0	0	0	0	3	7	-100.0	0.0	39.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	465	372	405	346	315	280	215	-1.4	-2.5	-3.7
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	61	52	-4.0	-0.1	-2.3
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	45	31	-2.9	-3.4	-5.1
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	74	53	0.8	-2.4	-4.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	32	28	0.3	-1.7	-2.9
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.7	16.3	12.2	1.0	-1.1	-3.1
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	12.0	12.0	8.5		-1.4	-3.4
of which ESD sectors (2013 scope) GHG emissions		5.1	5.0	5.1	4.7	4.3	3.7		-0.6	-2.3
CO ₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.5	14.1	10.2	1.6	-1.3	-3.4
Power generation/District heating	10.7	11.3	12.7	10.1	10.7	10.7	7.4	1.7	-1.6	-3.6
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.0	-2.5
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.4	-1.8	-0.1	-6.0
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.1	-4.2	0.5	-5.1
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.2	2.1	1.8	-6.1
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.9	3.1	-0.6	-1.6
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.5	0.5	-6.0	3.0	-0.3
Non-CO2 GHG emissions	2.3	1.9	2.0	1.9	1.8	1.8	1.6	-1.4	-1.0	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	41.6	40.6	30.4	1.0	-1.1	-3.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.59	0.60	0.55	-0.6	-0.6	-0.7
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.10	1.06	-0.5	-0.8	-1.0
Industry	1.58	1.43	1.31	1.07	1.00	0.95	0.60	-1.8	-2.6	-5.0
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.17	-5.2	0.9	-2.0
Tertiary	0.91	1.05	0.75	0.92	0.84	0.68	0.60	-2.0	1.1	-3.2
Transport	2.96	2.98	2.99	2.96	2.75	2.73	2.70	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.9	26.7	31.6			
RES-H&C share	31.8	32.2	43.2	39.9	38.8	40.5	53.0			
RES-E share	0.2	1.1	10.4	14.4	14.8	15.1	16.6			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.5	11.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	43	47	65	62	62	73	1.0	2.9	1.5
Average Price of Electricity in Final demand sectors (€13/MWh)	59	63	80	109	119	122	123	3.2	4.1	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	5.7	8.6	4.1	2.7
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.7	23.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Finland: EUCC+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5	
GDP (in 000 ME13)	157	179	187	188	199	210	226	1.7	0.6	1.3	
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35234	34700	30195	1.3	-0.5	-1.5	
Solids	5131	4936	6874	4106	4605	4221	2880	3.0	-3.9	-4.6	
Oil	9342	10335	10121	9288	8373	7253	6015	0.8	-1.9	-3.3	
Natural gas	3422	3598	3838	2821	2683	2975	2443	1.2	-3.5	-0.9	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Renewable energy forms	7816	8195	9508	10767	10551	12035	12128	2.0	1.0	1.4	
Energy Branch Consumption	1168	1209	1529	1577	1542	1364	1293	2.7	0.1	-1.7	
Non-Energy Uses	1040	1155	1229	1157	1191	1240	1242	1.7	-0.3	0.4	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	20957	22564	20537	1.7	1.7	-0.2	
Solids	1088	2136	1803	1007	1110	1268	1223	5.2	-4.7	1.0	
Oil	189	257	389	433	393	349	302	7.5	0.1	-2.6	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Renewable energy sources	7816	8273	9589	10905	10721	12213	12348	2.1	1.1	1.4	
Hydro	1261	1185	1111	1350	1215	1275	1304	-1.3	0.9	0.7	
Biomass & Waste	6549	7072	8451	9354	9029	9992	9926	2.6	0.7	1.0	
Wind	7	15	25	198	464	923	928	14.2	33.8	7.2	
Solar and others	1	1	1	2	14	22	26	10.0	26.4	6.6	
Geothermal	0	0	0	0	0	2	165	0.0	0.0	99.1	
Net Imports (ktoe)	18337	18979	17869	16077	14483	12335	9854	-0.3	-2.1	-3.8	
Solids	3537	3341	3977	3099	3495	2952	1656	1.2	-1.3	-7.2	
Oil	10357	10655	9232	9068	8182	7095	5889	-1.1	-1.2	-3.2	
Crude oil and Feedstocks	11964	10713	11206	13148	11845	10593	9277	-0.7	0.6	-2.4	
Oil products	-1607	-58	-1974	-4080	-3663	-3498	-3389	2.1	6.4	-0.8	
Natural gas	3422	3598	3838	2821	2687	2984	2464	1.2	-3.5	-0.9	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Import Dependency (%)	55.2	54.2	47.9	47.0	40.9	35.3	32.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71479	84188	102321	92099	1.4	0.4	0.9	
Nuclear energy	22479	23271	22800	23137	36999	37079	28850	0.1	5.0	-2.5	
Solids	12452	10998	20826	8559	11119	11958	7457	5.3	-6.1	-3.9	
Oil (including refinery gas)	587	500	484	635	42	265	13	-1.9	-21.7	-10.8	
Gas (including derived gases)	10816	11921	11847	7771	6529	10694	7670	0.9	-5.8	1.6	
Biomass-waste	8860	9891	11413	13361	9979	16764	22139	2.6	-1.3	8.3	
Hydro (pumping excluded)	14660	13784	12922	15701	14124	14823	15165	-1.3	0.9	0.7	
Wind	78	170	294	2307	5392	10732	10789	14.2	33.8	7.2	
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7	
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19617	21091	20151	0.4	1.6	0.3	
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5	
Renewable energy	2923	3121	3359	4289	5628	7444	7574	1.4	5.3	3.0	
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3389	3471	0.9	0.4	0.6	
Wind	38	82	197	1001	2343	4046	4084	17.9	28.1	5.7	
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	10363	10739	10605	11158	9612	9270	9179	0.2	-1.0	-0.5	
of which cogeneration units	8280	5832	6168	6361	5454	5293	4030	-2.9	-1.2	-3.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4676	4633	4532	4340	3303	2308	1763	-0.3	-3.1	-6.1	
Gas fired	2570	2481	2703	2698	2827	3425	3700	0.5	0.4	2.7	
Oil fired	1519	1505	1194	1532	643	637	617	-2.4	-6.0	-0.4	
Biomass-waste fired	1597	2120	2176	2589	2840	2899	3098	3.1	2.7	0.9	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.1	53.2	50.0				
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.4	36.3	35.6				
% of gross electricity from CHP	36.4	38.9	36.2	33.7	27.0	26.4	23.9				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	79.0	77.6	83.6				
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	6914	9413	9014	3.9	-4.1	2.7	
Solids	3181	2998	5098	2421	2885	2911	1849	4.8	-5.5	-4.4	
Oil (including refinery gas)	122	98	99	168	13	65	4	-2.1	-18.1	-10.5	
Gas (including derived gases)	2119	2385	2516	1493	1282	1798	1324	1.7	-6.5	0.3	
Biomass & Waste	1744	2302	2747	3480	2734	4639	5837	4.6	0.0	7.9	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	21306	21544	23155	24530	26272	23909	19497	0.8	1.3	-2.9	
Refineries	13059	12876	14265	15688	14232	12618	10931	0.9	0.0	-2.6	
Biofuels and hydrogen production	0	0	140	334	373	333	313	0.0	10.3	-1.7	
District heating	1059	1265	1600	1434	1504	1085	656	4.2	-0.6	-8.0	
Derived gases, cokeries etc.	7188	7403	7149	7074	10162	9873	7597	-0.1	3.6	-2.9	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.6
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.3
Private cars and motorcycles	57	63	66	68	69	69	71	1.5	0.4	0.3
Rail	4	4	4	5	5	6	6	1.4	1.5	1.6
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.2
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.5
Freight transport activity (Gtkm)	42	42	42	43	46	48	52	-0.2	1.0	1.3
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.1
Rail	10	10	10	10	11	12	14	-0.4	1.4	1.9
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4736	4388	4135	1.1	-0.2	-1.3
Public road transport	120	116	121	121	121	118	115	0.1	0.0	-0.5
Private cars and motorcycles	2334	2542	2693	2631	2399	2065	1848	1.4	-1.1	-2.6
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1163	1121	1119	-0.3	0.3	-0.4
Rail	90	92	90	94	101	106	111	0.0	1.2	1.0
Aviation	469	526	619	746	785	807	763	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
<i>By transport activity</i>										
Passenger transport	3086	3310	3549	3604	3417	3104	2842	1.4	-0.4	-1.8
Freight transport	1251	1314	1278	1292	1319	1284	1292	0.2	0.3	-0.2
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.3	3.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.5			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32814	34043	33460	28953	1.3	-0.5	-1.6
Final Energy Demand	24510	25239	26243	24732	24671	22520	19005	0.7	-0.6	-2.6
<i>by sector</i>										
Industry	12313	11922	11428	10647	10719	9876	8889	-0.7	-0.6	-1.9
Energy intensive industries	10172	9616	9017	8347	8370	7500	6701	-1.2	-0.7	-2.2
Other industrial sectors	2141	2306	2412	2299	2349	2376	2188	1.2	-0.3	-0.7
Residential	4544	5053	5804	5338	5404	4651	3224	2.5	-0.7	-5.0
Tertiary	3296	3616	4169	3837	3798	3592	2744	2.4	-0.9	-3.2
Transport ⁽⁵⁾	4356	4648	4842	4910	4750	4401	4148	1.1	-0.2	-1.3
<i>by fuel</i>										
Solids	1109	873	843	702	697	634	494	-2.7	-1.9	-3.4
Oil	7850	8102	7619	7073	6498	5342	4257	-0.3	-1.6	-4.1
Gas	1209	1082	1012	981	987	1056	1120	-1.8	-0.3	1.3
Electricity	6507	6942	7178	6788	6894	7571	7295	1.0	-0.4	0.6
Heat (from CHP and District Heating)	3334	3972	4656	4143	4258	3496	2362	3.4	-0.9	-5.7
Renewable energy forms	4501	4268	4935	5042	5331	4398	3442	0.9	0.8	-4.3
Other	0	0	0	3	7	23	36	0.0	1586.2	18.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	207	193	199	181	177	165	134	-0.4	-1.2	-2.8
Industry (Energy on Value added, index 2000=100)	100	81	79	75	73	65	55	-2.3	-0.8	-2.8
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	67	43	-0.2	-1.8	-6.3
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	82	58	0.9	-1.7	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	23	-0.6	-1.5	-2.6
Freight transport (toe/Mtkm)	30	31	31	30	29	26	25	0.4	-0.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	73.1	71.5	78.2	61.1	58.8	53.6	42.9	0.7	-2.8	-3.1
of which ETS sectors (2013 scope) GHG emissions		37.2	43.9	30.8	31.6	30.0	22.1		-3.2	-3.5
of which ESD sectors (2013 scope) GHG emissions		34.3	34.3	30.3	27.2	23.5	20.8		-2.3	-2.6
CO₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.6	42.7	32.4	1.2	-3.1	-3.8
Power generation/District heating	22.5	23.0	32.3	17.5	18.7	18.6	12.3	3.7	-5.3	-4.1
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.2	2.0	1.2	0.0	-3.5
Industry	14.2	12.7	11.0	10.1	9.5	8.0	6.3	-2.5	-1.4	-4.1
Residential	2.4	2.3	1.8	1.4	1.3	0.7	0.2	-2.6	-3.5	-18.2
Tertiary	3.6	3.5	3.4	2.8	2.4	1.3	0.7	-0.6	-3.6	-11.2
Transport	12.9	13.8	14.0	13.6	13.0	11.9	11.0	0.8	-0.8	-1.6
CO₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.2	2.2	3.8	0.3	-0.3
Non-CO₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.4	-2.3	-1.8	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.3	74.0	59.3	0.7	-2.8	-3.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.14	0.13	0.10	1.4	-5.3	-2.9
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.97	0.96	-1.6	-0.8	-1.0
Industry	1.15	1.06	0.96	0.95	0.89	0.81	0.71	-1.8	-0.8	-2.3
Residential	0.52	0.45	0.32	0.26	0.24	0.16	0.05	-5.0	-2.8	-13.9
Tertiary	1.09	0.97	0.81	0.74	0.62	0.36	0.26	-2.9	-2.7	-8.3
Transport	2.97	2.97	2.89	2.77	2.73	2.70	2.65	-0.3	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	42.0	45.9	46.4			
RES-H&C share	38.2	39.1	44.4	55.2	57.8	61.0	58.4			
RES-E share	27.3	26.9	27.7	36.2	33.3	43.6	51.4			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	22.8	27.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	92	86	93	1.4	4.5	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	131	138	143	3.7	3.0	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.7	35.6	41.3	4.4	2.4	2.4
as % of GDP	10.7	11.3	13.8	14.6	16.4	16.9	18.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								France: EUCC+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	57	60	61	63	64	66	67	0.7	0.5	0.4	
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4	
Gross Inland Consumption (ktoe)	257565	276646	267546	258764	248992	230763	201389	0.4	-0.7	-2.1	
Solids	15048	14303	12076	8763	8522	6123	4891	-2.2	-3.4	-5.4	
Oil	88937	93185	82668	79806	75211	67705	59958	-0.7	-0.9	-2.2	
Natural gas	35766	41025	42540	38807	35989	31911	20887	1.7	-1.7	-5.3	
Nuclear	107093	116474	110539	109294	97019	94378	89877	0.3	-1.3	-0.8	
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3	
Renewable energy forms	16695	16847	22365	24473	37945	36333	31319	3.0	5.4	-1.9	
Energy Branch Consumption	10822	9989	9635	8309	7415	6542	5806	-1.2	-2.6	-2.4	
Non-Energy Uses	16851	16704	14290	14232	14666	14892	14838	-1.6	0.3	0.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	136014	131542	121948	0.4	0.1	-1.1	
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0	
Oil	2023	1604	1542	1217	1122	954	896	-2.7	-3.1	-2.2	
Natural gas	1505	909	646	304	294	283	265	-8.1	-7.6	-1.0	
Nuclear	107093	116474	110539	109294	97019	94378	89877	0.3	-1.3	-0.8	
Renewable energy sources	16688	16902	22206	24212	37579	35927	30910	2.9	5.4	-1.9	
Hydro	5771	4442	5364	5476	5753	5515	5516	-0.7	0.7	-0.4	
Biomass & Waste	10763	12159	15690	15780	23675	19675	13319	3.8	4.2	-5.6	
Wind	7	83	855	1850	4741	5828	6739	62.6	18.7	3.6	
Solar and others	21	26	118	870	3083	4530	4902	18.7	38.6	4.7	
Geothermal	126	192	180	236	325	379	433	3.6	6.1	2.9	
Net Imports (ktoe)	134082	144103	132149	123217	115729	102087	82408	-0.1	-1.3	-3.3	
Solids	13005	13511	12192	8620	8522	6123	4891	-0.6	-3.5	-5.4	
Oil	91265	95114	82886	81211	76786	69490	61690	-1.0	-0.8	-2.2	
Crude oil and Feedstocks	85329	85302	65254	46552	45756	43055	39791	-2.6	-3.5	-1.4	
Oil products	5936	9813	17632	34659	31030	26435	21899	11.5	5.8	-3.4	
Natural gas	35779	40720	39553	38504	35749	31755	20961	1.0	-1.0	-5.2	
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3	
Import Dependency (%)	51.5	51.6	49.0	47.7	46.0	43.7	40.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584202	597249	610522	578400	0.5	0.6	-0.3	
Nuclear energy	415162	451529	428521	444338	396167	385196	364950	0.3	-0.8	-0.8	
Solids	27004	27515	23359	8820	9109	652	0	-1.4	-9.0	-100.0	
Oil (including refinery gas)	7165	7925	5565	516	0	364	239	-2.5	-100.0	0.0	
Gas (including derived gases)	15365	26254	26385	25753	23444	27488	5140	5.6	-1.2	-14.1	
Biomass-waste	3559	5016	6675	10512	14131	18679	15751	6.5	7.8	1.1	
Hydro (pumping excluded)	67121	51658	62388	63671	66898	64123	64139	-0.7	0.7	-0.4	
Wind	77	964	9942	21517	55129	67770	78360	62.6	18.7	3.6	
Solar	5	10	620	8601	31589	45050	47812	63.1	48.2	4.2	
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148953	156897	160006	0.7	1.9	0.7	
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3	
Renewable energy	23570	24601	32099	40333	66684	78707	83859	3.1	7.6	2.3	
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	23635	0.2	-0.1	0.0	
Wind	57	777	7050	10358	22130	25912	29218	61.9	12.1	2.8	
Solar	7	13	1030	6100	20535	28589	30093	64.7	34.9	3.9	
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1	
Thermal power	26680	25361	27256	23974	20942	17697	16654	0.2	-2.6	-2.3	
of which cogeneration units	7013	5779	4606	10620	5950	4124	2872	-4.1	2.6	-7.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2	
Gas fired	4116	6055	9334	9646	9181	8960	8133	8.5	-0.2	-1.2	
Oil fired	11328	9794	9643	7693	5008	1849	1676	-1.6	-6.3	-10.4	
Biomass-waste fired	684	876	1049	1249	2894	3051	3063	4.4	10.7	0.6	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	43.2	39.9				
Efficiency of gross thermal power generation (%)	34.9	33.3	30.8	39.7	38.7	39.4	33.9				
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.9	1.6	1.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.5	95.3	99.1				
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10378	10300	5364	3.0	-5.3	-6.4	
Solids	6559	6402	4717	2258	2323	169	0	-3.2	-6.8	-100.0	
Oil (including refinery gas)	1242	2160	1639	135	0	116	79	2.8	-79.3	256.3	
Gas (including derived gases)	4002	6298	8178	4941	3912	4940	1353	7.4	-7.1	-10.1	
Biomass & Waste	1476	2469	3352	2529	4127	5060	3917	8.5	2.1	-0.5	
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	205144	211862	191250	166425	153112	147661	139229	-0.7	-2.2	-0.9	
Refineries	90823	88392	73306	49009	48044	45187	41768	-2.1	-4.1	-1.4	
Biofuels and hydrogen production	325	651	2397	2746	3119	2825	2776	22.1	2.7	-1.2	
District heating	312	448	608	546	574	550	382	6.9	-0.6	-4.0	
Derived gases, cokeries etc.	113684	122371	114938	114124	101374	99100	94303	0.1	-1.2	-0.7	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1197	1250	0.8	1.2	0.7
Public road transport	42	42	50	55	60	62	65	1.7	1.9	0.8
Private cars and motorcycles	754	801	811	850	901	903	926	0.7	1.1	0.3
Rail	81	90	101	107	119	131	145	2.1	1.7	2.0
Aviation ⁽³⁾	69	62	68	76	86	97	110	-0.1	2.3	2.5
Inland navigation	3	3	3	3	3	4	4	-0.8	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	504	563	-0.5	1.8	1.8
Heavy goods and light commercial vehicles	311	319	296	310	357	372	417	-0.5	1.9	1.6
Rail	58	41	30	37	42	51	60	-6.3	3.5	3.6
Inland navigation	43	49	66	66	71	80	85	4.4	0.8	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	49950	46297	44620	-0.2	0.1	-1.1
Public road transport	536	519	595	654	705	710	711	1.0	1.7	0.1
Private cars and motorcycles	31157	31368	31602	31615	29848	25760	23453	0.1	-0.6	-2.4
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10233	9991	10486	-1.5	0.8	0.2
Rail	1134	980	932	1017	1081	1165	1234	-1.9	1.5	1.3
Aviation	6088	6291	6294	6827	7548	8079	8112	0.3	1.8	0.7
Inland navigation	483	481	500	499	535	592	624	0.4	0.7	1.6
By transport activity										
Passenger transport	38753	38887	39197	39839	38874	35351	33098	0.1	-0.1	-1.6
Freight transport	11607	11307	10150	10316	11076	10946	11521	-1.3	0.9	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.7	3.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234325	215871	186550	0.5	-0.8	-2.3
Final Energy Demand	154639	160337	155397	155251	156496	140383	116820	0.0	0.1	-2.9
by sector										
Industry	36670	34356	28478	30330	31267	29863	27668	-2.5	0.9	-1.2
Energy intensive industries	20906	20576	16506	17590	17997	16879	15451	-2.3	0.9	-1.5
Other industrial sectors	15764	13780	11972	12740	13270	12983	12218	-2.7	1.0	-0.8
Residential	42153	45931	45463	44159	45096	37557	25080	0.8	-0.1	-5.7
Tertiary	25209	29569	31792	30270	29817	26272	19030	2.3	-0.6	-4.4
Transport ⁽⁵⁾	50607	50482	49664	50492	50316	46691	45042	-0.2	0.1	-1.1
by fuel										
Solids	5775	5218	4547	4076	4164	3703	2748	-2.4	-0.9	-4.1
Oil	72503	71421	64647	63583	58940	51533	44223	-1.1	-0.9	-2.8
Gas	30907	33744	32430	32675	31021	26476	19226	0.5	-0.4	-4.7
Electricity	33096	36352	38185	37788	38969	40253	38067	1.4	0.2	-0.2
Heat (from CHP and District Heating)	3236	4163	3525	3658	3392	2978	1944	0.9	-0.4	-5.4
Renewable energy forms	9123	9439	12064	13458	19962	15253	10254	2.8	5.2	-6.4
Other	0	0	0	12	46	186	357	0.0	0.0	22.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	141	132	122	110	95	78	-0.7	-1.8	-3.4
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	70	61	-2.5	-0.1	-2.2
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	62	39	-0.9	-1.3	-7.0
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	92	75	50	1.0	-1.8	-5.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	23	21	-0.7	-1.6	-2.7
Freight transport (toe/Mtkm)	28	28	26	25	24	22	20	-0.9	-0.9	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	585.3	552.1	512.0	482.2	444.5	396.5	337.1	-1.3	-1.4	-2.7
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	131.8	125.4	115.7	99.1			-1.6	-2.3
of which ESD sectors (2013 scope) GHG emissions		378.8	364.7	350.4	319.2	280.8	238.0		-1.3	-2.9
CO2 Emissions (energy related)	388.3	394.4	360.0	332.5	307.7	265.6	211.4	-0.8	-1.6	-3.7
Power generation/District heating	46.7	53.6	48.1	26.7	22.4	17.7	8.5	0.3	-7.4	-9.2
Energy Branch	19.9	16.3	15.0	13.7	11.5	10.0	8.9	-2.7	-2.6	-2.6
Industry	74.6	67.0	54.1	59.8	57.6	51.0	42.8	-3.2	0.6	-2.9
Residential	59.3	64.8	57.2	51.5	43.6	32.7	14.1	-0.4	-2.7	-10.7
Tertiary	39.8	44.4	44.7	38.9	33.3	27.3	18.1	1.1	-2.9	-5.9
Transport	148.0	148.1	140.9	141.9	139.3	126.8	119.0	-0.5	-0.1	-1.6
CO2 Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	26.8	25.8	24.7	-1.2	0.4	-0.8
Non-CO2 GHG emissions	168.1	129.2	126.3	124.1	110.1	105.1	101.0	-2.8	-1.4	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.4	70.8	60.2	-1.3	-1.4	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.08	0.09	0.08	0.04	0.03	0.03	0.01	-0.3	-7.9	-8.7
Final energy demand (t of CO2/toe)	2.08	2.02	1.91	1.88	1.75	1.69	1.66	-0.8	-0.9	-0.5
Industry	2.03	1.95	1.90	1.97	1.84	1.71	1.55	-0.7	-0.3	-1.7
Residential	1.41	1.41	1.26	1.17	0.97	0.87	0.56	-1.1	-2.6	-5.3
Tertiary	1.58	1.50	1.41	1.29	1.12	1.04	0.95	-1.2	-2.3	-1.6
Transport	2.92	2.93	2.84	2.81	2.77	2.72	2.64	-0.3	-0.2	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	25.4	26.8			
RES-H&C share	12.4	12.3	15.8	19.4	30.0	30.7	31.8			
RES-E share	14.7	13.7	14.9	19.8	31.5	35.9	40.3			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	12.8	18.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	82	73	-0.7	5.1	-2.4
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	147	157	0.0	2.9	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	274.2	284.6	313.5	2.4	3.4	1.3
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.8	12.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Germany: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1		
GDP (in 000 M€13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9		
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	309458	287139	240403	-0.3	-0.7	-2.5		
Solids	84802	81952	78824	78036	78895	80809	62619	-0.7	0.0	-2.3		
Oil	130980	121460	111798	111688	102684	89889	77588	-1.6	-0.8	-2.8		
Natural gas	71878	77782	75905	74011	68110	63373	49117	0.5	-1.1	-3.2		
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0		
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0		
Renewable energy forms	10665	19054	31477	39195	50737	51682	49756	11.4	4.9	-0.2		
Energy Branch Consumption	14566	14384	13378	13631	12289	11653	9974	-0.8	-0.8	-2.1		
Non-Energy Uses	25064	24662	22582	24685	25861	26622	26385	-1.0	1.4	0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	135549	137356	129648	120921	110490	100358	85616	-0.4	-1.6	-2.5		
Solids	60629	56484	45906	42340	37789	37762	27829	-2.7	-1.9	-3.0		
Oil	4680	5782	4754	4964	3809	2909	2219	0.2	-2.2	-5.3		
Natural gas	15825	14334	11113	10749	9883	8193	6013	-3.5	-1.2	-4.8		
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0		
Renewable energy sources	10665	18695	31618	39043	50535	51494	49555	11.5	4.8	-0.2		
Hydro	1869	1689	1802	1925	1936	2048	2101	-0.4	0.7	0.8		
Biomass & Waste	7876	14249	24988	27662	32654	30922	25885	12.2	2.7	-2.3		
Wind	804	2341	3250	5689	9411	10180	11767	15.0	11.2	2.3		
Solar and others	116	371	1493	3575	5509	7285	8366	29.1	13.9	4.3		
Geothermal	0	46	86	192	1027	1059	1437	0.0	28.1	3.4		
Net Imports (ktoe)	204709	208118	201696	204465	201965	189853	157982	-0.1	0.0	-2.4		
Solids	21663	25972	31644	35695	41107	43047	34790	3.9	2.7	-1.7		
Oil	125918	120239	109834	109501	101812	89920	78317	-1.4	-0.8	-2.6		
Crude oil and Feedstocks	101441	111039	91612	87783	82363	73898	65780	-1.0	-1.1	-2.2		
Oil products	24477	9200	18222	21718	19450	16021	12537	-2.9	0.7	-4.3		
Natural gas	56865	61940	61645	63262	58287	55313	43351	0.8	-0.6	-2.9		
Electricity	263	-393	-1286	-4145	558	1385	1322	0.0	0.0	9.0		
Import Dependency (%)	59.4	60.4	60.1	62.8	64.6	65.4	64.9					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645693	599918	649494	596456	0.9	-0.4	-0.1		
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0		
Solids	296687	288142	262896	272894	277614	294748	225514	-1.2	0.5	-2.1		
Oil (including refinery gas)	4785	11997	8741	1079	941	2313	3091	6.2	-20.0	12.6		
Gas (including derived gases)	59970	83608	100912	92808	70104	98791	81352	5.3	-3.6	1.5		
Biomass-waste	10121	20849	42975	58715	35422	45120	44965	15.6	-1.9	2.4		
Hydro (pumping excluded)	21732	19638	20953	22380	22507	23815	24430	-0.4	0.7	0.8		
Wind	9352	27229	37793	66153	109427	118372	136822	15.0	11.2	2.3		
Solar	60	1283	11727	34612	48465	65364	79312	69.3	15.2	5.0		
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207109	212200	224642	3.1	3.0	0.8		
Nuclear energy	21644	20656	20656	12188	6907	0	0	-0.5	-10.4	-100.0		
Renewable energy	11040	25641	50141	90293	120216	135607	159137	16.3	9.1	2.8		
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5857	5977	1.1	0.3	0.7		
Wind	6095	18375	27180	44946	61821	61141	71656	16.1	8.6	1.5		
Solar	114	2056	17554	39757	52803	68609	81503	65.5	11.6	4.4		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	81689	77676	83806	86551	79986	76593	65505	0.3	-0.5	-2.0		
of which cogeneration units	14369	20840	24554	17067	6197	10297	9599	5.5	-12.9	4.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	50924	48087	47789	52819	49167	44046	36741	-0.6	0.3	-2.9		
Gas fired	21336	21671	26890	25178	21891	23811	20421	2.3	-2.0	-0.7		
Oil fired	8066	5686	5688	5028	1674	1487	1277	-3.4	-11.5	-2.7		
Biomass-waste fired	1363	2232	3432	3501	7083	7078	6895	9.7	7.5	-0.3		
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0		
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.2	33.1	28.9					
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	39.3	40.2					
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.1	9.4	10.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	41.9	39.1	48.0					
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	88062	96784	76195	0.7	-0.3	-1.4		
Solids	67101	65740	59687	61356	61736	64839	48576	-1.2	0.3	-2.4		
Oil (including refinery gas)	1411	1427	855	236	311	727	1016	-4.9	-9.6	12.6		
Gas (including derived gases)	12891	17808	19955	16546	12121	16831	13771	4.5	-4.9	1.3		
Biomass & Waste	3158	5100	10066	12030	13061	13553	11998	12.3	2.6	-0.8		
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	180304	187908	163048	142875	120528	100946	90576	-1.0	-3.0	-2.8		
Refineries	119420	125092	103238	98875	92806	83490	74446	-1.4	-1.1	-2.2		
Biofuels and hydrogen production	237	1859	2884	3011	2842	2548	2660	28.4	-0.1	-0.7		
District heating	1198	3942	4754	4043	3517	2702	1972	14.8	-3.0	-5.6		
Derived gases, cokeries etc.	59450	57015	52171	36947	21363	12206	11499	-1.3	-8.5	-6.0		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1208	1218	1246	0.6	0.7	0.3
Public road transport	69	67	62	63	67	66	68	-1.1	0.7	0.1
Private cars and motorcycles	850	876	905	942	949	938	950	0.6	0.5	0.0
Rail	90	92	100	111	115	131	140	1.1	1.4	2.0
Aviation ⁽³⁾	55	62	61	69	75	80	85	1.1	2.1	1.3
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.8
Freight transport activity (Gtkm)	493	545	592	619	682	697	745	1.9	1.4	0.9
Heavy goods and light commercial vehicles	342	385	422	439	486	479	515	2.1	1.4	0.6
Rail	83	95	107	116	126	139	148	2.6	1.6	1.6
Inland navigation	68	65	63	65	70	79	82	-0.7	1.1	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56107	50268	47220	-1.1	-0.4	-1.7
Public road transport	1047	897	803	815	836	809	788	-2.6	0.4	-0.6
Private cars and motorcycles	42176	37675	35607	35814	31214	26242	23600	-1.7	-1.3	-2.8
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12340	11369	11472	-0.8	0.9	-0.7
Rail	1947	1580	1414	1496	1455	1549	1555	-3.2	0.3	0.7
Aviation	7345	8265	8719	9601	9955	9955	9455	1.7	1.3	-0.5
Inland navigation	283	323	278	285	307	343	351	-0.2	1.0	1.3
By transport activity										
Passenger transport	51841	47805	45951	47113	42818	37874	34699	-1.2	-0.7	-2.1
Freight transport	13261	11992	12194	12678	13288	12394	12521	-0.8	0.9	-0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.7	3.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	6.0	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	317273	317254	310393	297924	283597	260516	214019	-0.2	-0.9	-2.8
Final Energy Demand	219989	218456	219721	217308	213495	192709	160282	0.0	-0.3	-2.8
by sector										
Industry	57570	59093	60563	62096	65211	62803	55451	0.5	0.7	-1.6
Energy intensive industries	39345	40705	42170	43510	45982	44083	38208	0.7	0.9	-1.8
Other industrial sectors	18225	18389	18393	18586	19230	18721	17244	0.1	0.4	-1.1
Residential	63072	63498	62442	58726	57386	49227	35828	-0.1	-0.8	-4.6
Tertiary	34239	35302	38222	36396	34513	30156	21569	1.1	-1.0	-4.6
Transport ⁽⁵⁾	65109	60563	58494	60090	56385	50522	47433	-1.1	-0.4	-1.7
by fuel										
Solids	10958	8238	9379	9284	10014	9701	7936	-1.5	0.7	-2.3
Oil	99738	90309	83168	82419	73155	59986	48338	-1.8	-1.3	-4.1
Gas	56064	55136	56501	56368	55501	46086	35368	0.1	-0.2	-4.4
Electricity	41570	44907	45781	44880	45980	50605	46487	1.0	0.0	0.1
Heat (from CHP and District Heating)	6831	10751	11268	9856	9766	9086	7265	5.1	-1.4	-2.9
Renewable energy forms	4828	9116	13625	14468	18986	16778	14101	10.9	3.4	-2.9
Other	0	0	0	32	94	466	786	0.0	0.0	23.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	144	140	128	116	104	92	74	-1.2	-2.0	-3.4
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	83	72	-0.7	-0.3	-2.3
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	61	42	-0.6	-2.2	-5.7
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	64	44	-0.2	-2.4	-5.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	24	21	-2.2	-1.7	-2.8
Freight transport (toe/Mtkm)	27	22	21	20	19	18	17	-2.6	-0.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	1076.8	1015.8	957.1	943.5	895.7	843.2	687.7	-1.2	-0.7	-2.6
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	499.4	499.4	509.6	415.0		-0.1	-1.8
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	396.3	396.3	333.6	272.7		-1.3	-3.7
CO ₂ Emissions (energy related)	852.1	825.2	787.8	777.7	736.8	690.4	543.8	-0.8	-0.7	-3.0
Power generation/District heating	330.6	344.9	324.5	317.5	306.4	330.4	255.3	-0.2	-0.6	-1.8
Energy Branch	28.1	26.2	23.5	25.9	22.1	19.9	17.3	-1.8	-0.6	-2.4
Industry	130.2	115.3	115.3	112.7	115.6	102.0	83.4	-1.2	0.0	-3.2
Residential	119.4	110.8	104.3	98.0	87.8	65.5	41.4	-1.3	-1.7	-7.3
Tertiary	58.5	55.9	56.3	55.4	47.8	35.1	21.0	-0.4	-1.6	-7.9
Transport	185.3	172.2	163.8	168.2	157.0	137.6	125.3	-1.2	-0.4	-2.2
CO ₂ Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.5	58.7	58.2	-1.4	0.5	-0.1
Non-CO ₂ GHG emissions	161.0	128.9	113.7	109.1	100.4	94.0	85.7	-3.4	-1.2	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	71.1	66.9	54.6	-1.2	-0.7	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.50	0.46	0.42	0.41	0.42	0.43	0.37	-1.7	0.0	-1.3
Final energy demand (t of CO ₂ /toe)	2.24	2.08	2.00	2.00	1.91	1.76	1.69	-1.1	-0.5	-1.2
Industry	2.26	1.95	1.90	1.81	1.77	1.62	1.50	-1.7	-0.7	-1.6
Residential	1.89	1.74	1.67	1.67	1.53	1.33	1.15	-1.2	-0.9	-2.8
Tertiary	1.71	1.58	1.47	1.52	1.39	1.16	0.97	-1.5	-0.6	-3.5
Transport	2.85	2.84	2.80	2.80	2.79	2.72	2.64	-0.2	-0.1	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	21.4	25.1			
RES-H&C share	4.2	6.7	9.6	10.6	17.5	19.7	21.4			
RES-E share	6.1	10.5	18.1	29.5	34.8	37.2	45.9			
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	15.9	22.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	104	96	95	3.7	5.4	-1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	167	171	175	2.2	0.2	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	344.8	369.0	432.6	3.0	1.3	2.3
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.8	13.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Greece: EUCC+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.8		
GDP (in 000 ME13)	190	231	232	200	207	213	225	2.0	-1.1	0.8		
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25262	22894	17234	0.2	-1.3	-3.8		
Solids	9038	8944	7863	6765	5726	5452	2508	-1.4	-3.1	-7.9		
Oil	16085	18119	14974	12997	12137	10286	8255	-0.7	-2.1	-3.8		
Natural gas	1705	2354	3235	2979	3774	3326	1555	6.6	1.6	-8.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Renewable energy forms	1466	1668	2163	2714	3225	3584	4733	4.0	4.1	3.9		
Energy Branch Consumption	1634	1820	1839	1906	1784	1673	1415	1.2	-0.3	-2.3		
Non-Energy Uses	719	761	1108	824	847	843	833	4.4	-2.7	-0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	10012	10326	9461	9027	8439	8602	6980	-0.6	-1.1	-1.9		
Solids	8222	8538	7315	6430	5427	5189	2367	-1.2	-2.9	-8.0		
Oil	282	101	132	75	73	70	67	-7.3	-5.7	-0.8		
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	1466	1668	2006	2521	2939	3343	4545	3.2	3.9	4.5		
Hydro	318	431	641	506	508	477	480	7.3	-2.3	-0.6		
Biomass & Waste	1009	1015	919	1157	1349	1271	1131	-0.9	3.9	-1.8		
Wind	39	109	233	330	448	576	1676	19.7	6.7	14.1		
Solar and others	99	101	197	514	620	1001	1244	7.1	12.2	7.2		
Geothermal	2	12	16	16	15	16	15	25.9	-0.4	-0.3		
Net Imports (ktoe)	22151	23498	21712	20057	19808	17220	13216	-0.2	-0.9	-4.0		
Solids	769	364	401	335	299	263	141	-6.3	-2.9	-7.3		
Oil	19695	20476	17433	15950	15014	13072	10962	-1.2	-1.5	-3.1		
Crude oil and Feedstocks	20596	19488	20633	24349	23250	21370	19419	0.0	1.2	-1.8		
Oil products	-900	988	-3200	-8399	-8236	-8297	-8457	13.5	9.9	0.3		
Natural gas	1689	2332	3231	2979	3809	3398	1742	6.7	1.7	-7.5		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Import Dependency (%)	69.5	68.6	69.1	69.0	70.1	66.7	65.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58612	59216	49599	0.7	0.2	-1.7		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	34313	35543	30797	26751	23471	23529	10042	-1.1	-2.7	-8.1		
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	127	-3.7	-1.7	-30.9		
Gas (including derived gases)	5920	8171	9830	8817	13813	11435	1137	5.2	3.5	-22.1		
Biomass-waste	163	222	319	195	382	676	1019	6.9	1.8	10.3		
Hydro (pumping excluded)	3693	5017	7460	5890	5901	5552	5577	7.3	-2.3	-0.6		
Wind	451	1266	2714	3834	5207	6702	19492	19.7	6.7	14.1		
Solar	0	1	158	3757	4715	8937	12205	0.0	40.4	10.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19767	22179	27188	3.5	2.2	3.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	3298	3598	4715	8146	9363	12677	18545	3.6	7.1	7.1		
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0		
Wind	226	491	1298	2152	2637	3286	7301	19.1	7.3	10.7		
Solar	0	1	202	2605	3147	5812	7665	0.0	31.6	9.3		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	7914	9610	11174	11062	10404	9503	8643	3.5	-0.7	-1.8		
of which cogeneration units	195	3051	588	284	333	278	292	11.7	-5.5	-1.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	4454	4754	4312	3923	3095	3165	2910	-0.3	-3.3	-0.6		
Gas fired	1157	2203	4189	5062	5305	5272	4737	13.7	2.4	-1.1		
Oil fired	2302	2625	2618	2022	1824	834	734	1.3	-3.6	-8.7		
Biomass-waste fired	1	28	55	55	180	232	263	50.5	12.6	3.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.6	28.6	20.2					
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	42.2	36.8					
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.3	2.7	2.7					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.6	36.9	77.2					
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8891	7750	2883	-0.6	-1.9	-10.7		
Solids	8170	8694	7567	6558	5534	5290	2414	-0.8	-3.1	-8.0		
Oil (including refinery gas)	1978	1992	1278	1005	1071	505	42	-4.3	-1.8	-27.7		
Gas (including derived gases)	1280	1605	1863	1435	2204	1812	221	3.8	1.7	-20.5		
Biomass & Waste	64	52	79	43	83	144	205	2.2	0.4	9.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	22570	21629	22585	24150	24043	22256	20388	0.0	0.6	-1.6		
Refineries	22508	21536	22462	23941	23758	21971	20088	0.0	0.6	-1.7		
Biofuels and hydrogen production	0	0	124	207	279	265	274	0.0	8.4	-0.2		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	62	93	0	2	7	20	26	-95.7	1750.5	14.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	129	153	161	164	172	173	179	2.2	0.7	0.4
Public road transport	22	22	21	21	22	22	23	-0.3	0.6	0.1
Private cars and motorcycles	67	90	105	106	108	105	106	4.7	0.2	-0.2
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.7
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.4
Inland navigation	7	7	7	7	7	7	7	-0.1	0.2	0.0
Freight transport activity (Gtkm)	38	34	37	37	39	40	41	-0.1	0.5	0.5
Heavy goods and light commercial vehicles	28	24	30	30	32	32	33	0.8	0.5	0.4
Rail	0	1	1	1	1	1	1	3.7	0.8	1.1
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7250	6680	6292	1.1	-1.2	-1.4
Public road transport	423	438	403	403	408	386	373	-0.5	0.1	-0.9
Private cars and motorcycles	3327	4435	4483	4018	3693	3170	2755	3.0	-1.9	-2.9
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1486	1398	1352	-0.4	-0.7	-0.9
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.2
Aviation	1325	1181	919	936	1018	1094	1163	-3.6	1.0	1.3
Inland navigation	495	648	717	612	621	608	624	3.8	-1.4	0.0
By transport activity										
Passenger transport	5530	6460	6297	5784	5548	5062	4710	1.3	-1.3	-1.6
Freight transport	1756	1714	1850	1688	1701	1618	1581	0.5	-0.8	-0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.8	1.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.2	4.5			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24415	22051	16401	0.0	-1.2	-3.9
Final Energy Demand	18676	20958	19197	17486	17130	15623	12943	0.3	-1.1	-2.8
by sector										
Industry	4450	4161	3672	3224	3306	3201	2793	-1.9	-1.0	-1.7
Energy intensive industries	2737	2588	2427	2157	2193	2096	1771	-1.2	-1.0	-2.1
Other industrial sectors	1714	1573	1245	1067	1113	1105	1021	-3.1	-1.1	-0.9
Residential	4502	5510	4615	4351	4278	3736	2460	0.2	-0.8	-5.4
Tertiary	2426	3100	2752	2426	2283	1992	1384	1.3	-1.9	-4.9
Transport ⁽⁵⁾	7297	8188	8158	7484	7263	6694	6306	1.1	-1.2	-1.4
by fuel										
Solids	891	458	302	208	192	162	93	-10.3	-4.4	-7.0
Oil	12744	14413	12110	10307	9455	8264	6838	-0.5	-2.4	-3.2
Gas	257	586	982	1018	1030	978	782	14.3	0.5	-2.7
Electricity	3710	4377	4568	4397	4620	4548	3862	2.1	0.1	-1.8
Heat (from CHP and District Heating)	28	49	46	44	50	51	39	5.2	0.8	-2.6
Renewable energy forms	1046	1076	1191	1510	1774	1598	1290	1.3	4.1	-3.1
Other	0	0	0	2	7	23	41	0.0	0.0	18.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	149	136	124	130	122	108	77	-1.8	-0.1	-4.5
Industry (Energy on Value added, index 2000=100)	100	88	101	99	98	92	77	0.1	-0.4	-2.3
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	76	48	-2.2	1.0	-5.9
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	80	67	44	-1.5	-0.8	-5.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.1
Freight transport (toe/Mtkm)	46	51	50	45	43	41	38	0.7	-1.4	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	133.3	139.6	121.4	105.7	97.1	87.7	61.1	-0.9	-2.2	-4.5
of which ETS sectors (2013 scope) GHG emissions	77.2	64.9	57.3	53.4	49.2	49.2	28.3		-1.9	-6.2
of which ESD sectors (2013 scope) GHG emissions	62.4	56.5	48.4	43.6	38.5	32.9			-2.6	-2.8
CO2 Emissions (energy related)	98.4	106.4	92.1	79.6	73.4	65.3	39.6	-0.7	-2.2	-6.0
Power generation/District heating	52.1	55.6	47.9	40.9	37.6	33.5	13.3	-0.8	-2.4	-9.9
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	2.9	1.6	-0.1	-1.9
Industry	10.4	8.9	7.2	6.2	5.9	5.3	3.9	-3.7	-2.0	-4.1
Residential	7.6	9.9	6.7	5.0	4.3	3.2	1.2	-1.3	-4.2	-11.8
Tertiary	3.4	4.3	2.8	1.8	1.2	0.9	0.5	-2.1	-8.0	-8.7
Transport	21.8	24.4	24.0	21.7	20.9	19.1	17.7	1.0	-1.4	-1.6
CO2 Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	7.5	-2.9	0.1	1.2
Non-CO2 GHG emissions	26.1	23.6	22.6	19.3	16.9	15.4	14.0	-1.4	-2.9	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.4	81.6	56.9	-0.9	-2.2	-4.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.97	0.93	0.83	0.75	0.63	0.56	0.26	-1.6	-2.6	-8.4
Final energy demand (t of CO2/toe)	2.32	2.26	2.12	1.99	1.89	1.82	1.80	-0.9	-1.2	-0.4
Industry	2.35	2.13	1.96	1.91	1.78	1.65	1.39	-1.8	-0.9	-2.4
Residential	1.69	1.79	1.45	1.16	1.01	0.87	0.50	-1.5	-3.5	-6.8
Tertiary	1.41	1.38	1.01	0.76	0.53	0.43	0.35	-3.3	-6.3	-4.0
Transport	2.99	2.98	2.94	2.90	2.87	2.86	2.81	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.4	22.7	36.5			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.4	41.4			
RES-E share	7.2	8.2	12.3	22.4	25.6	35.3	75.1			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.1	19.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	94	92	96	1.9	2.7	0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	135	139	155	3.8	2.2	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	15.2	20.2	26.7	26.6	31.5	33.6	37.2	5.8	1.6	1.7
as % of GDP	8.0	8.7	11.5	13.3	15.2	15.8	16.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Hungary: EUCC+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1	
GDP (in 000 ME13)	83	102	101	107	117	131	145	1.9	1.5	2.2	
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24391	24386	22431	0.2	-0.6	-0.8	
Solids	3850	3031	2730	2635	2330	1605	1265	-3.4	-1.6	-5.9	
Oil	6964	7115	6699	6271	6312	6309	6207	-0.4	-0.6	-0.2	
Natural gas	9657	12094	9816	7786	8517	6556	4718	0.2	-1.4	-5.7	
Nuclear	3672	3585	4078	3666	3677	6045	6593	1.1	-1.0	6.0	
Electricity	296	535	447	1204	862	827	691	4.2	6.8	-2.2	
Renewable energy forms	859	1251	2042	1931	2692	3043	2957	9.0	2.8	0.9	
Energy Branch Consumption	1164	1062	1095	1029	959	942	919	-0.6	-1.3	-0.4	
Non-Energy Uses	1587	2169	1974	2275	2502	2826	3077	2.2	2.4	2.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	10107	11015	11282	-0.5	-0.9	1.1	
Solids	2893	1748	1593	1794	1587	825	781	-5.8	0.0	-6.8	
Oil	1699	1457	1150	795	619	274	191	-3.8	-6.0	-11.1	
Natural gas	2475	2331	2235	1857	1195	517	475	-1.0	-6.1	-8.8	
Nuclear	3672	3585	4078	3666	3677	6045	6593	1.1	-1.0	6.0	
Renewable energy sources	859	1251	2010	2132	3029	3354	3242	8.9	4.2	0.7	
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0	
Biomass & Waste	758	1145	1844	1905	2651	2528	2121	9.3	3.7	-2.2	
Wind	0	1	46	50	77	183	240	0.0	5.3	12.1	
Solar and others	0	2	6	9	45	206	220	0.0	23.5	17.1	
Geothermal	86	87	99	148	236	416	642	1.4	9.1	10.5	
Net Imports (ktoe)	13956	17421	14988	13249	14284	13371	11149	0.7	-0.5	-2.4	
Solids	1087	1299	1143	841	743	780	485	0.5	-4.2	-4.2	
Oil	5291	5780	5637	5476	5694	6035	6016	0.6	0.1	0.6	
Crude oil and Feedstocks	5887	5988	5806	5273	5500	5873	5911	-0.1	-0.5	0.7	
Oil products	-596	-208	-169	203	194	161	106	-11.9	0.0	-5.9	
Natural gas	7283	9808	7726	5929	7322	6040	4243	0.6	-0.5	-5.3	
Electricity	296	535	447	1204	862	827	691	4.2	6.8	-2.2	
Import Dependency (%)	55.2	63.1	58.1	56.4	58.6	54.8	49.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33418	37039	37012	0.6	-1.1	1.0	
Nuclear energy	14180	13834	15761	15087	15024	24706	26948	1.1	-0.5	6.0	
Solids	9590	7023	6234	6436	5872	2916	2706	-4.2	-0.6	-7.5	
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0	
Gas (including derived gases)	6719	12502	11714	3383	8997	2988	531	5.7	-2.6	-24.6	
Biomass-waste	120	1730	2449	2015	2241	2344	1865	35.2	-0.9	-1.8	
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0	
Wind	0	10	534	585	890	2133	2792	0.0	5.2	12.1	
Solar	0	0	1	32	97	1656	1873	0.0	55.6	34.5	
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7125	9829	11426	-0.4	-1.5	4.8	
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6	
Renewable energy	48	66	348	431	640	2661	3277	21.9	6.3	17.8	
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0	
Wind	0	17	293	329	477	1040	1454	0.0	5.0	11.8	
Solar	0	0	2	45	106	1564	1766	0.0	48.7	32.5	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	6621	6311	6024	5103	4525	3948	3667	-0.9	-2.8	-2.1	
of which cogeneration units	1464	2047	1862	1144	1593	1131	522	2.4	-1.6	-10.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	1747	1380	1155	1137	798	532	520	-4.1	-3.6	-4.2	
Gas fired	4160	4622	4605	3496	3309	2995	2731	1.0	-3.3	-1.9	
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3	
Biomass-waste fired	112	133	173	349	356	358	358	4.4	7.5	0.1	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.4	40.8	35.1				
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	39.8	35.3	30.2				
% of gross electricity from CHP	13.5	19.1	19.6	14.4	12.6	8.4	5.6				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.5	84.1	91.3				
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3711	2024	1470	-1.3	-3.4	-8.8	
Solids	2755	1924	1646	1611	1493	752	702	-5.0	-1.0	-7.3	
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0	
Gas (including derived gases)	2140	3079	2704	657	1510	542	162	2.4	-5.7	-20.0	
Biomass & Waste	61	534	777	436	651	674	551	28.9	-1.7	-1.7	
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	12946	13165	14441	12781	12805	15112	15442	1.1	-1.2	1.9	
Refineries	7638	8118	8427	6997	7085	7115	7036	1.0	-1.7	-0.1	
Biofuels and hydrogen production	0	3	175	182	348	317	316	0.0	7.1	-1.0	
District heating	471	627	474	648	634	595	731	0.1	3.0	1.4	
Derived gases, cokeries etc.	4837	4417	5365	4954	4737	7085	7360	1.0	-1.2	4.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Hungary: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	80	84	84	86	95	103	110	0.5	1.3	1.4
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	63	67	1.4	1.1	1.1
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.4
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	41	45	2.3	1.1	1.8
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.8	1.5
Rail	9	9	9	10	11	12	14	0.0	2.0	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	0.9	1.8
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4116	4042	4085	2.8	-0.5	-0.1
Public road transport	339	361	335	346	353	348	343	-0.1	0.5	-0.3
Private cars and motorcycles	1805	2191	2208	2035	2070	1945	1875	2.0	-0.6	-1.0
Heavy goods and light commercial vehicles	763	1341	1418	1214	1275	1254	1294	6.4	-1.1	0.1
Rail	171	154	150	152	171	192	207	-1.3	1.3	1.9
Aviation	230	261	230	207	243	300	362	0.0	0.6	4.0
Inland navigation	1	1	1	4	4	4	5	3.1	14.5	1.6
By transport activity										
Passenger transport	2449	2877	2826	2642	2729	2664	2655	1.4	-0.3	-0.3
Freight transport	860	1431	1515	1316	1387	1378	1430	5.8	-0.9	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.6	8.6			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21888	21560	19355			
Final Energy Demand	16139	18218	16596	15895	16175	15195	12732	0.1	-0.8	-1.2
by sector								0.3	-0.3	-2.4
Industry	3513	3369	2890	3081	3038	3140	2874	-1.9	0.5	-0.6
Energy intensive industries	2517	2267	1854	1941	1872	1903	1663	-3.0	0.1	-1.2
Other industrial sectors	996	1102	1036	1141	1166	1237	1211	0.4	1.2	0.4
Residential	5603	6464	5740	5253	5256	4726	3442	0.2	-0.9	-4.1
Tertiary	3712	4072	3625	3566	3726	3253	2303	-0.2	0.3	-4.7
Transport ⁽⁵⁾	3311	4313	4341	3995	4154	4075	4113	2.7	-0.4	-0.1
by fuel										
Solids	665	690	481	501	372	390	180	-3.2	-2.5	-7.0
Oil	4218	4904	4638	4261	4174	3932	3688	1.0	-1.0	-1.2
Gas	6503	7852	6261	5868	5819	5051	3587	-0.4	-0.7	-4.7
Electricity	2531	2780	2941	2977	3104	3342	3277	1.5	0.5	0.5
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	871	700	-2.8	-0.8	-3.6
Renewable energy forms	774	683	1184	1301	1694	1591	1277	4.3	3.6	-2.8
Other	0	0	0	1	5	17	23	0.0	0.0	17.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	305	271	257	219	208	186	155	-1.7	-2.1	-2.9
Industry (Energy on Value added, index 2000=100)	100	74	64	63	57	53	44	-4.4	-1.1	-2.6
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	57	38	-1.4	-2.0	-6.2
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	56	35	-2.0	-1.3	-6.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	25	23	0.8	-1.7	-1.8
Freight transport (toe/Mtkm)	32	41	45	38	37	33	32	3.5	-2.0	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	79.8	76.9	67.7	59.4	56.4	47.6	40.7	-1.6	-1.8	-3.2
of which ETS sectors (2013 scope) GHG emissions		30.6	25.6	19.8	20.3	14.6	12.5		-2.3	-4.7
of which ESD sectors (2013 scope) GHG emissions		46.3	42.1	39.6	36.2	33.0	28.1		-1.5	-2.5
CO ₂ Emissions (energy related)	55.0	56.4	49.0	41.5	41.3	32.9	26.3	-1.1	-1.7	-4.4
Power generation/District heating	22.1	18.3	16.0	10.5	11.5	5.8	4.5	-3.2	-3.3	-8.9
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.3
Industry	6.8	6.7	5.3	5.8	5.0	4.8	3.4	-2.4	-0.6	-3.8
Residential	8.8	10.7	8.6	7.3	7.0	6.1	3.8	-0.2	-2.1	-5.9
Tertiary	6.1	6.7	5.2	5.2	5.2	4.0	2.6	-1.6	-0.1	-6.8
Transport	9.7	12.7	12.3	11.2	11.2	10.9	10.8	2.4	-1.0	-0.4
CO ₂ Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.1	5.4	-1.9	2.5	1.4
Non-CO ₂ GHG emissions	20.3	15.6	15.0	13.5	10.4	9.6	8.9	-3.0	-3.6	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	59.6	50.3	42.9	-1.6	-1.8	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.34	0.31	0.26	0.25	0.12	0.10	-2.7	-2.2	-8.8
Final energy demand (t of CO ₂ /toe)	1.94	2.02	1.90	1.85	1.75	1.69	1.61	-0.2	-0.8	-0.8
Industry	1.92	2.00	1.84	1.87	1.65	1.52	1.18	-0.4	-1.1	-3.3
Residential	1.57	1.66	1.50	1.39	1.33	1.29	1.11	-0.4	-1.2	-1.8
Tertiary	1.65	1.65	1.44	1.45	1.39	1.22	1.11	-1.4	-0.4	-2.2
Transport	2.92	2.94	2.83	2.81	2.69	2.66	2.62	-0.3	-0.5	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.1	15.3	16.5			
RES-H&C share	7.6	6.0	11.1	13.4	17.0	19.0	22.6			
RES-E share	0.6	4.4	7.1	6.7	7.8	13.5	14.9			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	9.9	10.5	11.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	69	77	89	3.5	0.3	2.5
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	128	138	162	5.4	-0.3	2.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.2	25.6	32.2	6.1	0.9	3.8
as % of GDP	13.5	15.9	20.2	16.7	19.0	19.6	22.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Ireland: EUCC+35					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0			
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6			
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14484	14009	12027	0.5	-0.5	-1.8			
Solids	2601	2664	1979	2028	1873	1753	958	-2.7	-0.5	-6.5			
Oil	8145	8589	7818	6926	6744	6271	5577	-0.4	-1.5	-1.9			
Natural gas	3436	3470	4683	4016	4047	3892	2986	3.1	-1.4	-3.0			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1			
Renewable energy forms	235	366	671	1152	1959	2242	2630	11.1	11.3	3.0			
Energy Branch Consumption	254	300	243	250	207	206	168	-0.4	-1.6	-2.1			
Non-Energy Uses	675	516	341	360	405	441	449	-6.6	1.7	1.0			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1921	2185	2575	-1.6	0.4	3.0			
Solids	965	820	981	740	0	1	1	0.2	-56.6	13.8			
Oil	0	0	0	44	0	0	0	0.0	0.0	13.8			
Natural gas	958	461	233	231	235	234	228	-13.2	0.1	-0.3			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	235	366	628	1016	1686	1950	2347	10.3	10.4	3.4			
Hydro	73	54	52	62	66	65	66	-3.4	2.6	-0.1			
Biomass & Waste	141	216	327	420	651	795	799	8.8	7.1	2.1			
Wind	21	96	242	520	911	1008	1381	27.7	14.2	4.3			
Solar and others	0	1	8	13	57	81	98	54.0	22.6	5.5			
Geothermal	0	0	0	0	0	1	2	0.0	0.0	17.1			
Net Imports (ktoe)	12370	13765	13215	12285	12672	11940	9573	0.7	-0.4	-2.8			
Solids	1681	1886	945	1288	1873	1752	957	-5.6	7.1	-6.5			
Oil	8203	8694	7706	6991	6851	6383	5685	-0.6	-1.2	-1.8			
Crude oil and Feedstocks	3016	3166	2987	2873	2873	2618	2301	-0.1	-0.4	-2.2			
Oil products	5186	5527	4718	4118	3979	3766	3384	-0.9	-1.7	-1.6			
Natural gas	2478	3010	4480	3784	3813	3660	2773	6.1	-1.6	-3.1			
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1			
Import Dependency (%)	84.9	89.6	86.5	85.8	86.8	84.5	78.8						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31216	33839	33312	1.8	0.9	0.7			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	8587	8839	6384	6793	6206	6311	3573	-2.9	-0.3	-5.4			
Oil (including refinery gas)	4638	3340	605	15	3	16	6	-18.4	-41.0	7.3			
Gas (including derived gases)	9263	11574	17705	12617	12950	14127	11508	6.7	-3.1	-1.2			
Biomass-waste	95	130	317	660	682	888	1178	12.8	8.0	5.6			
Hydro (pumping excluded)	846	631	599	721	771	760	766	-3.4	2.6	-0.1			
Wind	244	1112	2815	6049	10588	11722	16059	27.7	14.2	4.3			
Solar	0	0	0	1	16	16	222	0.0	0.0	30.4			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9591	9329	10447	6.2	1.7	0.9			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	355	751	1611	2724	4127	4491	6098	16.3	9.9	4.0			
Hydro (pumping excluded)	236	234	237	237	258	258	259	0.0	0.8	0.1			
Wind	119	517	1374	2486	3851	4215	5582	27.7	10.9	3.8			
Solar	0	0	0	1	19	19	258	0.0	0.0	30.0			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	4097	5179	6480	6366	5464	4838	4349	4.7	-1.7	-2.3			
of which cogeneration units	77	240	285	264	63	266	273	14.0	-14.0	15.7			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0			
Gas fired	1872	2625	4081	3969	3624	3472	3130	8.1	-1.2	-1.5			
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2			
Biomass-waste fired	14	43	43	69	197	198	203	11.4	16.6	0.3			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	36.1	40.2	35.7						
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.6	46.8	47.1						
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.9	11.4	12.4						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	38.6	39.6	54.7						
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3583	3921	2970	-0.4	-2.5	-1.9			
Solids	1930	1920	1358	1448	1373	1397	801	-3.5	0.1	-5.2			
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4			
Gas (including derived gases)	1825	2040	3039	2066	2055	2309	1892	5.2	-3.8	-0.8			
Biomass & Waste	24	30	75	143	153	212	276	12.2	7.5	6.1			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	3341	3204	3033	3024	3133	2890	2585	-1.0	0.3	-1.9			
Refineries	3341	3203	2940	2933	2926	2665	2344	-1.3	0.0	-2.2			
Biofuels and hydrogen production	0	1	93	89	199	189	188	0.0	7.9	-0.6			
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0			
Derived gases, cokeries etc.	0	0	0	2	8	36	52	0.0	2204.6	20.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.6
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.7
Rail	1	2	2	2	2	2	2	2.7	1.0	1.1
Aviation ⁽³⁾	6	10	10	11	14	16	17	5.2	3.2	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	1.0
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.3
Heavy goods and light commercial vehicles	11	17	10	11	13	15	16	-0.5	2.4	2.3
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.6
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4763	4681	4697	1.5	0.1	-0.1
Public road transport	96	101	110	111	111	112	113	1.4	0.2	0.1
Private cars and motorcycles	2206	2577	2807	2583	2525	2368	2251	2.4	-1.1	-1.1
Heavy goods and light commercial vehicles	1086	1482	967	1019	1135	1206	1304	-1.2	1.6	1.4
Rail	40	42	44	44	47	49	50	0.8	0.7	0.7
Aviation	629	857	767	809	922	922	955	2.0	1.9	0.4
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.9
By transport activity										
Passenger transport	2958	3559	3724	3544	3602	3448	3366	2.3	-0.3	-0.7
Freight transport	1124	1519	990	1042	1160	1233	1331	-1.3	1.6	1.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.8	5.1			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14079	13568	11578	0.8	-0.5	-1.9
Final Energy Demand	10779	12597	11957	11423	11763	11055	9658	1.0	-0.2	-2.0
by sector										
Industry	2498	2582	2146	2453	2558	2416	2180	-1.5	1.8	-1.6
Energy intensive industries	1245	1341	1023	1166	1183	1027	858	-1.9	1.5	-3.2
Other industrial sectors	1252	1241	1123	1287	1375	1389	1321	-1.1	2.0	-0.4
Residential	2513	2954	3296	2823	2856	2588	1769	2.7	-1.4	-4.7
Tertiary	1684	1979	1799	1556	1580	1365	1007	0.7	-1.3	-4.4
Transport ⁽⁵⁾	4085	5082	4715	4590	4768	4686	4702	1.4	0.1	-0.1
by fuel										
Solids	671	751	604	567	500	356	156	-1.0	-1.9	-11.0
Oil	7045	8204	7270	6439	6229	5727	5036	0.3	-1.5	-2.1
Gas	1200	1364	1593	1883	1926	1523	1054	2.9	1.9	-5.8
Electricity	1745	2094	2186	2107	2266	2458	2462	2.3	0.4	0.8
Heat (from CHP and District Heating)	0	0	0	1	14	36	58	0.0	0.0	15.1
Renewable energy forms	118	184	304	424	819	919	836	10.0	10.4	0.2
Other	0	0	0	2	8	36	56	0.0	1734.1	21.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	93	92	78	70	62	49	-1.9	-2.7	-3.4
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	64	54	-2.8	-0.3	-3.0
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	60	36	-0.2	-2.7	-7.0
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	46	31	-1.9	-3.6	-6.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	33	30	-1.2	-1.8	-2.3
Freight transport (toe/Mtkm)	96	88	92	89	86	81	78	-0.3	-0.7	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.8	73.1	65.0	63.1	61.5	59.6	52.2	-1.0	-0.5	-1.6
of which ETS sectors (2013 scope) GHG emissions	25.4	20.0	18.5	17.9	17.9	13.9	13.9		-1.1	-2.4
of which ESD sectors (2013 scope) GHG emissions	47.8	45.0	44.6	43.6	41.7	38.2	38.2		-0.3	-1.3
CO2 Emissions (energy related)	43.2	47.3	42.0	37.8	36.3	33.9	26.4	-0.3	-1.4	-3.1
Power generation/District heating	15.6	15.3	13.3	11.0	10.5	11.2	7.7	-1.6	-2.4	-3.0
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-2.0
Industry	5.3	5.6	3.6	3.8	3.4	2.6	1.9	-3.9	-0.4	-5.8
Residential	6.4	7.2	7.8	6.5	6.1	4.7	2.1	2.1	-2.5	-9.9
Tertiary	3.4	3.5	3.1	2.5	2.4	1.8	1.2	-0.7	-2.8	-6.7
Transport	12.3	15.3	13.9	13.6	13.8	13.4	13.3	1.3	-0.1	-0.4
CO2 Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	1.9	1.9	1.9	-7.0	3.1	-0.2
Non-CO2 GHG emissions	25.6	23.1	21.5	23.5	23.2	23.8	23.8	-1.7	0.8	0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.4	103.1	90.2	-1.0	-0.5	-1.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.66	0.60	0.47	0.41	0.33	0.33	0.23	-3.4	-3.3	-3.8
Final energy demand (t of CO2/toe)	2.53	2.51	2.38	2.32	2.18	2.04	1.91	-0.6	-0.9	-1.3
Industry	2.13	2.16	1.66	1.56	1.33	1.10	0.86	-2.5	-2.2	-4.2
Residential	2.53	2.44	2.37	2.30	2.12	1.80	1.21	-0.7	-1.1	-5.5
Tertiary	1.99	1.77	1.74	1.63	1.49	1.34	1.17	-1.3	-1.5	-2.4
Transport	3.00	3.01	2.96	2.96	2.89	2.86	2.83	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.2	18.8	25.9			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	18.3	26.6			
RES-E share	4.8	7.2	14.5	26.5	40.6	41.6	57.2			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	12.6	17.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	91	91	88	5.9	1.9	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	176	174	174	3.0	1.1	-0.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.8	13.9	15.5	15.6	18.9	20.9	23.8	4.7	2.0	2.3
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.3	9.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Italy: EUCC+35
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3	
GDP (in 000 ME13)	1564	1643	1622	1565	1675	1776	1885	0.4	0.3	1.2	
Gross Inland Consumption (ktoe)	174219	187471	174761	159036	161293	149408	124725	0.0	-0.8	-2.5	
Solids	12550	16461	14170	16106	18613	12441	6192	1.2	2.8	-10.4	
Oil	89540	83963	69558	61171	56702	50425	43550	-2.5	-2.0	-2.6	
Natural gas	57945	70651	68057	56177	59868	57466	44663	1.6	-1.3	-2.9	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Renewable energy forms	10371	12170	19180	21628	23533	26312	27568	6.3	2.1	1.8	
Energy Branch Consumption	7704	10052	9539	8520	8167	7220	6315	2.2	-1.5	-2.5	
Non-Energy Uses	9019	8607	9560	7050	7322	7453	7389	0.6	-2.6	0.1	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	28400	27839	29560	30751	31719	33247	34193	0.4	0.7	0.8	
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0	
Oil	4915	6376	5687	5142	5667	5604	5582	1.5	0.0	-0.2	
Natural gas	13627	9886	6885	6760	5766	4593	3920	-6.6	-1.8	-3.8	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	9856	11516	16924	18793	20286	23050	24691	5.6	1.8	2.0	
Hydro	3800	3101	4395	4138	4087	4212	4241	1.5	-0.7	0.4	
Biomass & Waste	1736	3392	6670	10105	11359	12248	11549	14.4	5.5	0.2	
Wind	48	202	785	1258	1260	1247	2709	32.1	4.8	8.0	
Solar and others	12	30	298	2199	2490	4183	4989	37.4	23.7	7.2	
Geothermal	4259	4791	4776	1092	1089	1159	1202	1.2	-13.7	1.0	
Net Imports (ktoe)	152069	160241	149804	131764	133156	119883	94376	-0.1	-1.2	-3.4	
Solids	13133	16367	14301	16050	18613	12441	6192	0.9	2.7	-10.4	
Oil	87599	79154	67826	59509	54560	48414	41463	-2.5	-2.2	-2.7	
Crude oil and Feedstocks	89451	94307	84882	68525	61697	54323	46572	-0.5	-3.1	-2.8	
Oil products	-1852	-15153	-17056	-9016	-7137	-5908	-5110	24.9	-8.3	-3.3	
Natural gas	47008	59840	61600	49416	54158	53002	41092	2.7	-1.3	-2.7	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Import Dependency (%)	86.5	84.5	84.3	81.1	80.8	78.3	73.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288970	317889	310173	280055	1.0	0.6	-1.3	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	26272	43606	39734	58856	67235	44904	19341	4.2	5.4	-11.7	
Oil (including refinery gas)	85878	47124	21714	8781	7795	6956	3075	-12.8	-9.7	-8.9	
Gas (including derived gases)	106398	156191	158215	110293	127595	115671	85319	4.0	-2.1	-3.9	
Biomass-waste	1908	6153	11586	18671	21446	29486	33207	19.8	6.4	4.5	
Hydro (pumping excluded)	44199	36067	51116	48121	47528	48979	49314	1.5	-0.7	0.4	
Wind	563	2344	9126	14628	14646	14500	31499	32.1	4.8	8.0	
Solar	17	31	1906	23409	25433	43466	52090	59.9	29.6	7.4	
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122775	123027	125794	3.9	1.6	0.2	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	16770	18701	26470	46375	47762	58908	70756	4.7	6.1	4.0	
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	18865	0.7	0.7	0.0	
Wind	363	1635	5794	8958	8963	8728	14780	31.9	4.5	5.1	
Solar	17	30	3113	18905	19994	31375	37111	68.3	20.4	6.4	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	55126	64249	78450	81079	75012	64119	55038	3.6	-0.4	-3.0	
of which cogeneration units	6476	5888	7351	17212	16945	17296	13800	1.3	8.7	-2.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4	
Gas fired	22819	36431	51677	52045	51353	46590	41124	8.5	-0.1	-2.2	
Oil fired	21763	17998	14748	13928	8629	5986	2173	-3.8	-5.2	-12.9	
Biomass-waste fired	436	870	1774	4810	5388	5654	5858	15.1	11.7	0.8	
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0	
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.4	27.8	24.7				
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.6	46.0	45.6				
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.4	11.0	10.8				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	36.3	46.0	61.5				
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43394	38030	27774	0.9	-2.2	-4.4	
Solids	6045	10399	9484	12963	14712	9143	3929	4.6	4.5	-12.4	
Oil (including refinery gas)	18954	12079	7365	1905	1675	1525	844	-9.0	-13.8	-6.6	
Gas (including derived gases)	19668	29585	28966	18745	21737	20114	15121	3.9	-2.8	-3.6	
Biomass & Waste	438	2270	3527	3795	4330	6309	6939	23.2	2.1	4.8	
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	101609	106909	97409	78677	74318	66577	58156	-0.4	-2.7	-2.4	
Refineries	95900	101959	91472	74873	68919	61621	53839	-0.5	-2.8	-2.4	
Biofuels and hydrogen production	0	177	1419	1593	2218	1934	1814	0.0	4.6	-2.0	
District heating	0	0	110	121	123	120	101	0.0	1.1	-1.9	
Derived gases, cokeries etc.	5709	4773	4408	2090	3058	2902	2402	-2.6	-3.6	-2.4	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	943	931	952	967	1020	1031	1068	0.1	0.7	0.5
Public road transport	93	101	102	105	107	108	109	0.9	0.5	0.2
Private cars and motorcycles	756	727	740	746	781	778	801	-0.2	0.5	0.2
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.1
Aviation ⁽³⁾	34	43	51	56	63	70	75	4.3	2.2	1.7
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.2
Freight transport activity (Gtkm)	253	303	268	271	290	300	319	0.6	0.8	1.0
Heavy goods and light commercial vehicles	192	226	202	203	217	221	235	0.5	0.7	0.8
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	55	58	2.4	0.5	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	38989	36098	34727	-0.2	-0.6	-1.2
Public road transport	1061	1231	1245	1278	1308	1288	1272	1.6	0.5	-0.3
Private cars and motorcycles	27882	27505	25835	24747	23387	20549	19116	-0.8	-1.0	-2.0
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8425	8168	8208	0.9	-0.3	-0.3
Rail	526	492	463	487	522	564	589	-1.3	1.2	1.2
Aviation	3491	3700	3863	4073	4282	4385	4352	1.0	1.0	0.2
Inland navigation	1269	1387	1128	1012	1065	1144	1190	-1.2	-0.6	1.1
By transport activity										
Passenger transport	33399	32865	31375	30531	29435	26717	25259	-0.6	-0.6	-1.5
Freight transport	8775	11512	9844	9324	9555	9381	9469	1.2	-0.3	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.7	5.5			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	153971	141955	117366	0.0	-0.7	-2.7
Final Energy Demand	125579	134544	124781	122385	122438	114726	96359	-0.1	-0.2	-2.4
by sector										
Industry	40502	39858	30905	27952	28620	27215	23922	-2.7	-0.8	-1.8
Energy intensive industries	25289	25477	19382	16985	17644	16862	14460	-2.6	-0.9	-2.0
Other industrial sectors	15214	14382	11523	10966	10976	10352	9463	-2.7	-0.5	-1.5
Residential	27656	31313	31959	34859	34801	32586	23944	1.5	0.9	-3.7
Tertiary	14901	18537	20182	19017	19285	18068	13012	3.1	-0.5	-3.9
Transport ⁽⁵⁾	42519	44836	41734	40557	39733	36857	35481	-0.2	-0.5	-1.1
by fuel										
Solids	3586	3980	2910	2094	2644	2248	1270	-2.1	-1.0	-7.1
Oil	57249	59005	48733	45659	41837	36338	30927	-1.6	-1.5	-3.0
Gas	38022	40609	38499	36390	37275	36503	28832	0.1	-0.3	-2.5
Electricity	23472	25871	25736	25288	26265	26029	23870	0.9	0.2	-1.0
Heat (from CHP and District Heating)	1449	3082	3332	3592	3781	3829	3224	8.7	1.3	-1.6
Renewable energy forms	1802	1997	5570	9356	10619	9688	8054	11.9	6.7	-2.7
Other	0	0	0	6	17	91	183	0.0	0.0	26.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	114	108	102	96	84	66	-0.3	-1.1	-3.7
Industry (Energy on Value added, index 2000=100)	100	100	83	79	77	71	60	-1.8	-0.7	-2.4
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	100	69	0.9	0.4	-4.9
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	100	68	2.3	-1.0	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	21	-1.0	-1.5	-2.1
Freight transport (toe/Mtkm)	35	38	37	34	33	31	30	0.6	-1.1	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	558.5	592.5	509.9	457.0	458.8	401.7	321.5	-0.9	-1.1	-3.5
of which ETS sectors (2013 scope) GHG emissions		261.5	213.8	172.1	188.4	155.7	113.4		-1.3	-4.9
of which ESD sectors (2013 scope) GHG emissions		331.0	296.1	284.8	270.4	245.9	208.1		-0.9	-2.6
CO2 Emissions (energy related)	432.5	470.4	404.2	354.7	361.4	310.6	235.6	-0.7	-1.1	-4.2
Power generation/District heating	137.1	158.5	135.9	106.9	122.1	93.3	58.6	-0.1	-1.1	-7.1
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.2	9.9	0.4	-2.4	-2.6
Industry	78.0	72.5	49.5	42.3	42.7	38.1	28.6	-4.5	-1.5	-3.9
Residential	53.4	59.9	53.6	51.4	49.7	46.1	29.9	0.0	-0.8	-5.0
Tertiary	24.4	29.3	30.2	26.0	25.4	22.9	15.6	2.2	-1.7	-4.7
Transport	123.7	131.8	118.6	114.0	108.7	99.0	93.0	-0.4	-0.9	-1.5
CO2 Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	21.8	21.9	21.8	-1.7	-1.0	0.0
Non-CO2 GHG emissions	97.3	91.3	81.6	81.2	75.5	69.2	64.1	-1.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.4	76.5	61.2	-0.9	-1.1	-3.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.47	0.45	0.38	0.31	0.32	0.25	0.18	-2.0	-1.7	-5.8
Final energy demand (t of CO2/toe)	2.23	2.18	2.02	1.91	1.85	1.80	1.73	-1.0	-0.9	-0.6
Industry	1.93	1.82	1.60	1.51	1.49	1.40	1.20	-1.8	-0.7	-2.2
Residential	1.93	1.91	1.68	1.48	1.43	1.41	1.25	-1.4	-1.6	-1.3
Tertiary	1.64	1.58	1.50	1.37	1.32	1.27	1.20	-0.9	-1.3	-0.9
Transport	2.91	2.94	2.84	2.81	2.73	2.69	2.62	-0.2	-0.4	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.8	24.1	33.8			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	26.4	40.8			
RES-E share	15.7	16.3	20.1	33.6	32.5	41.1	54.6			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.7	13.4	19.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	66	77	90	86	92	96	97	3.2	0.2	0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	156	163	170	0.9	0.2	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.4	205.1	245.9	2.0	1.4	2.6
as % of GDP	8.6	9.2	10.2	10.9	11.4	11.5	13.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Latvia: EUCC+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual	%	Change	
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4	
GDP (in 000 ME13)	13	20	19	23	27	29	31	3.6	3.5	1.7	
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4528	4551	3865	1.8	-0.2	-1.6	
Solids	132	82	109	84	72	51	33	-1.9	-4.1	-7.5	
Oil	1295	1487	1521	1464	1433	1363	1225	1.6	-0.6	-1.6	
Natural gas	1092	1358	1462	867	917	1112	595	3.0	-4.6	-4.2	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6	
Renewable energy forms	1191	1481	1463	1758	1962	1948	1843	2.1	3.0	-0.6	
Energy Branch Consumption	39	42	48	33	36	40	27	2.1	-2.9	-2.6	
Non-Energy Uses	75	97	73	105	127	138	144	-0.3	5.7	1.3	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	1411	1868	1979	2228	2490	2443	2280	3.4	2.3	-0.9	
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0	
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0	
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	1393	1858	1975	2228	2490	2443	2280	3.6	2.3	-0.9	
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0	
Biomass & Waste	1150	1568	1668	1972	2163	2114	1879	3.8	2.6	-1.4	
Wind	0	4	4	8	54	55	127	30.2	29.1	8.9	
Solar and others	0	0	0	0	1	2	2	0.0	0.0	6.4	
Geothermal	0	0	0	0	0	0	0	0.0	0.0	10.1	
Net imports (ktoe)	2361	3097	2220	2456	2398	2477	1962	-0.6	0.8	-2.0	
Solids	61	77	112	84	72	51	33	6.3	-4.3	-7.5	
Oil	1235	1783	1671	1807	1788	1721	1573	3.1	0.7	-1.3	
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0	
Oil products	1148	1779	1669	1807	1788	1721	1573	3.8	0.7	-1.3	
Natural gas	1113	1434	903	867	923	1124	625	-2.1	0.2	-3.8	
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6	
Import Dependency (%)	61.0	63.9	45.5	52.4	49.1	50.3	46.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6674	7994	6674	4.8	0.1	0.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	78	0	2	78	108	112	98	-30.7	49.0	-1.0	
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0	
Gas (including derived gases)	1128	1486	2988	2023	2115	3308	987	10.2	-3.4	-7.3	
Biomass-waste	0	41	66	511	662	772	956	0.0	25.9	3.7	
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0	
Wind	4	47	49	95	628	640	1472	28.5	29.1	8.9	
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3105	3434	2.0	2.0	1.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	1515	1562	1606	1652	1872	1873	2168	0.6	1.5	1.5	
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0	
Wind	2	26	30	62	281	283	577	31.1	25.1	7.5	
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	574	600	940	1185	1229	1231	1266	5.1	2.7	0.3	
of which cogeneration units	254	586	870	1026	1028	1023	1112	13.1	1.7	0.8	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0	
Gas fired	522	572	893	1098	1098	1090	1090	5.5	2.1	-0.1	
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0	
Biomass-waste fired	2	10	10	50	95	105	140	17.8	24.9	4.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.0	27.7	21.2				
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.5	46.0	34.3				
% of gross electricity from CHP	31.4	30.7	45.0	38.6	33.8	45.0	21.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.7	57.2	83.7				
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	545	784	511	4.1	-3.9	-0.6	
Solids	53	1	9	13	17	18	15	-15.9	6.4	-1.2	
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0	
Gas (including derived gases)	408	562	767	360	384	574	250	6.5	-6.7	-4.2	
Biomass & Waste	0	22	29	117	144	193	246	0.0	17.4	5.5	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	570	479	383	344	426	393	303	-3.9	1.1	-3.4	
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biofuels and hydrogen production	0	3	27	37	89	72	66	0.0	12.6	-2.9	
District heating	569	476	356	307	337	319	233	-4.6	-0.5	-3.6	
Derived gases, cokeries etc.	1	0	0	0	0	2	4	-95.3	1788.1	28.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.1
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.3
Private cars and motorcycles	12	12	13	13	14	14	14	0.8	0.7	0.5
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.1
Aviation ⁽³⁾	0	1	2	2	2	3	4	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	5	5.8	2.2	1.4
Rail	13	20	17	20	21	24	27	2.6	2.2	2.6
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1168	1119	4.9	-0.1	-0.6
Public road transport	51	67	68	65	66	67	67	2.9	-0.3	0.1
Private cars and motorcycles	502	603	673	613	590	518	456	3.0	-1.3	-2.5
Heavy goods and light commercial vehicles	89	242	260	255	292	309	306	11.2	1.2	0.5
Rail	76	94	76	87	91	101	110	0.1	1.8	2.0
Aviation	27	59	118	132	148	166	172	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.1
By transport activity										
Passenger transport	582	729	861	811	805	751	696	4.0	-0.7	-1.4
Freight transport	163	335	340	347	389	417	423	7.6	1.4	0.9
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.5	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4401	4412	3720	1.9	-0.3	-1.7
Final Energy Demand	3254	4018	4120	4104	4247	4113	3472	2.4	0.3	-2.0
by sector										
Industry	576	699	774	912	991	1014	911	3.0	2.5	-0.8
Energy intensive industries	229	282	305	277	305	303	257	2.9	0.0	-1.7
Other industrial sectors	348	417	469	635	686	711	654	3.0	3.9	-0.5
Residential	1327	1504	1389	1286	1298	1214	903	0.5	-0.7	-3.6
Tertiary	602	749	756	744	761	713	538	2.3	0.1	-3.4
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1172	1122	4.8	0.0	-0.6
by fuel										
Solids	62	74	94	70	54	33	17	4.2	-5.4	-10.8
Oil	1056	1323	1446	1355	1306	1225	1081	3.2	-1.0	-1.9
Gas	329	508	498	391	437	445	342	4.2	-1.3	-2.4
Electricity	385	493	534	568	621	658	645	3.3	1.5	0.4
Heat (from CHP and District Heating)	598	603	575	524	570	539	399	-0.4	-0.1	-3.5
Renewable energy forms	824	1018	973	1194	1259	1210	980	1.7	2.6	-2.5
Other	0	0	0	0	0	3	7	0.0	0.0	35.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	293	235	246	189	171	155	123	-1.8	-3.6	-3.2
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	86	74	0.2	-1.0	-2.3
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	38	26	-4.0	-3.9	-5.3
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	50	35	-2.0	-3.2	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	32	28	1.7	-1.8	-2.8
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.5	11.3	12.3	10.6	10.1	10.2	8.4	1.6	-1.9	-1.9
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	2.9	1.9		-3.7	-2.7
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.2	6.5		-1.3	-1.6
CO2 Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.5	4.8	2.0	-2.6	-2.8
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.6	0.7	-0.9	-6.7	-5.9
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.5	0.0	-2.9	-4.9
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.3	6.5	-2.1	-5.2
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.4	2.1	-1.8	-5.0
Transport	2.2	3.2	3.5	3.4	3.3	3.2	3.0	4.9	-0.6	-0.9
CO2 Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.7	10.4	2.8	0.0
Non-CO2 GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.8	-0.1	-1.3	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.3	31.5	1.6	-1.9	-1.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.21	0.17	0.16	0.09	0.08	0.11	0.06	-2.2	-6.5	-4.1
Final energy demand (t of CO2/toe)	1.29	1.37	1.45	1.30	1.23	1.19	1.20	1.1	-1.6	-0.2
Industry	1.80	1.55	1.34	0.85	0.78	0.71	0.52	-2.9	-5.3	-4.0
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.29	6.0	-1.5	-1.7
Tertiary	1.14	1.10	1.12	0.98	0.92	0.82	0.78	-0.2	-1.9	-1.6
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.69	0.0	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.4	41.9	47.1			
RES-H&C share	40.1	43.0	40.9	51.2	51.9	55.4	63.1			
RES-E share	52.7	43.0	42.1	46.2	53.4	51.5	64.9			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.3	19.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	107	86	93	77	84	90	110	-1.4	-0.9	2.7
Average Price of Electricity in Final demand sectors (€133/MWh)	57	66	107	102	114	122	132	6.5	0.7	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.9	7.5	10.0	0.1	3.9
as % of GDP	14.8	17.3	27.0	19.0	19.4	20.2	23.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8
GDP (in 000 ME13)	19	27	29	35	40	42	43	4.4	3.3	0.7
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6568	6295	6445	-0.4	-0.3	-0.2
Solids	91	185	213	254	197	138	87	8.8	-0.8	-7.9
Oil	2125	2710	2502	2432	2367	2234	1947	1.6	-0.6	-1.9
Natural gas	2064	2477	2492	2122	2090	2258	1334	1.9	-1.7	-4.4
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Renewable energy forms	675	881	1065	1249	1347	1273	1182	4.7	2.4	-1.3
Energy Branch Consumption	610	853	743	680	612	598	574	2.0	-1.9	-0.6
Non-Energy Uses	662	804	714	717	793	786	756	0.8	1.1	-0.5
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3269	3900	1318	1358	1477	1398	3321	-8.7	1.1	8.4
Solids	12	20	9	19	7	8	8	-3.0	-2.1	1.3
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.2
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0
Renewable energy sources	682	900	1185	1262	1393	1318	1236	5.7	1.6	-1.2
Hydro	29	39	46	38	38	38	38	4.7	-2.0	0.0
Biomass & Waste	653	858	1114	1158	1282	1079	970	5.5	1.4	-2.7
Wind	0	0	19	60	60	179	181	0.0	12.0	11.7
Solar and others	0	0	0	5	8	8	12	0.0	0.0	4.1
Geothermal	0	3	5	1	6	15	35	0.0	3.1	19.2
Net Imports (ktoe)	4247	5026	5668	5454	5266	5066	3294	2.9	-0.8	-4.6
Solids	80	174	196	235	190	130	79	9.4	-0.3	-8.5
Oil	2223	2622	2607	2516	2451	2323	2036	1.6	-0.6	-1.8
Crude oil and Feedstocks	4760	9029	9339	9639	9124	8567	7894	7.0	-0.2	-1.4
Oil products	-2537	-6408	-6732	-7123	-6672	-6244	-5858	10.3	-0.1	-1.3
Natural gas	2065	2493	2485	2122	2094	2266	1347	1.9	-1.7	-4.3
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Import Dependency (%)	59.4	56.8	81.8	80.1	78.1	78.4	49.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	6011	8394	13853	-7.7	1.9	8.7
Nuclear energy	8419	10337	0	0	0	0	9377	-100.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0
Gas (including derived gases)	1707	3217	3436	3028	4086	5178	929	7.2	1.7	-13.8
Biomass-waste	0	7	147	657	725	634	943	0.0	17.3	2.7
Hydro (pumping excluded)	340	451	540	440	440	440	440	4.7	-2.0	0.0
Wind	0	2	224	695	695	2077	2100	0.0	12.0	11.7
Solar	0	0	0	64	64	64	64	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2424	3027	3972	-6.3	-1.7	5.1
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0
Renewable energy	103	118	249	614	614	1367	1375	9.2	9.4	8.4
Hydro (pumping excluded)	103	117	116	116	116	116	116	1.2	0.0	0.0
Wind	0	1	133	424	424	1178	1186	0.0	12.3	10.8
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2556	2577	2629	2829	1810	1659	1480	0.3	-3.7	-2.0
of which cogeneration units	650	1038	1100	1799	578	1077	530	5.4	-6.2	-0.9
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	3	3	0	0	0	0	0	-100.0	0.0	0.0
Gas fired	1736	1781	1822	1992	1520	1520	1349	0.5	-1.8	-1.2
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4
Biomass-waste fired	0	0	37	67	90	91	130	0.0	9.3	3.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.5	30.0	37.7			
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	47.4	46.4	29.1			
% of gross electricity from CHP	15.5	15.5	34.6	45.5	49.8	41.6	8.6			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	32.0	38.3	93.3			
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	872	1078	552	3.3	-3.8	-4.5
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0
Gas (including derived gases)	723	1057	1117	725	709	903	277	4.4	-4.4	-9.0
Biomass & Waste	1	5	65	135	163	175	276	59.7	9.7	5.4
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	7911	12651	9987	10232	9879	9311	10479	2.4	-0.1	0.6
Refineries	5032	9415	9446	9704	9277	8799	8130	6.5	-0.2	-1.3
Biofuels and hydrogen production	0	3	45	59	113	99	91	0.0	9.7	-2.1
District heating	656	520	496	468	488	412	246	-2.7	-0.2	-6.6
Derived gases, cokeries etc.	2223	2713	0	0	0	1	2012	0.0	0.0	154.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Lithuania: EUO0+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.6
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.5
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.4
Inland navigation	0	0	0	0	0	0	0	0.4	1.4	0.8
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.3
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6
Inland navigation	0	0	0	0	0	0	0	0.4	1.7	0.6
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1630	1553	1446	3.7	0.7	-1.2
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4
Private cars and motorcycles	705	845	919	881	871	793	707	2.7	-0.5	-2.1
Heavy goods and light commercial vehicles	204	387	443	517	555	547	534	8.1	2.3	-0.4
Rail	76	79	65	67	78	81	80	-1.5	1.8	0.3
Aviation	27	46	49	69	79	85	78	6.1	4.9	-0.1
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5
By transport activity										
Passenger transport	777	947	1013	998	998	926	832	2.7	-0.2	-1.8
Freight transport	277	466	508	584	632	627	615	6.2	2.2	-0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.5	6.5			
ENERGY EFFICIENCY										
Primary energy consumption	6401	7907	6073	5934	5776	5509	5689	-0.5	-0.5	-0.2
Final Energy Demand	3767	4601	4763	4996	5042	4681	3751	2.4	0.6	-2.9
by sector										
Industry	780	987	898	1172	1194	1197	974	1.4	2.9	-2.0
Energy intensive industries	363	436	486	689	696	697	563	3.0	3.7	-2.1
Other industrial sectors	416	551	412	483	498	501	412	-0.1	1.9	-1.9
Residential	1368	1509	1599	1498	1435	1248	850	1.6	-1.1	-5.1
Tertiary	563	672	720	718	757	657	460	2.5	0.5	-4.8
Transport ⁽⁵⁾	1057	1433	1546	1608	1656	1578	1467	3.9	0.7	-1.2
by fuel										
Solids	82	177	208	238	180	119	67	9.8	-1.4	-9.5
Oil	1356	1616	1613	1664	1693	1573	1384	1.7	0.5	-2.0
Gas	363	519	567	649	607	590	382	4.6	0.7	-4.5
Electricity	533	686	717	832	895	909	855	3.0	2.2	-0.5
Heat (from CHP and District Heating)	827	905	922	870	912	843	556	1.1	-0.1	-4.8
Renewable energy forms	605	698	738	743	755	645	505	2.0	0.2	-3.9
Other	0	0	0	0	0	1	3	0.0	0.0	32.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	374	317	234	191	164	148	151	-4.6	-3.5	-0.9
Industry (Energy on Value added, index 2000=100)	100	80	66	74	70	67	54	-4.1	0.5	-2.4
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	50	40	27	-2.7	-4.2	-5.9
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	53	37	-1.3	-2.9	-5.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	18	0.3	-1.2	-2.4
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	19.0	15.5	1.5	-1.6	-2.3
of which ETS sectors (2013 scope) GHG emissions		11.7	9.4	7.8	7.0	7.4	5.0		-2.9	-3.3
of which ESD sectors (2013 scope) GHG emissions		13.2	13.6	13.4	12.3	11.6	10.5		-0.8	-1.7
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.4	7.3	1.8	-1.4	-3.8
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.6	0.8	-0.8	-5.5	-8.9
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.1
Industry	1.1	1.3	1.2	1.5	1.5	1.4	0.8	0.7	2.4	-5.3
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.2	3.7	-2.6	-8.9
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.2	2.2	-0.6	-8.2
Transport	3.1	4.2	4.5	4.6	4.6	4.4	4.0	3.7	0.2	-1.4
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.4	2.3	6.0	-1.4	-0.5
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	6.2	6.0	0.0	-2.1	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.4	39.4	32.2	1.5	-1.6	-2.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.13	0.04	2.3	-5.6	-10.3
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.41	1.42	0.6	-0.3	-0.1
Industry	1.38	1.35	1.29	1.31	1.22	1.20	0.87	-0.7	-0.5	-3.3
Residential	0.40	0.43	0.50	0.51	0.42	0.32	0.28	2.1	-1.6	-4.0
Tertiary	0.88	0.84	0.86	0.82	0.76	0.62	0.53	-0.3	-1.1	-3.5
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.72	-0.2	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.2	24.5	26.9			
RES-H&C share	26.1	30.4	33.2	36.7	38.4	35.9	43.6			
RES-E share	4.0	3.8	7.4	15.6	15.4	25.1	28.7			
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.2	10.9	12.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	108	105	109	8.7	-4.6	0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	118	133	159	5.7	0.5	3.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	8.0	9.2	7.6	2.5	2.6
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.8	21.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Luxembourg: EUCL+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2
GDP (in 000 M€13)	32	38	41	45	52	60	68	2.6	2.3	2.8
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4727	4663	4382	2.4	0.2	-0.8
Solids	108	77	66	51	44	32	17	-4.8	-4.0	-9.3
Oil	2320	3160	2869	2908	2862	2708	2687	2.2	0.0	-0.6
Natural gas	671	1176	1197	1031	1045	1129	834	6.0	-1.3	-2.2
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Renewable energy forms	64	106	160	245	391	407	423	9.6	9.4	0.8
Energy Branch Consumption	26	30	50	51	55	61	65	6.9	1.0	1.6
Non-Energy Uses	55	29	33	39	42	43	46	-5.1	2.5	0.8
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	64	111	122	148	265	289	299	6.7	8.1	1.2
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	64	111	122	148	265	289	299	6.7	8.1	1.2
Hydro	11	8	9	9	9	10	13	-1.4	0.2	3.3
Biomass & Waste	51	97	105	119	186	201	170	7.5	5.9	-0.9
Wind	2	5	5	7	43	42	53	7.4	24.8	2.1
Solar and others	0	2	3	13	27	36	63	0.0	25.2	9.0
Geothermal	0	0	0	0	0	0	0	0.0	0.0	15.6
Net Imports (ktoe)	3639	4671	4503	4468	4462	4374	4082	2.2	-0.1	-0.9
Solids	108	77	66	51	44	32	17	-4.8	-4.0	-9.3
Oil	2368	3141	2852	2908	2862	2708	2687	1.9	0.0	-0.6
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil products	2368	3141	2852	2908	2862	2708	2687	1.9	0.0	-0.6
Natural gas	671	1176	1197	1031	1045	1129	834	6.0	-1.3	-2.2
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.8	93.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3282	3954	3739	22.6	0.2	1.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0
Gas (including derived gases)	215	3107	2916	2304	2371	3016	2320	29.8	-2.0	-0.2
Biomass-waste	56	76	129	158	175	209	249	8.7	3.1	3.6
Hydro (pumping excluded)	124	94	108	110	110	114	152	-1.4	0.2	3.3
Wind	27	52	55	78	501	491	618	7.4	24.7	2.1
Solar	0	17	21	112	121	121	398	0.0	19.2	12.6
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	163	574	597	702	971	949	1340	13.8	5.0	3.3
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	47	93	107	212	467	454	859	8.6	15.9	6.3
Hydro (pumping excluded)	33	34	34	34	34	35	47	0.3	0.0	3.3
Wind	14	35	44	58	302	288	361	12.1	21.2	1.8
Solar	0	24	29	120	131	131	451	0.0	16.2	13.2
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	116	481	490	490	504	496	481	15.5	0.3	-0.5
of which cogeneration units	63	101	121	229	181	123	154	6.7	4.1	-1.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	103	468	469	469	469	457	442	16.4	0.0	-0.6
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0
Biomass-waste fired	9	9	17	20	34	37	37	7.1	7.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	38.0	46.9	31.4			
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.5	48.9			
% of gross electricity from CHP	17.7	10.1	9.6	23.3	15.9	7.5	8.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.7	23.7	37.9			
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	439	572	453	19.1	-2.3	0.3
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0
Gas (including derived gases)	66	544	520	383	393	515	395	22.8	-2.8	0.1
Biomass & Waste	29	32	33	36	46	57	57	1.5	3.2	2.3
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1	3	46	113	153	148	164	57.2	12.7	0.7
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	1	42	108	147	141	159	0.0	13.4	0.8
District heating	1	2	4	5	5	5	3	23.1	2.3	-3.9
Derived gases, cokeries etc.	0	0	0	0	0	2	2	0.0	0.0	18.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Luxembourg: EUO+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.2
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.3
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.2
Rail	0	0	0	0	0	1	1	0.4	3.1	3.0
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	3	3	3	3	4	4	5	0.8	3.6	1.7
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.6
Rail	1	0	0	0	0	0	1	-6.5	1.9	3.2
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2759	2652	2738	3.1	0.6	-0.1
Public road transport	60	92	106	115	122	120	125	5.9	1.4	0.2
Private cars and motorcycles	1153	1521	1341	1311	1216	1086	1126	1.5	-1.0	-0.8
Heavy goods and light commercial vehicles	364	721	709	818	956	942	944	6.9	3.0	-0.1
Rail	12	11	13	14	16	18	20	0.8	1.9	2.3
Aviation	321	432	431	435	446	482	520	3.0	0.3	1.6
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.6
By transport activity										
Passenger transport	1535	2046	1880	1863	1786	1691	1773	2.0	-0.5	-0.1
Freight transport	379	735	724	834	974	961	966	6.7	3.0	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.3	5.3			
ENERGY EFFICIENCY										
Primary energy consumption	3599	4771	4609	4576	4685	4620	4336	2.5	0.2	-0.8
Final Energy Demand	3505	4477	4327	4382	4469	4322	4078	2.1	0.3	-0.9
by sector										
Industry	714	754	739	585	590	560	477	0.4	-2.2	-2.1
Energy intensive industries	583	598	601	438	432	397	320	0.3	-3.2	-3.0
Other industrial sectors	130	156	139	148	158	163	157	0.6	1.3	0.0
Residential	468	525	508	498	521	521	387	0.8	0.3	-2.9
Tertiary	409	418	477	601	600	589	476	1.5	2.3	-2.3
Transport ⁽⁵⁾	1914	2781	2604	2697	2759	2652	2738	3.1	0.6	-0.1
by fuel										
Solids	108	77	66	51	44	32	17	-4.8	-4.0	-9.3
Oil	2261	3106	2835	2869	2820	2664	2641	2.3	-0.1	-0.7
Gas	605	631	675	645	652	614	439	1.1	-0.4	-3.9
Electricity	497	529	568	557	600	652	646	1.4	0.5	0.7
Heat (from CHP and District Heating)	13	75	74	80	75	76	59	19.2	0.2	-2.5
Renewable energy forms	22	59	108	181	277	280	261	17.2	9.9	-0.6
Other	0	0	0	0	1	4	16	0.0	0.0	38.3
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	115	126	113	103	91	78	64	-0.1	-2.1	-3.5
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	60	2.9	-3.7	-4.1
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	73	47	-0.7	-1.1	-5.6
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	71	50	-1.5	-0.1	-5.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	161	136	128	0.3	-2.5	-2.3
Freight transport (toe/Mtkm)	139	268	247	245	234	215	195	5.9	-0.5	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.7	14.1	13.3	12.9	12.8	12.4	11.6	2.2	-0.4	-1.0
of which ETS sectors (2013 scope) GHG emissions		4.2	3.8	3.5	3.4	3.7	3.3		-1.0	-0.2
of which ESD sectors (2013 scope) GHG emissions		9.9	9.5	9.5	9.4	8.7	8.2		-0.2	-1.3
CO2 Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	10.9	10.1	2.9	-0.4	-1.1
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.2	0.9	22.6	-2.8	0.0
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.4	-2.0	-2.8	-5.2
Residential	1.1	1.2	1.1	1.1	1.0	0.9	0.6	0.5	-1.1	-5.2
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.4	-0.6	0.6	-4.7
Transport	5.8	8.4	7.8	7.9	7.9	7.6	7.7	3.1	0.2	-0.2
CO2 Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.5	-2.1	-1.1	-0.6
Non-CO2 GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	1.0	-0.9	0.1	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.3	93.6	87.1	2.2	-0.4	-1.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.30	0.30	0.25	0.22	0.25	0.21	0.7	-2.9	-0.6
Final energy demand (t of CO2/toe)	2.49	2.52	2.43	2.40	2.31	2.25	2.25	-0.2	-0.5	-0.3
Industry	1.71	1.47	1.36	1.39	1.28	1.14	0.92	-2.3	-0.6	-3.2
Residential	2.29	2.28	2.22	2.14	1.93	1.79	1.52	-0.3	-1.4	-2.4
Tertiary	1.59	1.25	1.28	1.23	1.08	0.97	0.84	-2.1	-1.6	-2.5
Transport	3.01	3.04	2.99	2.92	2.88	2.86	2.83	-0.1	-0.4	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	8.9	10.0			
RES-H&C share	1.4	3.6	4.8	6.4	12.3	15.0	17.3			
RES-E share	2.1	3.2	3.8	6.1	12.0	11.3	17.2			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.8	11.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	95	91	99	-1.1	2.0	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	121	130	136	0.1	1.0	1.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.6	8.0	4.3	2.5	3.1
as % of GDP	9.5	11.5	11.2	10.4	11.4	11.0	11.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Malta: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	0	0	0	0	0	0	0	0.9	0.6	0.4		
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9		
Gross Inland Consumption (ktoe)	802	972	908	675	746	704	616	1.3	-1.9	-1.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.2		
Oil	802	972	903	579	342	322	292	1.2	-9.2	-1.6		
Natural gas	0	0	0	0	339	307	243	0.0	0.0	-3.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Renewable energy forms	0	1	5	21	49	57	66	0.0	25.7	2.9		
Energy Branch Consumption	10	2	10	6	5	4	3	0.5	-7.2	-4.8		
Non-Energy Uses	0	20	9	11	12	12	12	0.0	3.4	-0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	0	1	4	16	38	48	60	0.0	24.3	4.8		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	0	1	4	16	38	48	60	0.0	24.3	4.8		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	0	0	1	3	1	2	3	0.0	9.5	8.7		
Wind	0	0	0	0	0	0	1	0.0	0.0	0.0		
Solar and others	0	1	4	13	36	46	56	0.0	25.6	4.5		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	0.7		
Net Imports (ktoe)	1458	1630	2362	2099	2097	2079	2031	4.9	-1.2	-0.3		
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.2		
Oil	1458	1630	2361	2019	1719	1720	1649	4.9	-3.1	-0.4		
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil products	1458	1630	2361	2019	1719	1720	1649	4.9	-3.1	-0.4		
Natural gas	0	0	0	0	350	333	360	0.0	0.0	0.3		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.8	97.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2491	2546	2203	1.0	1.6	-1.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	1917	2240	2113	1293	0	0	0	1.0	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	2157	2176	1725	0.0	0.0	-2.2		
Biomass-waste	0	0	0	6	8	11	18	0.0	0.0	8.3		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	6	0.0	0.0	0.0		
Solar	0	0	0	103	326	359	454	0.0	0.0	3.4		
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	577	577	579	541	790	945	894	0.0	3.2	1.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	2	60	185	207	265	0.0	57.2	3.7		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	4	0.0	0.0	0.0		
Solar	0	0	2	60	185	207	260	0.0	57.2	3.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	577	577	577	481	606	737	630	0.0	0.5	0.4		
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-6.1		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	242	482	482	0.0	0.0	7.1		
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8		
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	4.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.2	30.2	27.7					
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.8	61.0	61.5					
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.4	14.5	21.7					
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	340	308	244	2.1	-5.1	-3.3		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	339	307	243	0.0	0.0	-3.3		
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	0.3		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	0	0	1	3	7	7	6	0.0	23.3	-2.8		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	1	3	7	7	6	0.0	23.3	-2.8		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	21.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.2	1.2
Public road transport	0	0	1	1	1	1	1	0.8	0.5	0.3
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0.3	1.3	1.6
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0.3	1.3	1.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	267	263	-0.5	0.6	-0.3
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.8
Private cars and motorcycles	97	105	110	109	102	89	82	1.2	-0.7	-2.2
Heavy goods and light commercial vehicles	36	37	31	31	34	35	36	-1.5	0.7	0.8
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	122	87	102	105	122	132	134	-1.8	1.9	0.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	232	205	224	225	236	232	226	-0.4	0.5	-0.4
Freight transport	36	37	31	31	34	35	36	-1.5	0.7	0.8
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.9	2.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.1			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	734	691	606	1.2	-2.0	-1.9
Final Energy Demand	483	478	476	501	548	539	485	-0.1	1.4	-1.2
by sector										
Industry	83	74	48	51	52	53	52	-5.4	0.8	0.0
Energy intensive industries	13	19	8	8	8	8	8	-4.8	-0.1	-0.4
Other industrial sectors	70	55	40	44	44	45	44	-5.5	1.0	0.1
Residential	76	77	80	85	101	95	74	0.5	2.4	-3.1
Tertiary	55	85	94	108	125	124	97	5.4	2.9	-2.5
Transport ⁽⁵⁾	268	242	255	256	270	267	263	-0.5	0.6	-0.3
by fuel										
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.2
Oil	348	309	316	323	330	310	280	-1.0	0.4	-1.6
Gas	0	0	0	0	0	0	0	0.0	0.0	8.8
Electricity	135	168	155	166	197	203	179	1.4	2.4	-0.9
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-2.4
Renewable energy forms	0	1	5	11	20	25	25	0.0	14.2	2.3
Other	0	0	0	0	0	0	0	0.0	0.0	33.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	162	134	89	90	77	61	-0.6	-4.0	-3.7
Industry (Energy on Value added, index 2000=100)	100	116	74	73	67	65	58	-2.9	-1.0	-1.5
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	81	57	-1.1	0.9	-5.3
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	131	117	83	2.1	0.6	-4.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.7
Freight transport (toe/Mtkm)	139	135	116	113	110	106	101	-1.7	-0.6	-0.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	2.8	3.3	3.1	2.1	2.1	1.9	1.6	1.0	-3.9	-2.4
of which ETS sectors (2013 scope) GHG emissions		2.4	2.1	1.1	1.2	1.1	1.0		-6.0	-1.8
of which ESD sectors (2013 scope) GHG emissions		1.0	1.0	1.0	0.9	0.8	0.7		-0.4	-3.3
CO ₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.7	1.4	0.9	-4.4	-2.3
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.7	0.6	2.1	-8.1	-3.3
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.5	-7.3
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.0	-1.2	2.4	-15.0
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.0	6.2	-0.7	-4.7
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.3
CO ₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO ₂ GHG emissions	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.6	-0.5	-3.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	94.8	87.0	74.1	1.0	-3.9	-2.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.28	0.26	1.1	-9.6	-2.1
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.73	1.74	-0.9	-1.0	-0.4
Industry	1.55	1.43	0.97	1.00	0.94	0.86	0.44	-4.6	-0.3	-7.3
Residential	1.02	0.80	0.86	0.91	0.86	0.54	0.23	-1.7	0.0	-12.2
Tertiary	0.67	0.40	0.72	0.73	0.50	0.45	0.40	0.7	-3.5	-2.2
Transport	3.00	3.00	2.99	2.96	2.92	2.91	2.91	0.0	-0.2	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.7	14.2	18.1			
RES-H&C share	0.0	1.0	7.0	17.5	23.9	35.4	50.5			
RES-E share	0.0	0.0	0.1	4.8	12.5	13.5	19.9			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.7	10.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	78	111	173	117	89	93	100	8.4	-6.4	1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	75	84	201	177	168	161	151	10.4	-1.8	-1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.3	8.2	2.3	2.2
as % of GDP	6.8	8.9	12.5	11.2	12.7	13.1	13.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Netherlands: EUCC+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2		
GDP (in 000 ME13)	537	573	613	620	668	706	738	1.3	0.9	1.0		
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83528	80215	70901	1.4	-0.4	-1.6		
Solids	7852	8195	7596	9274	7996	8965	6538	-0.3	0.5	-2.0		
Oil	28245	32464	34649	34892	34343	32691	30901	2.1	-0.1	-1.1		
Natural gas	35009	35334	39309	33859	30972	29464	23839	1.2	-2.4	-2.6		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Renewable energy forms	1827	2872	3796	3906	9184	8751	9213	7.6	9.2	0.0		
Energy Branch Consumption	5353	6336	5088	5607	5439	5022	4725	-0.5	0.7	-1.4		
Non-Energy Uses	10491	13013	17582	13895	14822	15340	15337	5.3	-1.7	0.3		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	57555	62220	70219	51471	52932	45379	37597	2.0	-2.8	-3.4		
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0		
Oil	2405	2328	1985	1381	1414	955	737	-1.9	-3.3	-6.3		
Natural gas	52203	56276	63534	44126	40620	33785	25690	2.0	-4.4	-4.5		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Renewable energy sources	1926	2577	3671	5009	9943	9649	10180	6.7	10.5	0.2		
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1		
Biomass & Waste	1831	2371	3282	4236	7005	6508	6795	6.0	7.9	-0.3		
Wind	71	178	343	618	2342	2440	2493	17.0	21.2	0.6		
Solar and others	11	21	29	123	546	617	741	9.8	34.1	3.1		
Geothermal	0	0	8	24	41	76	141	0.0	18.2	13.3		
Net Imports (ktoe)	33759	37076	30549	47678	45973	50903	50471	-1.0	4.2	0.9		
Solids	7998	8312	9228	9274	7996	8965	6538	1.4	-1.4	-2.0		
Oil	41425	47836	45167	48901	48027	47211	45908	0.9	0.6	-0.5		
Crude oil and Feedstocks	61018	61724	60676	53468	50693	47817	45176	-0.1	-1.8	-1.1		
Oil products	-19594	-13888	-15508	-4567	-2666	-606	731	-2.3	-16.1	0.0		
Natural gas	-17191	-20941	-24211	-10267	-9368	-3728	-429	3.5	-9.1	-26.5		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Import Dependency (%)	38.0	37.7	30.4	48.1	46.5	52.9	57.3					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107596	123448	134988	126749	2.8	0.4	0.3		
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4		
Solids	24276	23500	22588	29437	24100	30878	22007	-0.7	0.7	-0.9		
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0		
Gas (including derived gases)	54606	61588	77566	56711	47195	54242	50964	3.6	-4.8	0.8		
Biomass-waste	3203	6683	8606	8344	15909	12286	15274	10.4	6.3	-0.4		
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1		
Wind	829	2067	3993	7185	27228	28369	28992	17.0	21.2	0.6		
Solar	8	34	60	1113	5003	5003	5304	22.2	55.5	0.6		
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	21048	21728	25072	30866	38231	36650	33823	1.8	4.3	-1.2		
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0		
Renewable energy	497	1312	2362	4706	15624	15966	16506	16.9	20.8	0.6		
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0		
Wind	447	1224	2237	3431	10001	10344	10536	17.5	16.2	0.5		
Solar	13	51	88	1238	5586	5586	5933	21.1	51.4	0.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	20066	19931	22225	25674	22122	20198	16832	1.0	0.0	-2.7		
of which cogeneration units	7372	7162	9300	8515	2413	4398	5393	2.4	-12.6	8.4		
of which CCS units	0	0	0	0	0	250	250	0.0	0.0	0.0		
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9		
Gas fired	14667	14529	16575	17356	14402	12809	10081	1.2	-1.4	-3.5		
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6		
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	35.6	40.5	41.3					
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.7	43.6	44.6					
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.9	19.4	27.6					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.4	1.6					
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	42.2	36.9	42.4					
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17178	19231	17023	1.9	-2.1	-0.1		
Solids	4998	4958	4669	6490	4919	6248	4443	-0.7	0.5	-1.0		
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4		
Gas (including derived gases)	10671	11953	13773	9489	7813	9352	8838	2.6	-5.5	1.2		
Biomass & Waste	1213	2052	2460	1892	4446	3612	3721	7.3	6.1	-1.8		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	86454	91417	68924	63771	61741	59148	56267	-2.2	-1.1	-0.9		
Refineries	82233	86869	64188	58847	56695	54680	52160	-2.4	-1.2	-0.8		
Biofuels and hydrogen production	0	0	230	579	485	457	511	0.0	7.8	0.5		
District heating	398	436	499	366	338	310	241	2.3	-3.8	-3.3		
Derived gases, cokeries etc.	3824	4113	4007	3979	4222	3700	3356	0.5	0.5	-2.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Netherlands: EUOQ+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	184	195	183	191	200	203	211	-0.1	0.9	0.5
Public road transport	11	12	12	13	13	14	14	0.8	0.9	0.6
Private cars and motorcycles	143	152	138	141	147	145	148	-0.4	0.6	0.1
Rail	16	17	17	19	21	23	25	0.5	2.1	2.0
Aviation ⁽³⁾	13	14	15	17	18	20	22	1.1	2.4	1.7
Inland navigation	1	1	1	1	1	1	1	0.1	1.2	1.7
Freight transport activity (Gtkm)	94	100	106	111	121	126	133	1.3	1.3	0.9
Heavy goods and light commercial vehicles	48	51	54	55	61	60	62	1.2	1.3	0.2
Rail	5	6	6	6	7	8	8	2.7	1.5	1.9
Inland navigation	41	42	47	50	53	58	62	1.2	1.3	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14210	12909	12185	0.5	-0.5	-1.5
Public road transport	212	224	260	267	271	264	257	2.1	0.4	-0.5
Private cars and motorcycles	8007	8288	8206	7708	6904	5849	5309	0.2	-1.7	-2.6
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2740	2549	2530	2.2	0.1	-0.8
Rail	184	172	182	189	204	221	229	-0.1	1.1	1.2
Aviation	3382	3712	3463	3821	3837	3749	3568	0.2	1.0	-0.7
Inland navigation	328	207	159	239	253	277	292	-7.0	4.8	1.4
By transport activity										
Passenger transport	11703	12265	11985	11861	11081	9939	9215	0.2	-0.8	-1.8
Freight transport	2594	2933	3001	2957	3128	2971	2970	1.5	0.4	-0.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.1	2.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.1	4.5			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68705	64875	55564	0.6	0.0	-2.1
Final Energy Demand	50505	51654	51835	50854	50351	46081	38612	0.3	-0.3	-2.6
by sector										
Industry	14804	14814	12208	12815	13606	12718	11397	-1.9	1.1	-1.8
Energy intensive industries	10277	10532	8224	8734	9331	8719	7900	-2.2	1.3	-1.7
Other industrial sectors	4527	4281	3984	4082	4275	3999	3498	-1.3	0.7	-2.0
Residential	10299	10143	11518	10892	10510	9776	7251	1.1	-0.9	-3.6
Tertiary	11104	11499	13124	12329	12026	10677	7779	1.7	-0.9	-4.3
Transport ⁽⁵⁾	14297	15198	14985	14817	14210	12909	12185	0.5	-0.5	-1.5
by fuel										
Solids	1330	1515	1270	1402	1592	1568	1046	-0.5	2.3	-4.1
Oil	16505	17382	16113	15746	14876	13032	11609	-0.2	-0.8	-2.4
Gas	21011	20346	22378	21405	20299	17305	12436	0.6	-1.0	-4.8
Electricity	8408	8986	9189	9034	9572	9765	9107	0.9	0.4	-0.5
Heat (from CHP and District Heating)	2893	2981	2106	2038	2149	2250	1971	-3.1	0.2	-0.9
Renewable energy forms	358	444	780	1223	1837	2043	2222	8.1	9.0	1.9
Other	0	0	0	8	27	117	220	-100.0	0.0	23.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	141	142	141	135	125	114	96	0.0	-1.2	-2.6
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	65	56	-2.9	-0.2	-2.7
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	75	52	0.6	-2.0	-4.9
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	71	49	0.1	-1.7	-5.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	27	24	-0.4	-2.4	-2.9
Freight transport (toe/Mtkm)	28	29	28	27	26	24	22	0.2	-0.9	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	222.8	221.6	216.9	209.7	193.4	184.3	155.9	-0.3	-1.1	-2.1
of which ETS sectors (2013 scope) GHG emissions	103.3	95.6	95.8	85.5	85.5	88.0	74.1		-1.1	-1.4
of which ESD sectors (2013 scope) GHG emissions	118.2	121.4	113.8	107.9	96.4	81.8			-1.2	-2.7
CO2 Emissions (energy related)	168.5	175.7	175.0	171.3	156.2	147.9	119.8	0.4	-1.1	-2.6
Power generation/District heating	51.9	55.5	57.7	54.3	44.0	50.6	41.6	1.1	-2.7	-0.6
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.7	7.9	-2.3	1.2	-2.2
Industry	26.6	26.5	22.9	26.6	27.6	23.5	17.9	-1.5	1.9	-4.3
Residential	18.9	17.9	20.6	19.1	17.5	15.2	9.5	0.9	-1.7	-5.9
Tertiary	17.5	18.3	21.1	18.7	16.6	13.5	9.3	1.9	-2.4	-5.6
Transport	42.4	45.3	43.9	42.3	40.6	36.3	33.5	0.4	-0.8	-1.9
CO2 Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.9	8.9	8.9	2.0	0.3	0.0
Non-CO2 GHG emissions	47.3	37.0	33.3	29.9	28.3	27.5	27.2	-3.4	-1.6	-0.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	85.9	81.9	69.2	-0.3	-1.1	-2.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.40	0.38	0.37	0.38	0.28	0.30	0.26	-0.6	-2.9	-0.6
Final energy demand (t of CO2/toe)	2.09	2.09	2.09	2.10	2.03	1.92	1.82	0.0	-0.3	-1.1
Industry	1.80	1.79	1.87	2.07	2.03	1.85	1.57	0.4	0.8	-2.5
Residential	1.84	1.77	1.79	1.75	1.66	1.55	1.31	-0.2	-0.7	-2.4
Tertiary	1.58	1.59	1.61	1.51	1.38	1.27	1.20	0.2	-1.5	-1.4
Transport	2.97	2.98	2.93	2.86	2.86	2.82	2.75	-0.1	-0.3	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	13.0	14.2	17.9			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.5	12.5			
RES-E share	2.6	6.3	9.7	12.9	37.6	34.7	40.1			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.7	13.9	18.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	83	85	89	2.7	2.4	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	136	138	147	0.9	0.5	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	78.2	85.3	100.6	3.5	1.5	2.5
as % of GDP	8.9	10.6	11.0	10.5	11.7	12.1	13.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Poland: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2		
GDP (in 000 ME13)	253	294	371	425	492	559	623	3.9	2.9	2.4		
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	105665	103075	92650	1.3	0.5	-1.3		
Solids	56291	54612	54808	53011	50466	46172	38483	-0.3	-0.8	-2.7		
Oil	19037	21696	25747	25895	26598	24889	23222	3.1	0.3	-1.3		
Natural gas	9964	12237	12807	13159	16174	17330	15537	2.5	2.4	-0.4		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-548	-962	-116	6	64	168	81	-14.4	0.0	2.4		
Renewable energy forms	3905	4643	7684	9863	12364	14516	15326	7.0	4.9	2.2		
Energy Branch Consumption	6664	6104	6095	6243	6155	5496	5165	-0.9	0.1	-1.7		
Non-Energy Uses	4357	4573	4961	5545	6359	6997	7343	1.3	2.5	1.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	79590	78592	67394	70900	70520	65634	58822	-1.6	0.5	-1.8		
Solids	71299	68857	55381	55586	52214	44859	35430	-2.5	-0.6	-3.8		
Oil	1062	1143	1063	1539	1580	1531	1483	0.0	4.0	-0.6		
Natural gas	3317	3887	3696	3947	4582	4797	6649	1.1	2.2	3.8		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3912	4705	7254	9829	12143	14447	15260	6.4	5.3	2.3		
Hydro	181	189	251	206	209	218	246	3.3	-1.8	1.7		
Biomass & Waste	3728	4493	6838	8749	10831	11889	11827	6.3	4.7	0.9		
Wind	0	12	143	832	984	2100	2664	80.0	21.3	10.5		
Solar and others	0	0	8	22	81	194	210	0.0	25.5	10.0		
Geothermal	3	11	13	21	38	46	312	16.1	11.0	23.4		
Net Imports (ktoe)	8773	15932	31567	31285	35437	37761	34170	13.7	1.2	-0.4		
Solids	-16353	-13039	-2814	-2575	-1748	1313	3053	-16.1	-4.6	0.0		
Oil	19067	21466	25187	24607	25306	23669	22058	2.8	0.0	-1.4		
Crude oil and Feedstocks	17616	17893	22965	24633	24820	23021	21233	2.7	0.8	-1.5		
Oil products	1451	3573	2222	-26	486	648	825	4.4	-14.1	5.4		
Natural gas	6607	8531	8874	9213	11595	12542	8911	3.0	2.7	-2.6		
Electricity	-548	-962	-116	6	64	168	81	-14.4	0.0	2.4		
Import Dependency (%)	9.9	17.2	31.3	30.6	33.4	36.5	36.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	178559	191200	191227	0.9	1.3	0.7		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	135888	142161	136592	137628	143498	133973	125698	0.1	0.5	-1.3		
Oil (including refinery gas)	1916	2757	2892	9	0	479	470	4.2	-100.0	0.0		
Gas (including derived gases)	2961	6573	6689	2968	9678	17235	14612	8.5	3.8	4.2		
Biomass-waste	298	1532	6332	9667	11451	12484	16521	35.7	6.1	3.7		
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2538	2865	3.3	-1.8	1.7		
Wind	5	135	1664	9669	11437	24424	30976	78.7	21.3	10.5		
Solar	0	0	0	29	67	67	84	0.0	0.0	2.3		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	30310	31721	33411	38260	33841	38679	40632	1.0	0.1	1.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	821	1036	2044	6084	6756	12675	15491	9.6	12.7	8.7		
Hydro (pumping excluded)	817	915	936	949	949	984	1063	1.4	0.1	1.1		
Wind	4	121	1108	5100	5728	11611	14328	75.5	17.9	9.6		
Solar	0	0	0	35	79	79	99	0.0	0.0	2.3		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	29489	30685	31367	32176	27085	26004	25142	0.6	-1.5	-0.7		
of which cogeneration units	9354	8313	8693	6564	6583	7735	6793	-0.7	-2.7	0.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	28214	28608	29158	28543	23232	20988	19560	0.3	-2.2	-1.7		
Gas fired	764	1548	1592	1659	1702	2803	3186	7.6	0.7	6.5		
Oil fired	396	396	396	398	171	162	155	0.0	-8.1	-0.9		
Biomass-waste fired	115	133	221	1574	1980	2051	2240	6.8	24.5	1.2		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.3	52.3	50.0					
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.5	37.4	37.7					
% of gross electricity from CHP	16.1	16.8	17.6	18.2	21.5	18.1	16.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	14.2	20.7	26.4					
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	37780	37704	35881	0.5	-0.1	-0.5		
Solids	35247	36349	34345	33735	33374	31675	29674	-0.3	-0.3	-1.2		
Oil (including refinery gas)	245	184	171	2	0	156	154	-3.5	-74.4	286.6		
Gas (including derived gases)	1032	1805	2179	913	1945	3144	2652	7.8	-1.1	3.1		
Biomass & Waste	102	434	1645	2046	2460	2728	3402	32.1	4.1	3.3		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	32964	31279	38702	40301	40606	37377	32760	1.6	0.5	-2.1		
Refineries	18969	18975	24192	27120	27433	25630	23796	2.5	1.3	-1.4		
Biofuels and hydrogen production	0	49	887	1100	1395	1348	1272	0.0	4.6	-0.9		
District heating	4179	3465	3716	3183	3578	3140	2436	-1.2	-0.4	-3.8		
Derived gases, cokeries etc.	9816	8789	9908	8898	8200	7258	5255	0.1	-1.9	-4.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	225	233	268	302	344	370	404	1.7	2.6	1.6
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.6
Private cars and motorcycles	134	156	194	223	254	267	288	3.8	2.7	1.2
Rail	29	23	22	24	31	39	47	-2.5	3.2	4.3
Aviation ⁽³⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.1
Freight transport activity (Gtkm)	114	140	170	201	228	256	286	4.0	3.0	2.3
Heavy goods and light commercial vehicles	59	90	121	150	167	185	206	7.4	3.3	2.1
Rail	54	50	49	51	61	71	80	-1.0	2.2	2.8
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.5
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19785	18958	18808	5.9	1.3	-0.5
Public road transport	654	581	610	632	668	682	671	-0.7	0.9	0.0
Private cars and motorcycles	6314	7213	9660	10120	10620	9502	9092	4.3	1.0	-1.5
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7372	7522	7622	11.9	1.6	0.3
Rail	541	469	372	366	427	478	534	-3.7	1.4	2.3
Aviation	274	319	508	613	693	770	885	6.4	3.2	2.5
Inland navigation	6	5	3	3	4	4	5	-7.4	2.3	2.5
By transport activity										
Passenger transport	7317	8170	10823	11407	12035	11020	10726	4.0	1.1	-1.1
Freight transport	2514	4095	6636	7283	7750	7938	8082	10.2	1.6	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99306	96078	85306	1.3	0.4	-1.5
Final Energy Demand	55260	58986	67070	68144	71687	69077	59812	2.0	0.7	-1.8
by sector										
Industry	18504	16147	14193	16600	17453	18195	16839	-2.6	2.1	-0.4
Energy intensive industries	13031	10951	9372	10814	11130	11217	9993	-3.2	1.7	-1.1
Other industrial sectors	5473	5196	4821	5786	6323	6979	6846	-1.3	2.7	0.8
Residential	17193	19454	22501	20556	21358	19732	14594	2.7	-0.5	-3.7
Tertiary	9644	10846	12664	12057	12818	11922	9327	2.8	0.1	-3.1
Transport ⁽⁵⁾	9919	12539	17712	18930	20058	19227	19051	6.0	1.3	-0.5
by fuel										
Solids	13215	12285	14494	13387	11184	9508	5592	0.9	-2.6	-6.7
Oil	15500	17844	20727	21289	21498	19482	17786	2.9	0.4	-1.9
Gas	7574	8780	9468	9673	11131	10865	9216	2.3	1.6	-1.9
Electricity	8482	9064	10238	11011	12369	13633	13615	1.9	1.9	1.0
Heat (from CHP and District Heating)	6886	7056	6547	6063	6913	6414	5481	-0.5	0.5	-2.3
Renewable energy forms	3602	3957	5596	6721	8589	9159	8060	4.5	4.4	-0.6
Other	0	0	0	1	1	14	62	0.0	0.0	47.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	350	313	272	240	215	184	149	-2.5	-2.3	-3.6
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	29	24	-9.7	-1.3	-3.0
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	53	35	-0.8	-3.4	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	76	63	44	0.0	-2.7	-5.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	29	25	2.0	-1.5	-2.8
Freight transport (toe/Mtkm)	22	29	39	36	34	31	28	5.9	-1.4	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	400.5	403.1	411.9	407.8	400.8	376.6	333.0	0.3	-0.3	-1.8
of which ETS sectors (2013 scope) GHG emissions	222.2	210.3	208.8	207.0	197.8	175.9	175.9	-0.2	-1.6	
of which ESD sectors (2013 scope) GHG emissions	180.9	201.6	199.0	193.8	178.8	157.1		-0.4	-2.1	
CO2 Emissions (energy related)	303.3	307.5	320.7	311.8	307.8	285.7	244.1	0.6	-0.4	-2.3
Power generation/District heating	167.4	171.0	165.6	157.9	159.3	153.5	138.0	-0.1	-0.4	-1.4
Energy Branch	10.2	7.7	8.5	9.7	9.1	7.8	7.4	-1.8	0.7	-2.1
Industry	51.9	36.9	30.4	34.9	31.8	29.2	21.4	-5.2	0.5	-3.9
Residential	27.4	35.5	44.9	37.8	34.6	29.1	17.4	5.1	-2.6	-6.7
Tertiary	18.4	20.7	21.9	19.1	18.1	13.9	9.1	1.7	-1.9	-6.6
Transport	28.0	35.8	49.3	52.4	54.8	52.1	50.9	5.8	1.1	-0.7
CO2 Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.5	26.4	26.8	-1.0	2.4	0.5
Non-CO2 GHG emissions	75.0	74.7	71.0	73.2	67.5	64.6	62.1	-0.5	-0.5	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	84.5	79.4	70.2	0.3	-0.3	-1.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.71	0.69	0.67	0.65	0.59	0.56	0.52	-0.6	-1.2	-1.2
Final energy demand (t of CO2/toe)	2.27	2.18	2.19	2.12	1.94	1.80	1.65	-0.4	-1.2	-1.6
Industry	2.81	2.28	2.14	2.10	1.82	1.61	1.27	-2.6	-1.6	-3.6
Residential	1.59	1.83	2.00	1.84	1.62	1.48	1.19	2.3	-2.1	-3.0
Tertiary	1.91	1.91	1.73	1.59	1.41	1.17	0.98	-1.0	-2.0	-3.6
Transport	2.82	2.85	2.79	2.77	2.73	2.71	2.67	-0.1	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.1	17.7	20.7			
RES-H&C share	9.6	10.2	11.6	13.8	19.1	21.5	26.1			
RES-E share	1.6	2.7	6.6	13.4	14.2	20.5	26.3			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.5	11.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	70	73	77	2.6	3.7	0.9
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	128	129	132	5.2	0.0	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	93.1	109.6	137.0	6.9	3.5	3.9
as % of GDP	13.4	15.7	17.8	16.7	18.9	19.6	22.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Portugal: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual %	Change
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4		
GDP (in 000 ME13)	169	176	181	174	187	204	217	0.7	0.4	1.5		
Gross Inland Consumption (ktoe)	25285	27475	24205	22984	21385	20258	16892	-0.4	-1.2	-2.3		
Solids	3805	3349	1658	3347	856	10	4	-8.0	-6.4	-41.4		
Oil	15475	16174	12215	10669	10365	9576	8604	-2.3	-1.6	-1.8		
Natural gas	2078	3751	4489	3446	3426	3652	1540	8.0	-2.7	-7.7		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Renewable energy forms	3846	3615	5618	5328	6287	6519	6306	3.9	1.1	0.0		
Energy Branch Consumption	1028	1235	1195	1417	1209	1219	1187	1.5	0.1	-0.2		
Non-Energy Uses	2393	2587	1728	1470	1485	1516	1504	-3.2	-1.5	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5217	6156	6400	6167	4.1	0.6	0.0		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3846	3615	5800	5217	6156	6400	6167	4.2	0.6	0.0		
Hydro	974	407	1389	821	1596	1563	1623	3.6	1.4	0.2		
Biomass & Waste	2770	2967	3375	3181	3273	3228	2495	2.0	-0.3	-2.7		
Wind	14	153	790	1004	1012	1013	1444	49.2	2.5	3.6		
Solar and others	19	23	66	136	199	520	526	13.6	11.6	10.2		
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4		
Net Imports (ktoe)	22072	24845	18588	16330	15762	14397	11248	-1.7	-1.6	-3.3		
Solids	3914	3225	1629	3347	856	10	4	-8.4	-6.2	-41.4		
Oil	16039	17140	12436	11231	10913	10102	9095	-2.5	-1.3	-1.8		
Crude oil and Feedstocks	12316	13795	11875	14608	14054	13126	12065	-0.4	1.7	-1.5		
Oil products	3723	3345	561	-3376	-3141	-3024	-2969	-17.2	0.0	-0.6		
Natural gas	2039	3893	4505	3446	3432	3665	1573	8.2	-2.7	-7.5		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Import Dependency (%)	85.1	88.6	75.1	77.8	71.9	69.2	64.6					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50202	48578	49875	44260	2.2	-1.0	-0.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	14595	15226	7100	14862	3709	0	0	-7.0	-6.3	-100.0		
Oil (including refinery gas)	8421	8791	3008	770	1922	1253	608	-9.8	-4.4	-10.9		
Gas (including derived gases)	7231	13606	14900	9528	8566	10129	501	7.5	-5.4	-24.7		
Biomass-waste	1553	1987	2942	2936	3055	3986	2932	6.6	0.4	-0.4		
Hydro (pumping excluded)	11323	4731	16148	9543	18562	18169	18867	3.6	1.4	0.2		
Wind	168	1773	9182	11676	11767	11781	16795	49.2	2.5	3.6		
Solar	1	3	212	680	789	4348	4349	68.3	14.1	18.6		
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21871	22367	24403	5.6	1.5	1.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	4619	6083	9036	12611	14827	16826	18956	6.9	5.1	2.5		
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8		
Wind	83	1064	3796	5079	5113	5113	6680	46.6	3.0	2.7		
Solar	1	2	134	467	531	2305	2305	63.2	14.8	15.8		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6370	7378	9885	8484	7044	5541	5448	4.5	-3.3	-2.5		
of which cogeneration units	1676	1079	1310	1491	1671	1385	1090	-2.4	2.5	-4.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0		
Gas fired	1542	2477	4799	5062	5012	4153	4078	12.0	0.4	-2.0		
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6		
Biomass-waste fired	221	244	343	521	643	664	672	4.5	6.5	0.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	24.9	25.1	20.5					
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.7	41.3	29.5					
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.6	13.3	9.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.8	77.2	97.5					
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3432	3247	1239	-1.2	-5.1	-9.7		
Solids	3198	3319	1597	3329	841	0	0	-6.7	-6.2	-100.0		
Oil (including refinery gas)	1683	1793	574	185	454	296	144	-10.2	-2.3	-10.9		
Gas (including derived gases)	1215	2309	2775	1560	1404	1832	136	8.6	-6.6	-20.8		
Biomass & Waste	356	428	662	621	659	1044	885	6.4	0.0	3.0		
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	13004	13953	12457	15231	14671	13705	12600	-0.4	1.6	-1.5		
Refineries	12555	13953	12148	14807	14244	13307	12219	-0.3	1.6	-1.5		
Biofuels and hydrogen production	0	0	309	422	423	376	349	0.0	3.2	-1.9		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	449	0	0	1	4	23	31	0.0	0.0	22.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUCO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	105	115	116	121	125	133	141	1.0	0.8	1.2
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.1
Private cars and motorcycles	73	87	86	86	86	90	95	1.7	0.1	1.0
Rail	5	5	5	5	6	7	8	1.4	1.7	2.5
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	1.9
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.6
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.3
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.0
Rail	2	2	2	2	3	3	3	0.6	1.5	2.5
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6638	6262	6071	0.9	-0.8	-0.9
Public road transport	237	135	129	129	128	133	143	-5.9	0.0	1.1
Private cars and motorcycles	4590	5056	5149	4730	4385	3878	3631	1.2	-1.6	-1.9
Heavy goods and light commercial vehicles	891	1026	835	797	844	847	836	-0.6	0.1	-0.1
Rail	89	67	57	50	56	58	63	-4.3	-0.3	1.2
Aviation	784	888	1012	1124	1186	1304	1355	2.6	1.6	1.3
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.2
<i>By transport activity</i>										
Passenger transport	5689	6109	6318	6007	5727	5342	5157	1.1	-1.0	-1.0
Freight transport	947	1079	908	860	911	920	914	-0.4	0.0	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.4	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21514	19900	18742	15388	-0.2	-1.2	-2.5
Final Energy Demand	17919	19009	18022	16789	16842	15638	13419	0.1	-0.7	-2.2
<i>by sector</i>										
Industry	6323	5796	5453	5066	5173	4959	4262	-1.5	-0.5	-1.9
Energy intensive industries	4179	3889	3634	3613	3674	3539	2970	-1.4	0.1	-2.1
Other industrial sectors	2144	1907	1819	1452	1500	1420	1293	-1.6	-1.9	-1.5
Residential	2804	3224	2976	2632	2762	2316	1601	0.6	-0.7	-5.3
Tertiary	2157	2801	2368	2224	2269	2101	1485	0.9	-0.4	-4.1
Transport ⁽⁵⁾	6636	7188	7226	6867	6638	6262	6071	0.9	-0.8	-0.9
<i>by fuel</i>										
Solids	466	17	50	17	15	10	4	-20.0	-11.4	-12.1
Oil	10713	10812	9199	8142	7697	6995	6238	-1.5	-1.8	-2.1
Gas	873	1307	1564	1691	1835	1645	1245	6.0	1.6	-3.8
Electricity	3300	3983	4290	3865	4054	4239	3731	2.7	-0.6	-0.8
Heat (from CHP and District Heating)	134	328	338	325	364	297	287	9.7	0.8	-2.3
Renewable energy forms	2434	2563	2581	2748	2873	2427	1874	0.6	1.1	-4.2
Other	0	0	0	1	4	24	40	0.0	0.0	25.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	156	134	132	114	99	78	-1.1	-1.6	-3.8
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	74	62	-1.2	-0.8	-2.8
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	86	65	42	-0.6	-0.9	-6.8
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	73	48	-0.6	-0.9	-5.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	32	29	-0.3	-2.2	-2.5
Freight transport (toe/Mtkm)	36	33	33	31	30	29	27	-0.9	-0.8	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.9	90.7	73.4	73.2	59.8	54.0	44.6	-1.7	-2.0	-2.9
of which ETS sectors (2013 scope) GHG emissions	40.6	27.7	32.3	32.1	22.1	19.5	14.2		-2.2	-4.3
of which ESD sectors (2013 scope) GHG emissions	50.1	45.7	40.9	37.7	34.5	34.5	30.4		-1.9	-2.1
CO₂ Emissions (energy related)	61.0	64.6	49.6	50.1	38.9	33.5	25.5	-2.1	-2.4	-4.1
Power generation/District heating	21.7	24.9	14.9	18.0	8.2	5.3	0.8	-3.6	-5.8	-20.9
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.7	2.6	-0.2	0.6	-0.3
Industry	11.6	8.2	6.3	5.7	5.5	5.2	3.9	-5.9	-1.2	-3.6
Residential	2.0	2.3	2.6	2.0	2.0	1.2	0.5	2.5	-2.4	-13.0
Tertiary	3.4	4.4	2.4	2.0	1.7	1.5	0.9	-3.2	-3.3	-5.8
Transport	19.9	21.7	20.9	19.5	18.8	17.6	16.9	0.5	-1.1	-1.1
CO₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.1	6.2	6.2	-2.0	1.1	0.3
Non-CO₂ GHG emissions	19.3	19.1	18.4	16.9	14.8	14.3	12.8	-0.4	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	96.1	86.9	71.7	-1.7	-2.0	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.15	0.10	0.02	-6.3	-5.0	-20.1
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.63	1.65	-1.4	-0.7	-0.1
Industry	1.83	1.42	1.15	1.12	1.07	1.04	0.90	-4.5	-0.7	-1.7
Residential	0.71	0.72	0.86	0.75	0.73	0.53	0.31	1.9	-1.7	-8.1
Tertiary	1.55	1.56	1.02	0.88	0.76	0.70	0.64	-4.1	-2.9	-1.7
Transport	3.00	3.01	2.89	2.84	2.83	2.81	2.78	-0.4	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.4	36.2	41.9			
RES-H&C share	30.4	32.1	33.9	36.8	38.5	39.0	41.1			
RES-E share	28.3	27.7	40.7	47.5	63.7	68.9	88.7			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	13.6	21.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	112	114	105	1.6	3.6	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	139	142	149	-1.3	3.0	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.8	22.3	24.4	23.5	28.6	31.7	35.8	3.8	1.6	2.3
as % of GDP	10.0	12.7	13.5	13.5	15.3	15.5	16.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Romania: EUCC+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
									Annual %	Change		
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4		
GDP (in 000 ME13)	87	114	130	145	163	181	195	4.1	2.3	1.8		
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	35007	35276	29971	-0.2	-0.2	-1.5		
Solids	7493	8788	7008	6207	6461	5207	3110	-0.7	-0.8	-7.1		
Oil	9992	10286	9310	8775	8529	8289	7587	-0.7	-0.9	-1.2		
Natural gas	13680	13923	10788	9688	10779	10039	6788	-2.3	0.0	-4.5		
Nuclear	1407	1433	2998	2838	2846	5749	5663	7.9	-0.5	7.1		
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1		
Renewable energy forms	4137	5026	5891	6299	6970	6885	7773	3.6	1.7	1.1		
Energy Branch Consumption	3675	4105	2839	2480	2445	2335	2032	-2.5	-1.5	-1.8		
Non-Energy Uses	1883	2467	1473	1754	2001	2202	2346	-2.4	3.1	1.6		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	28465	28224	27824	26642	28364	30020	28647	-0.2	0.2	0.1		
Solids	5604	5795	5904	5042	5111	3954	2172	0.5	-1.4	-8.2		
Oil	6355	6226	4565	3643	3646	3651	3637	-3.3	-2.2	0.0		
Natural gas	10968	9701	8619	8848	9976	9945	9590	-2.4	1.5	-0.4		
Nuclear	1407	1433	2998	2838	2846	5749	5663	7.9	-0.5	7.1		
Renewable energy sources	4131	5070	5739	6271	6786	6720	7585	3.3	1.7	1.1		
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0		
Biomass & Waste	2854	3314	3980	4135	4559	4401	4030	3.4	1.4	-1.2		
Wind	0	0	26	557	560	560	1590	0.0	35.8	11.0		
Solar and others	0	0	0	163	183	249	385	0.0	111.9	7.7		
Geothermal	7	18	23	30	46	67	137	13.1	7.1	11.7		
Net Imports (ktoe)	8009	10867	7827	6473	6674	5293	1365	-0.2	-1.6	-14.7		
Solids	1920	2939	1234	1165	1350	1253	937	-4.3	0.9	-3.6		
Oil	3437	3988	4838	5156	4913	4673	3989	3.5	0.2	-2.1		
Crude oil and Feedstocks	4801	8857	6233	5504	4994	4562	3868	2.6	-2.2	-2.5		
Oil products	-1364	-4870	-1395	-348	-80	111	121	0.2	-24.8	0.0		
Natural gas	2712	4190	1816	839	804	95	-2800	-3.9	-7.8	0.0		
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1		
Import Dependency (%)	21.8	27.7	21.9	19.5	19.0	15.0	4.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67528	70767	75783	73088	1.6	1.6	0.3		
Nuclear energy	5456	5555	11623	11890	11922	23792	23256	7.9	0.3	6.9		
Solids	18926	21916	20681	21982	22414	16979	8651	0.9	0.8	-9.1		
Oil (including refinery gas)	3399	1894	692	625	406	227	199	-14.7	-5.2	-6.9		
Gas (including derived gases)	9001	9834	7323	8032	10077	8071	354	-2.0	3.2	-28.4		
Biomass-waste	0	7	111	522	763	973	1722	0.0	21.3	8.5		
Hydro (pumping excluded)	14778	20207	19883	16112	16723	16777	16780	3.0	-1.7	0.0		
Wind	0	0	306	6473	6512	6512	18485	0.0	35.8	11.0		
Solar	0	0	0	1891	1950	2452	3639	0.0	0.0	6.4		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	20197	19153	20120	24896	23904	22653	25724	0.0	1.7	0.7		
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2		
Renewable energy	6242	6289	6863	11413	11457	11707	16219	1.0	5.3	3.5		
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0		
Wind	0	0	389	2976	2989	2989	6730	0.0	22.6	8.5		
Solar	0	0	0	1792	1824	2074	2844	0.0	0.0	4.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	13283	12192	11913	12070	11033	8118	6678	-1.1	-0.8	-4.9		
of which cogeneration units	3431	5246	4582	4234	4098	2173	1948	2.9	-1.1	-7.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2		
Gas fired	3728	3439	3488	4173	4136	4084	3873	-0.7	1.7	-0.7		
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0		
Biomass-waste fired	147	5	23	96	139	169	219	-16.9	19.7	4.6		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.2	35.7	31.0					
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	39.0	39.2	33.7					
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.3	8.5	6.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.5	66.6	87.4					
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7424	5756	2790	-2.2	-1.5	-9.3		
Solids	5462	6085	5929	5216	5337	4151	2265	0.8	-1.0	-8.2		
Oil (including refinery gas)	1736	799	327	176	130	73	64	-15.4	-8.8	-6.9		
Gas (including derived gases)	3579	3437	2399	1331	1788	1313	86	-3.9	-2.9	-26.2		
Biomass & Waste	12	9	21	113	169	219	376	6.1	23.3	8.3		
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	16275	19666	15568	13664	13411	15757	14708	-0.4	-1.5	0.9		
Refineries	11250	15219	11480	9680	9157	8703	7971	0.2	-2.2	-1.4		
Biofuels and hydrogen production	0	0	115	273	558	512	481	0.0	17.1	-1.5		
District heating	1738	825	749	702	679	609	443	-8.1	-1.0	-4.2		
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5933	5813	-0.2	-0.7	6.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUO+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	85	93	110	118	130	143	157	2.6	1.7	1.9
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.6
Private cars and motorcycles	54	63	78	85	92	102	111	3.9	1.7	1.8
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.7
Freight transport activity (Gtkm)	27	56	43	51	61	69	76	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.5
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5726	5772	5767	4.3	1.2	0.1
Public road transport	293	260	359	373	378	374	372	2.0	0.5	-0.2
Private cars and motorcycles	2082	2416	3214	3381	3371	3222	3082	4.4	0.5	-0.9
Heavy goods and light commercial vehicles	363	1182	946	1142	1356	1457	1509	10.1	3.7	1.1
Rail	357	159	222	245	274	303	321	-4.6	2.1	1.6
Aviation	128	128	272	265	298	363	427	7.8	0.9	3.6
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.7
By transport activity										
Passenger transport	2648	2855	3921	4091	4131	4052	3977	4.0	0.5	-0.4
Freight transport	689	1331	1152	1356	1595	1720	1789	5.3	3.3	1.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	33006	33074	27625	-0.1	-0.4	-1.8
Final Energy Demand	22772	24714	22591	23117	24604	24090	20571	-0.1	0.9	-1.8
by sector										
Industry	9296	10007	6876	7316	8151	8319	7353	-3.0	1.7	-1.0
Energy intensive industries	6510	7208	4759	4794	5396	5382	4581	-3.1	1.3	-1.6
Other industrial sectors	2787	2799	2117	2522	2756	2937	2771	-2.7	2.7	0.1
Residential	8409	7990	8102	7825	8135	7533	5583	-0.4	0.0	-3.7
Tertiary	1606	2441	2489	2468	2529	2400	1803	4.5	0.2	-3.3
Transport ⁽⁵⁾	3460	4276	5124	5507	5789	5838	5832	4.0	1.2	0.1
by fuel										
Solids	1046	1611	939	815	938	857	678	-1.1	0.0	-3.2
Oil	5526	6628	6184	6765	6594	6410	5807	1.1	0.6	-1.3
Gas	6910	7754	6189	6337	6829	6621	4761	-1.1	1.0	-3.5
Electricity	2918	3341	3553	3683	4086	4286	4240	2.0	1.4	0.4
Heat (from CHP and District Heating)	3570	2136	1650	1493	1623	1650	1316	-7.4	-0.2	-2.1
Renewable energy forms	2802	3244	4077	4023	4532	4263	3758	3.8	1.1	-1.9
Other	0	0	0	0	1	3	11	-100.0	0.0	27.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	423	343	275	229	215	195	153	-4.2	-2.5	-3.3
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	30	-7.8	-1.0	-2.9
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	33	22	-6.9	-2.1	-5.5
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	79	54	1.4	-2.1	-5.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	25	1.3	-1.2	-2.3
Freight transport (toe/Mtkm)	25	24	27	27	26	25	23	0.5	-0.2	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.5	110.0	89.2	-1.5	-0.6	-2.8
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	48.8	41.7	27.4		-1.3	-5.6	
of which ESD sectors (2013 scope) GHG emissions		76.5	69.6	71.8	69.7	68.3	61.8		0.0	-1.2
CO ₂ Emissions (energy related)	88.8	95.8	77.4	71.5	73.8	65.7	46.6	-1.4	-0.5	-4.5
Power generation/District heating	42.0	39.0	33.6	27.2	28.6	22.0	10.4	-2.2	-1.6	-9.6
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.3	-2.8	-2.9	-1.3
Industry	21.6	25.2	14.4	14.7	15.6	14.9	10.9	-4.0	0.9	-3.5
Residential	6.6	7.3	5.8	6.5	6.9	6.6	4.6	-1.2	1.7	-3.9
Tertiary	1.9	4.2	3.6	3.5	3.5	3.0	1.9	6.7	-0.4	-5.6
Transport	9.9	12.4	14.8	15.5	15.4	15.6	15.4	4.1	0.4	0.0
CO ₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.8	7.7	-6.1	0.9	-0.2
Non-CO ₂ GHG emissions	43.8	46.7	40.9	39.8	36.9	36.5	34.9	-0.7	-1.0	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.6	43.3	35.1	-1.5	-0.6	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.22	0.11	-0.6	-2.5	-9.4
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.67	1.60	-0.3	-0.2	-0.5
Industry	2.33	2.52	2.09	2.01	1.92	1.79	1.48	-1.1	-0.8	-2.5
Residential	0.79	0.92	0.72	0.83	0.85	0.87	0.83	-0.8	1.6	-0.2
Tertiary	1.17	1.70	1.44	1.42	1.37	1.26	1.07	2.2	-0.5	-2.4
Transport	2.86	2.90	2.89	2.81	2.67	2.67	2.63	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.2	26.6	34.8			
RES-H&C share	16.1	17.9	27.4	25.9	26.4	27.1	32.0			
RES-E share	30.2	28.8	30.4	42.3	40.6	40.9	65.6			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.2	16.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	74	72	73	5.0	0.6	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	107	113	124	5.7	1.8	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.5	37.7	47.2	8.8	3.5	3.8
as % of GDP	11.5	16.8	17.7	18.4	20.0	20.9	24.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EUCo+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	5	5	5	5	5	5	5	0.0	0.0	-0.2		
GDP (in 000 ME13)	43	55	69	76	89	102	117	4.8	2.6	2.7		
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18356	18424	17080	-0.2	0.3	-0.7		
Solids	4278	4231	3897	3247	3133	2878	2025	-0.9	-2.2	-4.3		
Oil	3415	3711	3692	3346	3437	3335	3336	0.8	-0.7	-0.3		
Natural gas	5777	5884	5007	4939	5001	4968	3715	-1.4	0.0	-2.9		
Nuclear	4255	4626	3819	3569	4953	5375	6349	-1.1	2.6	2.5		
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6		
Renewable energy forms	810	859	1360	1551	2036	2107	1893	5.3	4.1	-0.7		
Energy Branch Consumption	623	1297	963	942	937	863	808	4.5	-0.3	-1.5		
Non-Energy Uses	1365	1279	1053	1597	1738	1869	2002	-2.6	5.1	1.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	6389	6684	6345	6192	7966	8071	8583	-0.1	2.3	0.7		
Solids	1018	637	613	593	523	443	201	-4.9	-1.6	-9.1		
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0		
Natural gas	133	126	88	120	107	71	71	-4.0	1.9	-4.0		
Nuclear	4255	4626	3819	3569	4953	5375	6349	-1.1	2.6	2.5		
Renewable energy sources	818	912	1438	1613	2120	2181	1962	5.8	4.0	-0.8		
Hydro	397	399	452	407	468	432	431	1.3	0.4	-0.8		
Biomass & Waste	421	505	972	1148	1573	1617	1367	8.7	4.9	-1.4		
Wind	0	1	1	1	2	36	36	0.0	16.2	31.9		
Solar and others	0	0	6	51	63	69	76	0.0	26.8	2.0		
Geothermal	0	8	8	6	14	28	52	0.0	5.4	14.0		
Net imports (ktoe)	11997	12428	11230	10675	10390	10353	8496	-0.7	-0.8	-2.0		
Solids	3432	3739	2951	2654	2610	2434	1823	-1.5	-1.2	-3.5		
Oil	3090	3274	3266	3048	3174	3335	3336	0.6	-0.3	0.5		
Crude oil and Feedstocks	5720	5429	5282	5716	5602	5567	5356	-0.8	0.6	-0.4		
Oil products	-2630	-2155	-2015	-2667	-2428	-2231	-2020	-2.6	1.9	-1.8		
Natural gas	5707	5735	5003	4819	4893	4887	3644	-1.3	-0.2	-2.9		
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6		
Import Dependency (%)	65.5	65.3	62.9	63.3	56.6	56.2	49.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34095	36711	36493	-1.1	2.2	0.7		
Nuclear energy	16494	17727	14574	14662	20320	22049	27184	-1.2	3.4	3.0		
Solids	5584	5535	3570	4120	4682	3812	1668	-4.4	2.7	-9.8		
Oil (including refinery gas)	202	741	600	164	8	90	90	11.5	-34.7	26.7		
Gas (including derived gases)	3871	2629	2716	1730	1152	3055	232	-3.5	-8.2	-14.8		
Biomass-waste	32	76	726	1129	1929	1739	1272	36.6	10.3	-4.1		
Hydro (pumping excluded)	4615	4638	5255	4738	5445	5019	5014	1.3	0.4	-0.8		
Wind	0	6	6	6	26	414	414	0.0	15.8	31.9		
Solar	0	0	17	520	532	532	619	0.0	40.8	1.5		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7700	7976	8754	-0.3	1.4	1.3		
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6		
Renewable energy	1685	1601	1624	2220	2356	2711	2771	-0.4	3.8	1.6		
Hydro (pumping excluded)	1685	1596	1600	1607	1718	1718	1718	-0.5	0.7	0.0		
Wind	0	5	5	5	19	374	374	0.0	14.3	34.6		
Solar	0	0	19	608	620	620	680	0.0	41.7	0.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2526	2795	3246	3337	2523	2445	1962	2.5	-2.5	-2.5		
of which cogeneration units	618	5411	2821	1020	839	866	645	16.4	-11.4	-2.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4		
Gas fired	821	1067	1674	1738	1325	1323	1099	7.4	-2.3	-1.9		
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0		
Biomass-waste fired	7	30	177	241	322	326	326	38.2	6.1	0.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	47.6	49.7	45.3					
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	37.2	37.2	30.8					
% of gross electricity from CHP	18.4	15.3	15.9	25.6	22.1	18.2	8.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	82.9	81.0	94.5					
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1796	2008	910	-0.4	-3.5	-6.6		
Solids	1619	1677	1205	1089	1148	1034	476	-2.9	-0.5	-8.4		
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.7		
Gas (including derived gases)	1002	847	793	314	209	544	106	-2.3	-12.5	-6.6		
Biomass & Waste	4	40	264	255	436	401	299	51.0	5.1	-3.7		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	12901	13989	12558	12416	13528	13498	13926	-0.3	0.7	0.3		
Refineries	5959	6398	6011	6450	6334	6062	5874	0.1	0.5	-0.8		
Biofuels and hydrogen production	0	11	98	118	176	165	166	0.0	6.0	-0.5		
District heating	674	718	497	367	376	358	224	-3.0	-2.8	-5.1		
Derived gases, cokeries etc.	6268	6862	5952	5481	6643	6914	7662	-0.5	1.1	1.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovakia: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	37	39	36	38	45	50	56	-0.2	2.2	2.3
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	2.0
Private cars and motorcycles	24	26	27	28	34	38	42	1.2	2.1	2.1
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.3
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	17	6.0	1.9	1.4
Rail	11	9	8	8	10	11	13	-3.2	1.8	3.0
Inland navigation	1	1	1	1	1	1	2	-1.5	1.1	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2346	2259	2297	4.4	0.5	-0.2
Public road transport	193	185	132	141	154	161	170	-3.7	1.5	1.0
Private cars and motorcycles	830	992	1194	1155	1208	1116	1119	3.7	0.1	-0.8
Heavy goods and light commercial vehicles	308	527	821	814	872	854	862	10.3	0.6	-0.1
Rail	83	42	40	41	48	55	62	-7.1	1.8	2.6
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.5
<i>By transport activity</i>										
Passenger transport	1064	1223	1374	1346	1423	1347	1369	2.6	0.3	-0.4
Freight transport	390	570	867	859	924	912	928	8.3	0.6	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	7.9	8.0			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16618	16554	15078	-0.1	-0.1	-1.0
Final Energy Demand	10980	11561	11546	11225	11713	11285	9868	0.5	0.1	-1.7
<i>by sector</i>										
Industry	4532	4713	4361	4420	4603	4599	4278	-0.4	0.5	-0.7
Energy intensive industries	3678	3887	3637	3655	3772	3731	3394	-0.1	0.4	-1.1
Other industrial sectors	854	826	723	765	830	868	883	-1.7	1.4	0.6
Residential	2586	2540	2312	2176	2215	2081	1514	-1.1	-0.4	-3.7
Tertiary	2407	1916	2240	2038	2164	1971	1453	-0.7	-0.3	-3.9
Transport ⁽⁵⁾	1455	2392	2633	2591	2731	2635	2623	6.1	0.4	-0.4
<i>by fuel</i>										
Solids	1747	1572	1637	1294	1247	1177	974	-0.6	-2.7	-2.4
Oil	1703	2184	2301	2230	2287	2141	2086	3.1	-0.1	-0.9
Gas	4698	4540	4119	4011	4070	3654	2815	-1.3	-0.1	-3.6
Electricity	1893	1965	2075	2219	2352	2550	2535	0.9	1.3	0.8
Heat (from CHP and District Heating)	619	951	851	726	813	763	522	3.2	-0.5	-4.3
Renewable energy forms	320	349	562	745	941	991	922	5.8	5.3	-0.2
Other	0	0	0	0	2	9	14	0.0	0.0	25.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	424	347	259	221	206	181	146	-4.8	-2.3	-3.4
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	30	25	-8.9	-1.4	-3.1
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	36	22	-5.1	-2.9	-6.6
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	39	25	-3.8	-3.2	-6.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	26	24	2.7	-1.8	-2.6
Freight transport (toe/Mtkm)	20	27	40	37	35	32	29	7.2	-1.1	-2.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	54.1	54.7	50.8	45.0	42.4	39.8	32.3	-0.6	-1.8	-2.7
of which ETS sectors (2013 scope) GHG emissions	29.2	24.7	20.4	19.0	18.2	13.2			-2.6	-3.6
of which ESD sectors (2013 scope) GHG emissions	25.5	26.1	24.6	23.4	21.6	19.1			-1.1	-2.0
CO₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.4	30.0	22.8	0.0	-1.7	-3.5
Power generation/District heating	11.1	11.2	9.2	6.3	5.9	6.4	2.9	-1.8	-4.3	-7.0
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.8	1.6	4.4	-2.0	-2.3
Industry	13.3	14.1	12.8	12.0	11.3	10.1	8.5	-0.4	-1.2	-2.8
Residential	4.1	3.6	3.4	2.8	2.7	2.4	1.4	-2.0	-2.2	-6.0
Tertiary	4.5	2.7	3.5	3.1	3.1	2.4	1.5	-2.5	-1.1	-7.3
Transport	4.1	6.6	7.3	7.1	7.3	7.0	6.9	5.9	0.1	-0.6
CO₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.5	-7.0	0.9	-0.1
Non-CO₂ GHG emissions	8.7	9.1	8.9	7.8	6.4	6.3	6.0	0.2	-3.2	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	56.1	52.7	42.7	-0.6	-1.8	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.14	0.07	-1.4	-5.7	-6.6
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.09	1.93	1.86	-0.2	-1.1	-1.2
Industry	2.94	2.99	2.94	2.72	2.46	2.19	1.99	0.0	-1.8	-2.1
Residential	1.60	1.40	1.47	1.30	1.22	1.14	0.96	-0.9	-1.8	-2.4
Tertiary	1.85	1.43	1.55	1.54	1.44	1.21	1.01	-1.8	-0.7	-3.5
Transport	2.82	2.77	2.77	2.74	2.69	2.66	2.63	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.7	14.4	15.5	16.4			
RES-H&C share	1.2	4.9	7.8	10.3	13.0	15.5	17.6			
RES-E share	11.9	13.5	17.8	21.7	25.1	22.7	21.8			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	10.7	11.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	81	73	84	1.2	1.4	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	131	136	144	4.3	-0.8	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.7	15.9	19.7	4.9	1.8	3.7
as % of GDP	16.4	15.6	16.6	14.7	15.4	15.6	16.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EU20+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 ME13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6777	7006	6806	6164	1.1	-0.3	-1.3
Solids	1305	1539	1451	1268	1353	1294	1204	1.1	-0.7	-1.2
Oil	2419	2580	2579	2360	2275	2014	1731	0.6	-1.2	-2.7
Natural gas	826	929	863	681	693	717	541	0.4	-2.2	-2.4
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-50	-134	4.7	-7.5	5.0
Renewable energy forms	788	787	1054	1182	1395	1401	1393	3.0	2.8	0.0
Energy Branch Consumption	107	100	112	99	105	95	99	0.5	-0.6	-0.6
Non-Energy Uses	238	310	209	114	120	121	124	-1.3	-5.4	0.3
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3085	3492	3687	3441	3764	3749	3746	1.8	0.2	0.0
Solids	1062	1184	1196	1023	1127	1040	1054	1.2	-0.6	-0.7
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	11	15	0.0	-3.8	13.8
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1260	1269	1247	2.7	2.1	-0.1
Hydro	330	298	388	381	391	407	438	1.6	0.1	1.2
Biomass & Waste	458	489	601	632	724	671	602	2.7	1.9	-1.8
Wind	0	0	0	0	24	24	30	0.0	0.0	2.2
Solar and others	0	0	9	36	54	116	141	0.0	19.2	10.0
Geothermal	0	0	27	45	86	51	35	0.0	9.4	-6.1
Net Imports (ktoe)	3415	3855	3581	3356	3263	3078	2439	0.5	-0.9	-2.9
Solids	244	323	279	245	226	254	150	1.4	-2.1	-4.0
Oil	2466	2634	2596	2380	2295	2034	1750	0.5	-1.2	-2.7
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2295	2034	1750	1.2	-1.2	-2.7
Natural gas	820	925	857	678	689	707	527	0.4	-2.2	-2.7
Electricity	-114	-28	-180	-36	-83	-50	-134	4.7	-7.5	5.0
Import Dependency (%)	52.9	52.5	49.4	49.4	46.4	45.1	39.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15128	16471	17377	18150	1.8	0.1	1.0
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5182	4797	4457	1.4	-0.2	-1.5
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	144	370	204	6.5	-12.5	3.5
Biomass-waste	70	120	222	111	300	336	809	12.2	3.0	10.4
Hydro (pumping excluded)	3834	3461	4512	4425	4542	4735	5093	1.6	0.1	1.2
Wind	0	0	0	5	284	284	353	0.0	0.0	2.2
Solar	0	0	13	295	391	1054	1435	0.0	40.8	13.9
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3886	4303	4527	0.8	2.0	1.5
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2393	2877	2.6	5.0	5.0
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1305	2.5	1.3	0.7
Wind	0	0	0	4	200	200	246	0.0	0.0	2.1
Solar	0	0	12	262	352	973	1326	0.0	40.2	14.2
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1414	1210	950	-0.1	0.1	-3.9
of which cogeneration units	648	336	333	228	213	241	199	-6.4	-4.4	-0.7
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	468	391	168	3.0	2.3	-9.8
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	124	134	3.9	9.3	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.4	43.9	43.7			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.6	33.2	33.3			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.5	5.9	4.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.7	70.3	74.3			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1400	1427	1414	1.8	-1.1	0.1
Solids	1215	1412	1381	1217	1301	1251	1182	1.3	-0.6	-1.0
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	25	82	48	6.7	-13.8	6.5
Biomass & Waste	15	30	65	27	73	93	184	15.5	1.2	9.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1622	1608	0.6	0.1	0.2
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	139	144	0.0	12.3	-0.1
District heating	80	89	57	61	62	53	32	-3.2	0.8	-6.3
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1431	1431	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovenia: EUO+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	25	27	30	31	34	35	36	2.0	1.0	0.8	
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.3	
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.6	
Rail	1	1	1	1	1	2	2	1.4	4.1	3.9	
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.7	
Heavy goods and light commercial vehicles	4	8	8	8	10	11	12	7.9	3.1	1.9	
Rail	3	3	3	4	5	6	7	1.8	3.6	4.4	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1906	1814	1725	3.8	0.5	-1.0	
Public road transport	78	71	92	94	96	95	91	1.8	0.3	-0.4	
Private cars and motorcycles	1025	1047	1304	1319	1300	1165	1055	2.4	0.0	-2.1	
Heavy goods and light commercial vehicles	98	323	355	370	444	478	494	13.8	2.3	1.1	
Rail	24	28	26	27	33	38	43	1.0	2.2	2.8	
Aviation	25	23	28	28	34	38	41	1.3	2.1	1.7	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
By transport activity											
Passenger transport	1132	1146	1430	1447	1437	1306	1197	2.4	0.0	-1.8	
Freight transport	117	346	376	391	469	508	528	12.4	2.2	1.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.3	2.8				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.9	8.6				
ENERGY EFFICIENCY											
Primary energy consumption	6214	7016	7017	6662	6886	6685	6040	1.2	-0.2	-1.3	
Final Energy Demand	4457	4897	4927	4954	5047	4773	4106	1.0	0.2	-2.0	
by sector											
Industry	1424	1644	1273	1332	1413	1432	1263	-1.1	1.1	-1.1	
Energy intensive industries	836	1028	788	890	945	946	803	-0.6	1.8	-1.6	
Other industrial sectors	588	616	485	442	468	486	460	-1.9	-0.4	-0.2	
Residential	1077	1140	1191	1145	1099	978	709	1.0	-0.8	-4.3	
Tertiary	697	620	657	638	628	548	408	-0.6	-0.4	-4.2	
Transport ⁽⁵⁾	1259	1493	1806	1839	1907	1815	1726	3.7	0.5	-1.0	
by fuel											
Solids	90	80	47	51	52	43	22	-6.3	1.1	-8.3	
Oil	2264	2409	2447	2239	2154	1894	1608	0.8	-1.3	-2.9	
Gas	569	665	620	635	644	604	478	0.9	0.4	-2.9	
Electricity	905	1096	1029	1098	1160	1282	1263	1.3	1.2	0.9	
Heat (from CHP and District Heating)	195	196	192	197	205	196	144	-0.2	0.7	-3.4	
Renewable energy forms	435	452	592	735	832	752	584	3.1	3.5	-3.5	
Other	0	0	0	0	0	2	6	0.0	0.0	34.4	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	227	215	195	181	171	152	128	-1.5	-1.3	-2.8	
Industry (Energy on Value added, index 2000=100)	100	93	70	74	72	66	54	-3.6	0.3	-2.8	
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	62	41	-1.6	-1.1	-6.0	
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	47	33	-3.5	-1.6	-5.8	
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	36	32	0.3	-1.0	-2.6	
Freight transport (toe/Mtkm)	18	32	34	33	31	29	27	6.4	-1.0	-1.5	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	19.0	20.2	19.2	17.5	17.4	16.3	14.5	0.1	-1.0	-1.8	
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.6	7.3	6.6		-0.8	-1.4	
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	8.9	7.9		-1.1	-2.1	
CO2 Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	12.9	11.3	0.9	-1.0	-2.1	
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	5.5	5.1	1.3	-1.0	-0.9	
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.9	13.8	
Industry	2.4	2.3	1.7	1.7	1.7	1.5	1.0	-3.0	-0.5	-4.8	
Residential	1.3	1.5	1.2	0.9	0.8	0.6	0.3	-1.0	-4.0	-8.5	
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.2	-3.0	-4.1	-8.3	
Transport	3.7	4.4	5.3	5.2	5.3	4.9	4.5	3.8	0.0	-1.5	
CO2 Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.8	-1.7	-1.1	0.5	
Non-CO2 GHG emissions	3.9	3.5	3.0	3.0	2.7	2.6	2.5	-2.6	-1.0	-1.0	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.4	87.4	78.0	0.1	-1.0	-1.8	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.34	0.35	0.33	0.30	0.29	0.28	0.26	-0.3	-1.2	-1.3	
Final energy demand (t of CO2/toe)	1.91	1.88	1.85	1.72	1.64	1.55	1.49	-0.4	-1.2	-1.0	
Industry	1.66	1.41	1.37	1.29	1.18	1.02	0.81	-1.9	-1.5	-3.7	
Residential	1.24	1.28	1.01	0.79	0.73	0.60	0.46	-2.0	-3.2	-4.4	
Tertiary	1.68	1.63	1.32	1.03	0.91	0.73	0.59	-2.4	-3.7	-4.3	
Transport	2.90	2.97	2.93	2.85	2.76	2.71	2.63	0.1	-0.6	-0.5	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	26.7	29.8				
RES-H&C share	18.9	19.0	25.5	29.8	34.5	36.1	38.5				
RES-E share	30.9	28.7	32.2	33.0	35.7	38.3	46.5				
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.3	18.2				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	69	55	58	-0.7	4.3	-1.8	
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	107	108	108	0.2	-0.4	0.1	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.2	9.1	5.0	2.1	1.9	
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.2	18.9				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Spain: EUCC+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3
GDP (in 000 ME13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8
Gross Inland Consumption (ktoe)	123642	144223	129868	124582	125264	114367	97231	0.5	-0.4	-2.5
Solids	20938	20566	7906	15768	15865	10393	3481	-9.3	7.2	-14.1
Oil	63967	70457	60436	53990	50067	46094	41902	-0.6	-1.9	-1.8
Natural gas	15305	29886	31162	25155	25433	21241	12562	7.4	-2.0	-6.8
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Renewable energy forms	7005	8587	15090	15611	19347	21921	24749	8.0	2.5	2.5
Energy Branch Consumption	6259	6666	7878	7994	7436	6539	5926	2.3	-0.6	-2.2
Non-Energy Uses	9407	8362	7046	5744	6094	6368	6374	-2.8	-1.4	0.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33100	36707	37412	39559	0.8	0.7	0.8
Solids	7966	6265	3296	2973	2911	1079	303	-8.4	-1.2	-20.3
Oil	228	167	124	377	365	344	359	-5.9	11.4	-0.2
Natural gas	234	185	78	42	47	54	56	-10.4	-4.9	1.8
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Renewable energy sources	7005	8587	14677	15536	19211	21762	24668	7.7	2.7	2.5
Hydro	2430	1582	3638	2853	2862	2877	2882	4.1	-2.4	0.1
Biomass & Waste	4131	5113	6183	6934	9586	8931	7973	4.1	4.5	-1.8
Wind	406	1821	3807	4443	4844	4954	7801	25.1	2.4	4.9
Solar and others	33	65	1035	1288	1896	4948	5966	41.3	6.2	12.1
Geothermal	5	7	16	18	24	53	46	11.5	4.3	6.5
Net Imports (ktoe)	99342	123832	106084	100729	97907	86287	67101	0.7	-0.8	-3.7
Solids	12840	14418	6726	12795	12954	9314	3178	-6.3	6.8	-13.1
Oil	70653	79281	68704	62860	58969	54901	50480	-0.3	-1.5	-1.5
Crude oil and Feedstocks	59023	60650	56496	66666	63016	58824	54493	-0.4	1.1	-1.4
Oil products	11631	18630	12208	-3806	-4047	-3923	-4012	0.5	0.0	-0.1
Natural gas	15467	30248	30950	25113	25468	21368	12996	7.2	-1.9	-6.5
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	69.8	62.9			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275292	284904	285310	267911	3.0	-0.5	-0.6
Nuclear energy	62206	57539	61990	58066	58066	57757	57521	0.0	-0.7	-0.1
Solids	79094	84047	25493	57621	58342	34907	8912	-10.7	8.6	-17.1
Oil (including refinery gas)	22578	24420	16562	4988	566	1700	1598	-3.1	-28.7	10.9
Gas (including derived gases)	21942	80725	95840	53218	56352	41715	3586	15.9	-5.2	-24.1
Biomass-waste	2100	3104	4674	4514	5972	7470	9237	8.3	2.5	4.5
Hydro (pumping excluded)	28256	18393	42304	33174	33273	33452	33517	4.1	-2.4	0.1
Wind	4727	21176	44271	51665	56322	57605	90711	25.1	2.4	4.9
Solar	17	41	6423	12046	16011	50704	62829	80.6	9.6	14.6
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104565	118473	128707	6.6	0.5	2.1
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0
Renewable energy	17760	25774	41432	46783	51047	66883	84472	8.8	2.1	5.2
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0
Wind	2206	9918	20693	23025	24977	25362	35708	25.1	1.9	3.6
Solar	12	60	4653	7126	9275	26525	31968	81.5	7.1	13.2
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	26776	39924	49994	50333	46119	42392	36837	6.4	-0.8	-2.2
of which cogeneration units	4570	6597	3382	6261	2911	3914	5541	-3.0	-1.5	6.6
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	11556	11359	10389	10316	9331	7376	3966	-1.1	-1.1	-8.2
Gas fired	4713	17647	29569	31333	30271	29749	28056	20.2	0.2	-0.8
Oil fired	10028	10043	8964	7496	4752	3422	2950	-1.1	-6.1	-4.7
Biomass-waste fired	478	876	1072	1188	1764	1844	1865	8.4	5.1	0.6
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	29.9	26.7	23.3			
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.6	41.7	35.2			
% of gross electricity from CHP	9.2	4.0	7.4	9.7	4.6	5.5	5.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.5	72.5	94.7			
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24483	17713	5693	-0.5	-0.3	-13.6
Solids	18245	17623	5561	13703	13789	8322	2072	-11.2	9.5	-17.3
Oil (including refinery gas)	4455	5249	3391	948	133	402	379	-2.7	-27.7	11.0
Gas (including derived gases)	3075	11140	14839	8684	9260	7173	1126	17.0	-4.6	-19.0
Biomass & Waste	697	1391	1435	994	1300	1816	2116	7.5	-1.0	5.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	79871	79435	78129	80766	79053	75169	71020	-0.2	0.1	-1.1
Refineries	60685	61323	58480	63161	60978	57369	53466	-0.4	0.4	-1.3
Biofuels and hydrogen production	70	256	1412	1419	2061	1868	1913	35.0	3.9	-0.7
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	19115	17857	18237	16187	16014	15931	15640	-0.5	-1.3	-0.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	476	535	542	561	609	656	710	1.3	1.2	1.5
Public road transport	50	53	51	52	53	54	55	0.1	0.5	0.4
Private cars and motorcycles	310	346	352	354	372	392	420	1.3	0.5	1.2
Rail	25	28	29	29	37	44	52	1.2	2.5	3.4
Aviation ⁽³⁾	89	106	109	124	145	164	181	2.1	3.0	2.2
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.5
Freight transport activity (Gtkm)	180	265	227	228	247	261	278	2.3	0.9	1.2
Heavy goods and light commercial vehicles	138	217	190	191	206	215	229	3.2	0.8	1.1
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.5
Inland navigation	31	36	28	28	30	32	34	-1.1	0.7	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34469	32673	32090	1.2	-0.8	-0.7
Public road transport	1354	1408	1319	1329	1325	1296	1270	-0.3	0.0	-0.4
Private cars and motorcycles	18655	20608	19876	18098	16537	14383	13614	0.6	-1.8	-1.9
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8353	8125	8291	2.9	-0.3	-0.1
Rail	708	1029	899	772	874	979	1051	2.4	-0.3	1.9
Aviation	4486	5323	5389	6005	6623	7071	7001	1.9	2.1	0.6
Inland navigation	1395	1555	1057	707	757	819	864	-2.7	-3.3	1.3
By transport activity										
Passenger transport	25151	27727	26960	25730	24840	23160	22335	0.7	-0.8	-1.1
Freight transport	7933	12069	10220	9303	9629	9513	9755	2.6	-0.6	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	5.9	6.2			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119171	107998	90858	0.7	-0.3	-2.7
Final Energy Demand	79885	97754	89072	85314	86318	80042	70702	1.1	-0.3	-2.0
by sector										
Industry	25368	30967	21435	21275	22288	21490	19602	-1.7	0.4	-1.3
Energy intensive industries	17349	20338	13379	13268	14049	13292	11882	-2.6	0.5	-1.7
Other industrial sectors	8020	10628	8056	8007	8239	8198	7721	0.0	0.2	-0.6
Residential	12000	15132	16920	15550	15509	13585	9904	3.5	-0.9	-4.4
Tertiary	9287	11712	13526	13441	14036	12277	9088	3.8	0.4	-4.3
Transport ⁽⁵⁾	33230	39944	37192	35048	34485	32690	32108	1.1	-0.8	-0.7
by fuel										
Solids	1775	1712	1261	1123	1314	1312	701	-3.4	0.4	-6.1
Oil	46297	53449	46775	43129	40265	36250	32354	0.1	-1.5	-2.2
Gas	12141	17978	14645	14743	14348	12463	10038	1.9	-0.2	-3.5
Electricity	16205	20827	21049	20057	21337	21827	20518	2.7	0.1	-0.4
Heat (from CHP and District Heating)	0	0	0	8	118	297	507	0.0	0.0	15.7
Renewable energy forms	3469	3788	5343	6252	8926	7840	6438	4.4	5.3	-3.2
Other	0	0	0	3	10	53	147	0.0	1431.1	30.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	139	138	119	114	104	86	67	-1.5	-1.3	-4.3
Industry (Energy on Value added, index 2000=100)	100	114	87	87	83	75	63	-1.4	-0.4	-2.8
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	93	74	50	1.4	-2.1	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	80	54	1.0	-0.9	-6.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	29	26	-1.1	-2.2	-2.7
Freight transport (toe/Mtkm)	44	46	45	41	39	36	35	0.3	-1.5	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	398.8	447.7	364.3	356.5	342.2	294.4	229.6	-0.9	-0.6	-3.9
of which ETS sectors (2013 scope) GHG emissions		216.2	146.4	157.9	158.0	128.8	82.5		0.8	-6.3
of which ESD sectors (2013 scope) GHG emissions		231.5	218.0	198.6	184.2	165.7	147.2		-1.7	-2.2
CO ₂ Emissions (energy related)	291.6	347.3	272.6	271.0	259.4	214.5	152.7	-0.7	-0.5	-5.2
Power generation/District heating	98.8	117.7	70.3	81.2	80.2	54.1	14.2	-3.4	1.3	-15.9
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.6	11.5	1.9	-1.2	-2.2
Industry	50.4	59.2	42.3	39.8	39.6	35.8	28.3	-1.7	-0.7	-3.3
Residential	17.1	20.9	20.5	16.5	13.6	9.8	3.6	1.9	-4.0	-12.5
Tertiary	13.2	16.5	15.0	15.5	13.9	10.2	6.7	1.3	-0.7	-7.1
Transport	98.7	119.5	108.3	101.9	97.7	92.0	88.6	0.9	-1.0	-1.0
CO ₂ Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	18.9	19.5	19.8	-1.8	-1.4	0.5
Non-CO ₂ GHG emissions	81.1	71.0	69.9	67.7	64.0	60.5	57.1	-1.5	-0.9	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.5	99.4	77.5	-0.9	-0.6	-3.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.45	0.41	0.24	0.29	0.28	0.19	0.05	-6.2	1.7	-15.6
Final energy demand (t of CO ₂ /toe)	2.25	2.21	2.09	2.04	1.91	1.85	1.80	-0.7	-0.9	-0.6
Industry	1.99	1.91	1.97	1.87	1.78	1.67	1.44	-0.1	-1.0	-2.1
Residential	1.42	1.38	1.21	1.06	0.88	0.72	0.36	-1.6	-3.2	-8.5
Tertiary	1.43	1.41	1.11	1.15	0.99	0.83	0.73	-2.5	-1.1	-3.0
Transport	2.97	2.99	2.91	2.91	2.83	2.81	2.76	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	25.8	33.7			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	23.8	26.9			
RES-E share	16.6	19.1	29.8	36.9	38.5	51.1	72.4			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.1	12.5	20.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	97	89	80	2.5	2.6	-1.9
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	171	163	164	3.5	1.4	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.2	144.9	153.6	172.8	4.9	1.9	1.8
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.6	11.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EUCC+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	9	9	9	10	10	11	11	0.5	0.9	0.8	
GDP (in 000 ME13)	296	337	366	404	448	497	552	2.2	2.1	2.1	
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45913	44843	41979	0.4	-1.0	-0.9	
Solids	2452	2629	2492	2263	1974	1905	1316	0.2	-2.3	-4.0	
Oil	15377	14136	14199	11663	10830	9588	8496	-0.8	-2.7	-2.4	
Natural gas	816	886	1484	679	3064	2701	971	6.2	7.5	-10.9	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Renewable energy forms	15066	15308	17512	19146	19609	20172	20933	1.5	1.1	0.7	
Energy Branch Consumption	1141	1326	1469	1414	1364	1339	1334	2.6	-0.7	-0.2	
Non-Energy Uses	3143	2460	2113	2183	2281	2398	2435	-3.9	0.8	0.7	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	30052	34233	32685	33372	31496	32002	32634	0.8	-0.4	0.4	
Solids	162	211	238	210	86	92	0	4.0	-9.6	-100.0	
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0	
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Renewable energy sources	15066	15308	17512	18801	19217	19718	20443	1.5	0.9	0.6	
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1	
Biomass & Waste	8264	8961	11490	11434	11779	11014	10835	3.4	0.2	-0.8	
Wind	39	81	301	1147	1249	2566	3051	22.6	15.3	9.3	
Solar and others	5	6	11	17	31	53	84	7.4	10.9	10.4	
Geothermal	0	0	0	0	0	2	393	0.0	0.0	103.6	
Net Imports (ktoe)	20436	19460	19294	15820	16735	15271	11894	-0.6	-1.4	-3.4	
Solids	2409	2556	2548	2054	1888	1813	1316	0.6	-3.0	-3.5	
Oil	16849	16698	15102	13853	13100	11910	10666	-1.1	-1.4	-2.0	
Crude oil and Feedstocks	21606	19369	19139	15905	15013	13763	12592	-1.2	-2.4	-1.7	
Oil products	-4757	-2671	-4038	-2052	-1913	-1853	-1926	-1.6	-7.2	0.1	
Natural gas	776	843	1466	679	3112	2808	1350	6.6	7.8	-8.0	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	32.3	26.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	172992	183204	181767	0.2	1.5	0.5	
Nuclear energy	57316	72377	57828	57851	49379	49379	49738	0.1	-1.6	0.1	
Solids	1706	1169	1770	1540	1118	1116	641	0.4	-4.5	-5.4	
Oil (including refinery gas)	1533	1379	1774	249	361	203	0	1.5	-14.7	-100.0	
Gas (including derived gases)	1292	1342	3782	471	15475	12630	2186	11.3	15.1	-17.8	
Biomass-waste	4342	8357	13397	14846	20456	19225	22962	11.9	4.3	1.2	
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1	
Wind	457	936	3502	13335	14526	29840	35478	22.6	15.3	9.3	
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37500	42719	44575	0.7	0.1	1.7	
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0	
Renewable energy	16718	16799	18654	22501	23533	28555	30316	1.1	2.4	2.6	
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0	
Wind	209	493	2019	6025	6507	11529	13290	25.5	12.4	7.4	
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7754	7256	8761	7643	7018	7215	7309	1.2	-2.2	0.4	
of which cogeneration units	4940	3488	5100	4504	6290	5581	4189	0.3	2.1	-4.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6	
Gas fired	547	469	1168	1168	3216	3280	3280	7.9	10.7	0.2	
Oil fired	4472	3974	3963	2958	865	865	865	-1.2	-14.1	0.0	
Biomass-waste fired	2398	2465	3274	3161	2801	2933	3036	3.2	-1.5	0.8	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.3	47.8	45.4				
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	39.6	35.8				
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.3	15.1	8.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.2	92.4	98.4				
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7847	7198	6187	6.2	1.9	-2.3	
Solids	462	508	597	566	266	286	171	2.6	-7.8	-4.3	
Oil (including refinery gas)	530	317	431	70	103	60	0	-2.0	-13.3	-100.0	
Gas (including derived gases)	508	591	998	225	2486	2080	422	7.0	9.6	-16.2	
Biomass & Waste	2084	3158	4491	4886	4993	4772	5594	8.0	1.1	1.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	40980	42243	39786	34628	31698	30474	29232	-0.3	-2.2	-0.8	
Refineries	22901	20082	21039	16927	16156	15132	14020	-0.8	-2.6	-1.4	
Biofuels and hydrogen production	0	134	376	733	817	862	1066	0.0	8.1	2.7	
District heating	1564	1525	1735	1424	1362	1043	882	1.0	-2.4	-4.3	
Derived gases, cokeries etc.	16516	20501	16636	15543	13363	13437	13263	0.1	-2.2	-0.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUOQ+35		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	142	148	151	160	167	174	185	0.7	1.0	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.2
Private cars and motorcycles	102	108	109	114	116	119	124	0.7	0.7	0.6
Rail	10	11	13	15	16	18	20	2.8	2.1	2.0
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.3	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.5
Freight transport activity (Gtkm)	70	78	81	81	90	97	104	1.5	1.1	1.5
Heavy goods and light commercial vehicles	43	47	45	46	49	51	53	0.4	1.1	0.7
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.2
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7891	7175	6768	0.5	-0.9	-1.5
Public road transport	189	179	184	187	193	203	211	-0.3	0.5	0.9
Private cars and motorcycles	4879	5236	5250	4890	4394	3651	3219	0.7	-1.8	-3.1
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1939	1847	1829	1.2	-0.1	-0.6
Rail	299	246	208	232	264	287	311	-3.6	2.4	1.6
Aviation	928	846	840	945	1002	1078	1082	-1.0	1.8	0.8
Inland navigation	156	142	188	85	98	107	116	1.8	-6.3	1.7
By transport activity										
Passenger transport	6165	6361	6387	6089	5667	5016	4600	0.4	-1.2	-2.1
Freight transport	2027	2248	2234	2171	2225	2159	2168	1.0	0.0	-0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.7	2.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.8	12.4	15.3			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43632	42446	39544	0.6	-1.1	-1.0
Final Energy Demand	33561	33492	34077	31885	31926	30241	26599	0.2	-0.6	-1.8
by sector										
Industry	12854	12464	12205	11531	12079	12107	11431	-0.5	-0.1	-0.5
Energy intensive industries	9198	9252	9141	8370	8734	8620	8071	-0.1	-0.5	-0.8
Other industrial sectors	3656	3212	3064	3161	3344	3487	3360	-1.8	0.9	0.0
Residential	7300	7305	7557	7197	7047	6282	4729	0.3	-0.7	-3.9
Tertiary	5214	5114	5720	4897	4908	4676	3671	0.9	-1.5	-2.9
Transport ⁽⁵⁾	8192	8609	8595	8260	7891	7175	6768	0.5	-0.9	-1.5
by fuel										
Solids	1114	1346	1202	1122	1127	980	592	0.8	-0.6	-6.2
Oil	11861	11256	10038	8856	7990	6708	5663	-1.7	-2.3	-3.4
Gas	673	765	728	677	798	884	808	0.8	0.9	0.1
Electricity	11068	11238	11283	11102	11594	12457	12054	0.2	0.3	0.4
Heat (from CHP and District Heating)	3550	4174	5141	4420	4468	3430	2076	3.8	-1.4	-7.4
Renewable energy forms	5294	4714	5685	5705	5946	5767	5313	0.7	0.5	-1.1
Other	0	0	0	3	3	15	94	0.0	0.0	39.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	165	151	139	116	102	90	76	-1.7	-3.0	-2.9
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	54	47	-3.5	-1.7	-2.2
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	49	33	-1.7	-3.0	-6.2
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	53	38	-0.9	-3.7	-5.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	26	22	-0.5	-2.2	-3.2
Freight transport (toe/Mtkm)	29	29	28	27	25	22	21	-0.5	-1.2	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.7	50.7	40.2	-0.9	-1.4	-3.4
of which ETS sectors (2013 scope) GHG emissions	25.9	25.6	19.9	19.9	23.7	22.0	15.1		-0.8	-4.4
of which ESD sectors (2013 scope) GHG emissions	43.0	39.5	35.8	35.8	33.0	28.7	25.1		-1.8	-2.7
CO2 Emissions (energy related)	52.2	52.1	49.0	40.6	42.2	36.9	26.8	-0.6	-1.5	-4.4
Power generation/District heating	7.7	7.7	9.1	4.4	8.7	8.0	3.2	1.7	-0.5	-9.6
Energy Branch	2.0	1.9	2.0	2.1	1.8	1.8	1.7	0.4	-1.0	-0.6
Industry	11.9	13.3	10.5	10.1	9.5	8.1	5.4	-1.2	-1.0	-5.5
Residential	3.0	1.5	0.4	0.2	0.2	0.1	0.0	-17.9	-6.6	-15.6
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.5	-4.2	-6.8	-9.8
Transport	23.2	24.6	24.1	22.0	20.5	18.1	16.0	0.4	-1.6	-2.5
CO2 Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.4	3.4	3.3	1.5	-0.8	-0.4
Non-CO2 GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	10.1	-2.7	-1.1	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.4	69.3	54.9	-0.9	-1.4	-3.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.04	0.04	0.04	0.02	0.04	0.04	0.02	0.6	-1.2	-8.8
Final energy demand (t of CO2/toe)	1.27	1.27	1.11	1.07	0.99	0.90	0.82	-1.3	-1.1	-1.8
Industry	0.93	1.07	0.86	0.87	0.79	0.67	0.47	-0.7	-0.9	-5.0
Residential	0.41	0.20	0.05	0.03	0.03	0.02	0.01	-18.2	-5.9	-12.2
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.14	-5.1	-5.4	-7.1
Transport	2.83	2.86	2.80	2.66	2.60	2.53	2.36	-0.1	-0.7	-1.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.7	61.0	65.8			
RES-H&C share	48.7	52.4	60.9	72.7	68.9	73.1	75.8			
RES-E share	51.7	51.6	56.6	67.3	69.2	72.9	80.5			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.3	41.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	62	56	58	-0.1	0.8	-0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	141	142	145	5.7	-0.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.1	53.3	62.2	3.9	0.6	2.4
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.7	11.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EU00+35				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual %	Change		
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 M€13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	189043	173651	152720	-0.8	-1.2	-2.1	
Solids	36516	37737	30761	30896	19260	8282	4454	-1.7	-4.6	-13.6	
Oil	81031	84449	72986	71030	65599	59093	53335	-1.0	-1.1	-2.0	
Natural gas	87399	85473	85050	67578	61688	59441	35685	-0.3	-3.2	-5.3	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	25782	31810	34453	11.3	13.6	2.9	
Energy Branch Consumption	14909	16092	13761	10879	9804	8726	7747	-0.8	-3.3	-2.3	
Non-Energy Uses	11330	11213	7524	8461	8861	8961	8832	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	109895	98852	96136	-5.8	-2.9	-1.3	
Solids	18658	11899	10751	6067	5387	3134	1833	-5.4	-6.7	-10.2	
Oil	127939	87930	63788	48199	40963	32836	26139	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26692	22567	15314	-6.2	-6.4	-5.4	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10759	21480	26455	29076	8.6	14.4	3.1	
Hydro	437	423	307	477	453	457	457	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11792	15241	16360	8.4	10.6	3.3	
Wind	81	250	875	2969	7891	9134	10643	26.8	24.6	3.0	
Solar and others	11	30	101	878	1341	1613	1596	24.5	29.5	1.8	
Geothermal	1	1	1	1	3	11	20	0.0	13.3	21.9	
Net Imports (ktoe)	-39220	31596	61239	87711	82352	77961	59740	0.0	3.0	-3.2	
Solids	14454	27222	16045	24829	13873	5147	2621	1.0	-1.4	-15.3	
Oil	-45582	-2738	11181	25966	27804	29342	30153	0.0	9.5	0.8	
Crude oil and Feedstocks	-39093	4558	13213	20985	23618	25946	27490	0.0	6.0	1.5	
Oil products	-6489	-7296	-2032	4981	4186	3396	2663	-11.0	0.0	-4.4	
Natural gas	-9311	5973	32205	33331	35032	36951	20570	0.0	0.8	-5.2	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.8	44.1	38.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357131	373734	390757	394974	0.1	-0.1	0.6	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	53779	12169	3676	-1.1	-6.7	-23.5	
Oil (including refinery gas)	8446	5339	4804	4252	2853	2891	2864	-5.5	-5.1	0.0	
Gas (including derived gases)	150427	154339	176759	117631	96901	126630	71478	1.6	-5.8	-3.0	
Biomass-waste	4455	11658	13373	26283	51005	68361	71585	11.6	14.3	3.4	
Hydro (pumping excluded)	5086	4922	3568	5550	5265	5309	5314	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	91759	106214	123761	26.8	24.6	3.0	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	118964	114788	120575	1.2	3.0	0.1	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	45184	49874	55359	14.1	20.3	2.1	
Hydro (pumping excluded)	1485	1501	1637	1693	1739	1739	1739	1.0	0.6	0.0	
Wind	412	1565	5396	13603	32301	36973	42455	29.3	19.6	2.8	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64896	57103	52108	1.1	-0.9	-2.2	
of which cogeneration units	5794	5440	6102	5050	5465	5648	13996	0.5	-1.1	9.9	
of which CCS units	0	0	0	0	833	833	833	0.0	0.0	0.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35273	36313	33232	3.1	0.6	-0.6	
Oil fired	9696	9323	9064	2227	1235	1223	1179	-0.7	-18.1	-0.5	
Biomass-waste fired	2403	2961	3335	3634	17238	17244	17196	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.3	37.4	36.0				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	42.6	46.4	44.1				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	4.9	4.1	4.2				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.5	1.6				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	58.9	63.7	80.2				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	41281	38945	29153	0.1	-3.6	-3.4	
Solids	28425	29812	23816	23961	13402	2993	779	-1.8	-5.6	-24.8	
Oil (including refinery gas)	1453	1060	789	920	638	647	641	-5.9	-2.1	0.1	
Gas (including derived gases)	28139	28415	31452	20339	16289	20495	11965	1.1	-6.4	-3.0	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15767	10.9	11.5	3.7	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83354	76776	81289	-1.9	-1.6	-0.3	
Refineries	88821	88399	75162	65526	61262	55933	51137	-1.7	-2.0	-1.8	
Biofuels and hydrogen production	0	80	1130	1361	2136	1934	1908	0.0	6.6	-1.1	
District heating	15	14	13	13	11	14	7	-0.9	-2.2	-4.5	
Derived gases, cokeries etc.	29623	26714	21187	21212	19946	18895	28237	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUOQ+35			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	822	872	849	878	935	961	1011	0.3	1.0	0.8
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.4
Private cars and motorcycles	644	673	649	659	702	714	747	0.1	0.8	0.6
Rail	47	53	66	76	80	87	93	3.5	2.0	1.6
Aviation ⁽³⁾	77	97	83	90	100	107	115	0.7	1.8	1.5
Inland navigation	6	6	5	5	6	6	7	-0.3	0.8	1.2
Freight transport activity (Gtkm)	237	248	216	242	253	260	273	-0.9	1.6	0.8
Heavy goods and light commercial vehicles	183	183	164	187	195	198	207	-1.1	1.8	0.6
Rail	18	21	19	22	23	25	26	0.3	2.1	1.5
Inland navigation	36	43	33	34	35	37	39	-0.9	0.5	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49604	45455	43137	-0.2	-0.4	-1.4
Public road transport	559	499	515	511	504	493	477	-0.8	-0.2	-0.6
Private cars and motorcycles	29150	30049	29058	27657	25100	21507	19956	0.0	-1.5	-2.3
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9043	8712	8434	-1.5	0.7	-0.7
Rail	821	988	966	1108	1155	1223	1276	1.6	1.8	1.0
Aviation	11115	13069	11650	12400	12889	12557	11995	0.5	1.0	-0.7
Inland navigation	933	1282	884	881	913	962	999	-0.5	0.3	0.9
By transport activity										
Passenger transport	41504	44033	41640	40984	38935	35012	32900	0.0	-0.7	-1.7
Freight transport	10882	11467	9830	11030	10670	10442	10237	-1.0	0.8	-0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.6	3.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.4	5.7			
ENERGY EFFICIENCY										
Primary energy consumption	219230	222779	204710	191181	180183	164690	143888	-0.7	-1.3	-2.2
Final Energy Demand	153236	152728	142723	138484	135301	124993	104083	-0.7	-0.5	-2.6
by sector										
Industry	36930	33388	26923	25432	25488	23395	20265	-3.1	-0.5	-2.3
Energy intensive industries	19392	16472	12350	11464	11259	9736	7611	-4.4	-0.9	-3.8
Other industrial sectors	17537	16916	14573	13968	14229	13660	12654	-1.8	-0.2	-1.2
Residential	43034	44151	44715	40936	39859	37447	26604	0.4	-1.1	-4.0
Tertiary	20377	19686	19633	20101	20350	18696	14076	-0.4	0.4	-3.6
Transport ⁽⁵⁾	52895	55503	51452	52014	49604	45455	43137	-0.3	-0.4	-1.4
by fuel										
Solids	5954	4530	4133	4583	3837	3123	1632	-3.6	-0.7	-8.2
Oil	63674	65851	59524	58175	53022	46846	41578	-0.7	-1.1	-2.4
Gas	52180	50380	47246	43853	42426	36722	22414	-1.0	-1.1	-6.2
Electricity	28360	29998	28286	27707	28990	30254	30241	0.0	0.2	0.4
Heat (from CHP and District Heating)	2439	1268	1266	1255	1341	1422	1309	-6.3	0.6	-0.2
Renewable energy forms	630	702	2268	2885	5588	6140	6164	13.7	9.4	1.0
Other	0	0	0	26	97	486	746	-100.0	0.0	22.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	131	117	101	89	77	63	-2.4	-2.7	-3.4
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	60	50	-2.3	-1.5	-3.0
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	60	39	-1.4	-2.4	-5.4
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	57	40	-2.6	-1.4	-5.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.7
Freight transport (toe/Mtkm)	46	46	46	46	42	40	38	-0.1	-0.8	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	494.5	417.8	319.5	-1.2	-2.5	-4.3
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	244.9	183.4	143.7	102.4		-3.9	-5.7
of which ESD sectors (2013 scope) GHG emissions			413.6	362.5	340.9	311.1	274.1		-1.5	-3.5
CO ₂ Emissions (energy related)	568.2	573.4	518.3	477.6	394.9	325.3	237.0	-0.9	-2.7	-5.0
Power generation/District heating	194.2	199.6	178.4	155.5	97.1	65.2	35.7	-0.8	-5.9	-9.5
Energy Branch	31.3	35.2	29.4	20.9	18.6	16.3	13.7	-0.6	-4.4	-3.1
Industry	77.4	67.5	52.1	49.5	46.1	38.4	25.6	-3.9	-1.2	-5.7
Residential	82.6	80.4	83.1	74.7	68.8	60.0	31.9	0.1	-1.9	-7.4
Tertiary	27.0	25.3	24.8	25.3	22.6	17.8	11.7	-0.9	-0.9	-6.3
Transport	155.6	165.4	150.6	151.7	141.6	127.6	118.3	-0.3	-0.6	-1.8
CO ₂ Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	18.7	18.2	16.9	-2.8	1.9	-1.0
Non-CO2 GHG emissions	131.6	133.2	102.5	90.5	80.9	74.3	65.6	-2.5	-2.3	-2.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	60.4	51.0	39.0	-1.2	-2.5	-4.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.49	0.45	0.42	0.25	0.16	0.09	-0.6	-5.9	-10.0
Final energy demand (t of CO ₂ /toe)	2.24	2.22	2.18	2.18	2.06	1.95	1.80	-0.3	-0.5	-1.3
Industry	2.10	2.02	1.93	1.95	1.81	1.64	1.26	-0.8	-0.7	-3.5
Residential	1.92	1.82	1.86	1.82	1.73	1.60	1.20	-0.3	-0.7	-3.6
Tertiary	1.32	1.29	1.26	1.26	1.11	0.95	0.83	-0.5	-1.3	-2.8
Transport	2.94	2.98	2.93	2.92	2.86	2.81	2.74	-0.1	-0.2	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.5	18.4	24.3			
RES-H&C share	0.8	0.8	1.8	3.4	7.0	8.9	14.8			
RES-E share	2.6	4.1	7.4	19.3	40.0	46.4	51.2			
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	17.6	24.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	113	112	112	3.4	6.8	-0.1
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	169	175	178	0.3	2.7	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	231.2	255.6	301.0	1.5	2.5	2.7
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.4	12.4			

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively.

For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix I.e: EUCO+40 scenario - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 M€13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	1726888	1824722	1760315	1666601	1649851	1543298	1243154	0.2	-0.6	-2.8
Solids	321292	318127	282994	277891	264147	234584	145975	-1.3	-0.7	-5.8
Oil	660025	677021	612954	579805	544758	486831	427419	-0.7	-1.2	-2.4
Natural gas	396144	445263	447394	387731	382756	359029	207257	1.2	-1.5	-6.0
Nuclear	243841	257516	236562	213043	188974	174739	163968	-0.3	-2.2	-1.4
Electricity	2030	1412	712	1761	1247	523	44	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206370	267970	287592	298579	5.7	4.1	1.1
Energy Branch Consumption	86261	91922	86455	81623	76468	69668	60602	0.0	-1.2	-2.3
Non-Energy Uses	113106	116080	110230	106709	112513	116541	116713	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	944996	903986	835772	758584	763346	727726	657043	-1.2	-0.9	-1.5
Solids	214596	196030	164837	148196	140952	127513	84595	-2.6	-1.6	-5.0
Oil	173901	135553	100408	78529	69695	57432	47128	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106313	91664	73026	-2.7	-4.0	-3.7
Nuclear	243841	257516	236562	213043	188974	174739	163968	-0.3	-2.2	-1.4
Renewable energy sources	103222	124116	174017	200379	257411	276377	288324	5.4	4.0	1.1
Hydro	30703	26859	32312	31167	32355	32461	33031	0.5	0.0	0.2
Biomass & Waste	65583	85060	119573	132613	164758	159357	140241	6.2	3.3	-1.6
Wind	1913	6058	12836	23588	39328	52469	74602	21.0	11.8	6.6
Solar and others	436	827	3775	11001	17756	28409	33759	24.1	16.7	6.6
Geothermal	4587	5312	5521	2009	3215	3680	6691	1.9	-5.3	7.6
Net Imports (ktoe)	826349	879676	955004	962880	942707	873285	646041	1.5	-0.1	-3.7
Solids	98320	125363	111814	129695	123195	107071	61379	1.3	1.0	-6.7
Oil	532226	597491	558847	556140	530514	485121	434996	0.5	-0.5	-2.0
Crude oil and Feedstocks	514686	578712	537586	515210	492607	456293	417516	0.4	-0.9	-1.6
Oil products	17540	18779	21261	40930	37908	28828	17480	1.9	6.0	-7.4
Natural gas	193432	254054	278015	269292	277192	269355	139455	3.7	0.0	-6.6
Electricity	2030	1412	712	1761	1247	523	44	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	54.5	49.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251294	3401091	3672298	3308837	1.0	0.2	-0.3
Nuclear energy	944993	997699	916610	867402	772986	717746	680716	-0.3	-1.7	-1.3
Solids	933855	965565	830393	846904	820940	732076	441378	-1.2	-0.1	-6.0
Oil (including refinery gas)	181296	142772	86899	34609	21012	20365	11521	-7.1	-13.2	-5.8
Gas (including derived gases)	514267	705961	798645	566051	573490	676688	270265	4.5	-3.3	-7.2
Biomass-waste	46401	87831	145814	188759	215934	268207	317400	12.1	4.0	3.9
Hydro (pumping excluded)	357072	312372	375785	362407	376217	377457	384082	0.5	0.0	0.2
Wind	22254	70455	149278	274278	457302	610109	867465	21.0	11.8	6.6
Solar	117	1458	22502	103798	154749	260733	325190	69.1	21.3	7.7
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	10821	2.6	2.1	2.5
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1030246	1113759	1217423	2.3	1.8	1.7
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	473711	598459	738304	6.3	7.1	4.5
Hydro (pumping excluded)	115841	119177	122922	127470	131606	132445	134274	0.6	0.7	0.2
Wind	12730	40485	85701	141580	205606	259215	347712	21.0	9.1	5.4
Solar	178	2292	29774	97443	136014	206109	255282	66.9	16.4	6.5
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	442331	410249	369214	1.6	-1.0	-1.8
of which cogeneration units	92439	107819	107430	109183	88184	86609	74800	1.5	-2.0	-1.6
of which CCS units	0	0	0	0	833	1083	1083	0.0	0.0	2.7
Solids fired	194525	185353	180110	176559	147408	118966	100637	-0.8	-2.0	-3.7
Gas fired	123821	163333	215485	219628	210704	216393	196807	5.7	-0.2	-0.7
Oil fired	83315	74582	69295	53085	31411	20948	15520	-1.8	-7.6	-6.8
Biomass-waste fired	12657	16610	21719	27908	51765	52899	55016	5.5	9.1	0.6
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1221	2.4	3.1	1.7
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.9	36.1	30.0			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.3	41.3	39.4			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	10.9	9.9	7.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.3			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	58.4	61.1	78.1			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	349652	354991	229242	0.7	-1.7	-4.1
Solids	223608	229335	197694	200223	189790	167011	100267	-1.2	-0.4	-6.2
Oil (including refinery gas)	40868	32485	20566	7340	4834	4923	3061	-6.6	-13.5	-4.5
Gas (including derived gases)	105105	137667	151968	100069	97370	114473	48921	3.8	-4.4	-6.7
Biomass & Waste	14651	26766	41420	43077	55728	66652	74127	11.0	3.0	2.9
Geothermal heat	4114	4645	4828	1184	1932	1932	2868	1.6	-8.8	4.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997999	908897	859821	793432	718780	-0.7	-1.5	-1.8
Refineries	735106	756042	667606	609584	582484	536608	487677	-1.0	-1.4	-1.8
Biofuels and hydrogen production	709	3279	13086	16149	20791	18614	18617	33.8	4.7	-1.1
District heating	15899	17445	19101	16261	16251	12896	8885	1.9	-1.6	-5.9
Derived gases, cokeries etc.	316179	324441	298206	266904	240295	225314	203600	-0.6	-2.1	-1.6

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7160	7393	7775	0.8	1.1	0.8
Public road transport	549	541	528	546	568	580	595	-0.4	0.7	0.5
Private cars and motorcycles	4466	4721	4843	5001	5255	5319	5530	0.8	0.8	0.5
Rail	450	464	499	540	599	675	743	1.0	1.8	2.2
Aviation ⁽³⁾	458	528	539	608	695	775	860	1.7	2.6	2.2
Inland navigation	42	42	40	40	43	45	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2982	3152	3406	1.1	1.6	1.3
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2110	2175	2347	1.3	1.6	1.1
Rail	405	416	394	428	483	547	604	-0.3	2.1	2.3
Inland navigation	300	343	354	361	390	430	455	1.7	1.0	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350517	322237	309380	0.5	-0.3	-1.2
Public road transport	8775	8725	8834	9040	9253	9153	9032	0.1	0.5	-0.2
Private cars and motorcycles	206270	212102	211618	204765	189792	162078	148611	0.3	-1.1	-2.4
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81617	78656	79322	1.3	0.6	-0.3
Rail	8168	7668	7129	7395	7898	8544	8978	-1.4	1.0	1.3
Aviation	44876	49959	49230	53303	56615	58106	57485	0.9	1.4	0.2
Inland navigation	6156	6798	5673	5051	5341	5700	5952	-0.8	-0.6	1.1
By transport activity										
Passenger transport	266294	275041	273897	271237	259967	233906	219856	0.3	-0.5	-1.7
Freight transport	75231	89484	85505	86825	90549	88331	89524	1.3	0.6	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.5	3.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.6	6.7			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559891	1537338	1426757	1126442	0.2	-0.7	-3.1
Final Energy Demand	1129427	1186370	1155879	1133457	1136208	1040132	818378	0.2	-0.2	-3.2
by sector										
Industry	330627	327576	283437	284538	295557	288578	227178	-1.5	0.4	-2.6
Energy intensive industries	215899	215115	182721	182407	188950	181762	141286	-1.7	0.3	-2.9
Other industrial sectors	114728	112461	100716	102131	106607	106816	85892	-1.3	0.6	-2.1
Residential	288564	307594	313829	299747	298627	258854	166295	0.8	-0.5	-5.7
Tertiary	166677	183368	196770	188333	188620	167585	112882	1.7	-0.4	-5.0
Transport ⁽⁵⁾	343558	367831	361842	360838	353404	325114	312024	0.5	-0.2	-1.2
by fuel										
Solids	61977	53988	50512	47694	45834	41149	24875	-2.0	-1.0	-5.9
Oil	487065	502509	455207	437598	404480	347311	294135	-0.7	-1.2	-3.1
Gas	267588	281191	273366	265878	263831	226096	141793	0.2	-0.4	-6.0
Electricity	217644	239548	244471	241010	253522	275264	247718	1.2	0.4	-0.2
Heat (from CHP and District Heating)	48044	52425	52875	49062	50704	45423	29626	1.4	-0.4	-5.2
Renewable energy forms	49109	56708	79448	92104	117462	102717	76546	4.9	4.0	-4.2
Other	0	0	0	111	375	2172	3685	0.0	0.0	25.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	154	148	137	124	113	99	75	-1.2	-1.8	-4.1
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	70	52	-2.2	-0.6	-3.6
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	64	38	-0.6	-1.7	-7.1
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	84	69	43	0.0	-1.7	-6.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	25	22	-0.8	-1.8	-2.7
Freight transport (toe/Mtkm)	33	34	33	32	30	28	26	0.2	-1.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4323.0	3919.2	2956.4	-0.9	-1.2	-3.7
of which ETS sectors (2013 scope) GHG emissions		2501.2	2175.1	2016.7	1935.6	1831.7	1249.7		-1.2	-4.3
of which ESD sectors (2013 scope) GHG emissions		2847.9	2699.9	2566.7	2387.4	2087.5	1706.7		-1.2	-3.3
CO ₂ Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3326.9	2962.2	2046.1	-0.5	-1.3	-4.7
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1111.0	1051.9	598.4	-0.5	-1.9	-6.0
Energy Branch	167.3	170.7	155.2	148.5	133.2	117.3	102.0	-0.7	-1.5	-2.6
Industry	691.0	634.1	511.8	505.6	495.0	447.5	293.2	-3.0	-0.3	-5.1
Residential	468.0	484.2	466.9	422.7	384.4	289.2	123.2	0.0	-1.9	-10.8
Tertiary	257.9	271.6	267.9	245.8	221.0	169.7	100.1	0.4	-1.9	-7.6
Transport	1001.7	1079.8	1036.6	1023.4	982.4	886.6	829.3	0.3	-0.5	-1.7
CO ₂ Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	250.0	250.0	246.7	-1.5	0.5	-0.1
Non-CO ₂ GHG emissions	1057.0	939.6	855.4	820.5	746.1	706.9	663.6	-2.1	-1.4	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	75.1	68.1	51.3	-0.9	-1.2	-3.7
Carbon intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.39	0.37	0.33	0.30	0.27	0.25	0.16	-1.6	-2.0	-5.1
Final energy demand (t of CO ₂ /toe)	2.14	2.08	1.98	1.94	1.83	1.72	1.64	-0.8	-0.7	-1.1
Industry	2.09	1.94	1.81	1.78	1.67	1.55	1.29	-1.5	-0.7	-2.6
Residential	1.62	1.57	1.49	1.41	1.29	1.12	0.74	-0.9	-1.4	-5.4
Tertiary	1.55	1.48	1.36	1.31	1.17	1.01	0.89	-1.3	-1.5	-2.7
Transport	2.92	2.94	2.86	2.84	2.78	2.73	2.66	-0.2	-0.3	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.0	24.6	32.5			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.9	32.7			
RES-E share	13.3	14.8	19.7	28.2	35.1	41.1	57.3			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	15.6	23.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	91	87	89	2.1	3.4	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	149	154	166	0.0	0.9	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1802.8	1966.2	2407.4	3.4	2.1	2.9
as % of GDP	9.4	10.4	11.4	11.2	12.4	12.6	14.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Austria: EUCo-40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5		
GDP (in 000 ME13)	257	279	298	316	345	373	400	1.5	1.5	1.5		
Gross Inland Consumption (ktoe)	28996	34373	34604	32933	33496	31621	25551	1.8	-0.3	-2.7		
Solids	3597	4000	3365	3333	3495	3125	1981	-0.7	0.4	-5.5		
Oil	12173	14448	12833	12275	11719	10290	8931	0.5	-0.9	-2.7		
Natural gas	6519	8159	8215	6454	7650	7230	3488	2.3	-0.7	-7.6		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Renewable energy forms	6825	7537	9991	9810	10193	10642	10847	3.9	0.2	0.6		
Energy Branch Consumption	1306	1566	1504	1593	1504	1404	1207	1.4	0.0	-2.2		
Non-Energy Uses	1718	1717	1850	2037	2202	2331	2358	0.7	1.8	0.7		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	9776	10012	12114	11277	11458	11163	11004	2.2	-0.6	-0.4		
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0		
Oil	1092	1003	1036	813	673	341	110	-0.5	-4.2	-16.6		
Natural gas	1533	1404	1486	1270	1139	667	418	-0.3	-2.6	-9.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	6859	7605	9592	9194	9645	10156	10476	3.4	0.1	0.8		
Hydro	3597	3154	3299	3527	3698	3812	3867	-0.9	1.1	0.4		
Biomass & Waste	3169	4214	5914	5018	5142	4629	3640	6.4	-1.4	-3.4		
Wind	6	114	178	340	382	808	1449	40.8	8.0	14.3		
Solar and others	63	93	168	260	360	822	1080	10.3	7.9	11.6		
Geothermal	25	30	35	49	64	84	440	3.4	6.4	21.3		
Net Imports (ktoe)	18970	24517	21577	21656	22039	20458	14547	1.3	0.2	-4.1		
Solids	3019	3971	3358	3333	3495	3125	1981	1.1	0.4	-5.5		
Oil	10850	13204	11510	11462	11045	9949	8821	0.6	-0.4	-2.2		
Crude oil and Feedstocks	7791	8100	7011	8001	7807	7352	6790	-1.1	1.1	-1.4		
Oil products	3059	5104	4499	3461	3239	2597	2031	3.9	-3.2	-4.6		
Natural gas	5253	7153	6115	5184	6511	6563	3070	1.5	0.6	-7.2		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Import Dependency (%)	65.4	71.3	62.4	65.8	65.8	64.7	56.9					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59616	72473	82792	79404	1.3	0.6	0.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	5727	7165	4918	4194	5502	3744	442	-1.5	1.1	-22.3		
Oil (including refinery gas)	1702	1641	1273	208	215	71	66	-2.9	-16.3	-11.1		
Gas (including derived gases)	8864	14347	16137	6774	14522	14588	1878	6.2	-1.0	-18.5		
Biomass-waste	1675	2882	5088	2592	3608	4580	5197	11.8	-3.4	3.7		
Hydro (pumping excluded)	41836	36677	38363	41008	42997	44329	44960	-0.9	1.1	0.4		
Wind	67	1331	2064	3958	4443	9394	16851	40.9	8.0	14.3		
Solar	3	21	88	871	1174	6074	9631	38.2	29.5	23.4		
Geothermal and other renewables	0	2	2	11	11	11	378	0.0	21.5	41.9		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23388	29451	35347	1.8	0.8	4.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	11668	12440	13841	16437	17371	23970	30115	1.7	2.3	5.7		
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13704	13854	0.9	0.8	0.1		
Wind	50	778	981	2412	2583	4815	7556	34.7	10.2	11.3		
Solar	5	30	154	876	1090	5451	8706	40.9	21.6	23.1		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6243	6652	7662	6552	6016	5481	5232	2.1	-2.4	-1.4		
of which cogeneration units	2632	3253	3157	3005	3054	2704	1766	1.8	-0.3	-5.3		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1887	1660	1359	873	862	836	836	-3.2	-4.5	-0.3		
Gas fired	2816	3389	4512	4074	3559	3310	2984	4.8	-2.3	-1.7		
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4		
Biomass-waste fired	280	456	650	633	778	850	923	8.8	1.8	1.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	2	1	2	2	2	66	0.0	7.2	41.9		
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	34.0	31.1	25.0					
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	44.0	41.8	28.9					
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.6	16.4	5.6					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.1	77.8	97.0					
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4667	4727	2373	4.0	-2.0	-6.5		
Solids	1216	1507	1019	908	1177	783	152	-1.8	1.4	-18.5		
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.9		
Gas (including derived gases)	1961	2836	2868	1406	2569	2818	580	3.9	-1.1	-13.8		
Biomass & Waste	421	814	1649	604	843	1093	1295	14.6	-6.5	4.4		
Geothermal heat	0	2	1	10	10	10	325	0.0	23.4	41.9		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	11349	11946	11472	12554	11777	10794	9333	0.1	0.3	-2.3		
Refineries	8865	9275	8040	9141	8770	7936	7090	-1.0	0.9	-2.1		
Biofuels and hydrogen production	16	50	495	571	445	396	391	41.2	-1.1	-1.3		
District heating	558	613	869	678	626	538	306	4.5	-3.2	-6.9		
Derived gases, cokeries etc.	1910	2009	2068	2164	1936	1925	1546	0.8	-0.7	-2.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	96	101	107	112	119	124	129	1.1	1.1	0.8
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.6
Private cars and motorcycles	68	72	75	78	80	82	84	1.0	0.7	0.4
Rail	12	13	15	16	18	21	22	1.9	2.2	1.9
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.5
Freight transport activity (Gtkm)	50	54	61	65	70	73	78	2.0	1.3	1.1
Heavy goods and light commercial vehicles	31	33	39	43	46	46	49	2.3	1.6	0.7
Rail	17	19	20	20	22	24	26	1.8	0.9	1.9
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8019	7179	6836	2.3	-0.6	-1.6
Public road transport	92	97	101	103	106	107	106	0.9	0.5	0.0
Private cars and motorcycles	4520	5616	5043	4708	4260	3573	3225	1.1	-1.7	-2.7
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2590	2399	2360	6.3	0.8	-0.9
Rail	267	242	247	249	264	277	283	-0.8	0.7	0.7
Aviation	591	679	707	776	775	798	834	1.8	0.9	0.7
Inland navigation	28	45	22	23	24	27	27	-2.1	0.8	1.2
By transport activity										
Passenger transport	5260	6438	5894	5634	5194	4533	4224	1.1	-1.3	-2.0
Freight transport	1527	2377	2613	2846	2825	2646	2612	5.5	0.8	-0.8
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.2	2.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.3	6.5			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30896	31294	29290	23193	1.8	-0.5	-3.0
Final Energy Demand	23692	28185	28423	28425	28015	25883	20527	1.8	-0.1	-3.1
by sector										
Industry	7283	8825	9195	9724	9932	9756	7944	2.4	0.8	-2.2
Energy intensive industries	5321	6148	6212	6588	6631	6414	5191	1.6	0.7	-2.4
Other industrial sectors	1962	2676	2983	3136	3301	3343	2753	4.3	1.0	-1.8
Residential	6332	6828	6797	6669	6496	5637	3425	0.7	-0.5	-6.2
Tertiary	3070	3449	3686	3285	3283	3030	2076	1.8	-1.2	-4.5
Transport ⁽⁵⁾	7007	9082	8744	8746	8303	7460	7082	2.2	-0.5	-1.6
by fuel										
Solids	1403	1466	1169	1135	1179	1233	893	-1.8	0.1	-2.7
Oil	9818	12084	10539	9934	9319	7875	6597	0.7	-1.2	-3.4
Gas	4464	5125	5259	5142	5122	4455	2878	1.7	-0.3	-5.6
Electricity	4432	5013	5358	5436	5837	6523	6334	1.9	0.9	0.8
Heat (from CHP and District Heating)	1020	1353	1832	2008	1882	1740	958	6.0	0.3	-6.5
Renewable energy forms	2555	3145	4266	4769	4671	4014	2799	5.3	0.9	-5.0
Other	0	0	0	2	5	44	67	0.0	0.0	29.1
Energy intensity indicators										
Gross Int. Cons./GDP (toe/M€13)	113	123	116	104	97	85	64	0.3	-1.8	-4.1
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	96	74	0.8	-0.4	-3.4
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	76	61	34	-0.7	-2.0	-7.6
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	65	41	0.1	-2.7	-6.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	30	27	0.1	-2.6	-3.1
Freight transport (toe/Mtkm)	30	44	43	44	40	36	33	3.4	-0.5	-1.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	86.1	96.8	89.0	82.8	82.5	74.4	54.9	0.3	-0.8	-4.0
of which ETS sectors (2013 scope) GHG emissions	38.3	35.2	32.8	34.7	32.7	20.7			-0.2	-5.0
of which ESD sectors (2013 scope) GHG emissions	58.4	53.7	50.0	47.8	41.7	34.2			-1.2	-3.3
CO2 Emissions (energy related)	65.6	78.6	71.5	65.7	66.1	58.7	40.3	0.9	-0.8	-4.8
Power generation/District heating	12.5	17.0	15.1	11.2	14.4	13.5	5.7	1.9	-0.5	-8.9
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.3	2.8	1.3	-0.4	-2.5
Industry	16.8	18.5	17.6	17.7	17.1	16.1	11.2	0.5	-0.3	-4.2
Residential	8.9	8.6	7.7	6.8	6.4	4.3	1.3	-1.5	-1.8	-14.4
Tertiary	3.9	4.4	3.2	2.0	1.8	1.4	0.7	-1.8	-5.8	-8.4
Transport	20.2	26.5	24.1	23.9	22.8	20.0	18.5	1.8	-0.6	-2.0
CO2 Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.3	5.2	1.6	-0.2	-0.3
Non-CO2 GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.5	-2.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.7	93.5	69.0	0.3	-0.8	-4.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.17	0.21	0.17	0.13	0.15	0.13	0.06	-0.3	-1.0	-8.4
Final energy demand (t of CO2/toe)	2.10	2.06	1.85	1.77	1.72	1.61	1.55	-1.3	-0.8	-1.0
Industry	2.31	2.10	1.92	1.82	1.72	1.65	1.41	-1.9	-1.1	-2.0
Residential	1.41	1.26	1.13	1.02	0.98	0.76	0.39	-2.2	-1.4	-8.8
Tertiary	1.26	1.27	0.88	0.60	0.54	0.46	0.36	-3.6	-4.7	-4.1
Transport	2.88	2.91	2.76	2.73	2.74	2.68	2.62	-0.4	0.0	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.1	38.3	46.9			
RES-H&C share	20.4	22.0	29.7	37.0	36.3	34.6	38.8			
RES-E share	66.9	62.4	65.7	68.0	68.0	75.2	94.2			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.5	18.7	29.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	64	69	71	0.0	-0.7	1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	139	150	156	0.9	-0.2	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.9	43.8	52.9	4.2	1.7	3.1
as % of GDP	8.5	10.2	11.0	10.2	11.3	11.8	13.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Belgium: EUCC-40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	10	10	11	11	12	12	13	0.8	0.9	0.9		
GDP (in 000 ME13)	324	350	372	385	414	443	479	1.4	1.1	1.5		
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54742	49200	39859	0.3	-1.1	-3.1		
Solids	7922	5081	3673	3205	2008	2144	1582	-7.4	-5.9	-2.4		
Oil	24136	24721	24699	23472	21996	20016	17683	0.2	-1.2	-2.2		
Natural gas	13369	14728	16999	14941	14140	16863	10939	2.4	-1.8	-2.5		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Renewable energy forms	1081	1658	3560	4242	6225	6767	7200	12.7	5.7	1.5		
Energy Branch Consumption	2366	2403	2246	2406	2220	2139	2016	-0.5	-0.1	-1.0		
Non-Energy Uses	6739	7516	8541	8464	8523	8620	8518	2.4	0.0	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14106	7326	6729	1.2	-0.8	-7.1		
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0		
Oil	0	6	-7	-14	-14	-13	-13	1692.2	7.2	-0.7		
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Renewable energy sources	977	1377	2996	3725	5488	6099	6742	11.9	6.2	2.1		
Hydro	40	25	27	31	32	46	50	-3.8	1.7	4.7		
Biomass & Waste	931	1327	2793	2944	3975	3840	3551	11.6	3.6	-1.1		
Wind	1	20	111	431	1032	1594	2206	54.9	25.0	7.9		
Solar and others	1	3	60	313	442	608	911	50.7	22.0	7.5		
Geothermal	3	3	4	6	8	11	24	3.0	6.5	11.4		
Net Imports (ktoe)	50502	53396	53753	52611	49715	61298	42920	0.6	-0.8	-1.5		
Solids	7220	5150	3591	3205	2008	2144	1582	-6.7	-5.6	-2.4		
Oil	29527	32605	32752	32035	31042	28997	26281	1.0	-0.5	-1.7		
Crude oil and Feedstocks	34177	32251	31004	27409	27195	26376	25080	-1.0	-1.3	-0.8		
Oil products	-4650	354	1749	4626	3847	2622	1202	0.0	8.2	-11.0		
Natural gas	13278	14817	16791	14941	14186	17319	12143	2.4	-1.7	-1.5		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.5	86.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	74271	81488	74862	1.3	-2.3	0.1		
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0		
Solids	12916	8199	4190	2975	195	344	56	-10.6	-26.4	-11.8		
Oil (including refinery gas)	797	1740	406	96	674	699	715	-6.5	5.2	0.6		
Gas (including derived gases)	19091	25143	33178	23812	18304	45814	31576	5.7	-5.8	5.6		
Biomass-waste	1336	2516	5882	5914	3512	4737	7151	16.0	-5.0	7.4		
Hydro (pumping excluded)	460	288	312	365	368	538	583	-3.8	1.7	4.7		
Wind	16	227	1292	5009	11998	18534	25649	55.1	25.0	7.9		
Solar	0	1	560	3376	4013	5750	9132	0.0	21.8	8.6		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	14674	14867	17071	18515	21006	25226	29790	1.5	2.1	3.6		
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0		
Renewable energy	117	274	1934	5560	8494	12196	18171	32.4	15.9	7.9		
Hydro (pumping excluded)	103	105	118	119	119	168	184	1.4	0.1	4.4		
Wind	14	167	912	2229	4558	6585	9413	51.8	17.5	7.5		
Solar	0	2	904	3212	3818	5443	8574	0.0	15.5	8.4		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	8636	8672	9216	9048	7457	9989	11619	0.7	-2.1	4.5		
of which cogeneration units	1112	1893	2575	1552	665	1274	1260	8.8	-12.7	6.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2290	1450	1184	825	43	47	19	-6.4	-28.2	-7.7		
Gas fired	4392	5201	6468	6799	6270	8887	10284	3.9	-0.3	5.1		
Oil fired	1581	1494	836	646	266	266	235	-6.2	-10.8	-1.2		
Biomass-waste fired	373	527	727	777	878	788	1081	6.9	1.9	2.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.9	36.1	28.2					
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.7	50.0	50.5					
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.6	14.9	16.4					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.2	42.5	56.8					
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4367	8874	6732	1.7	-6.3	4.4		
Solids	2629	1833	936	761	47	81	11	-9.8	-25.8	-13.3		
Oil (including refinery gas)	180	411	57	29	223	231	237	-10.8	14.6	0.6		
Gas (including derived gases)	3790	4612	5671	4111	2956	7180	4723	4.1	-6.3	4.8		
Biomass & Waste	492	821	1722	1414	1140	1382	1761	13.4	-4.0	4.4		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	54711	52964	50595	41255	42583	34627	31635	-0.8	-1.7	-2.9		
Refineries	38602	37483	35454	31882	31698	30884	29478	-0.8	-1.1	-0.7		
Biofuels and hydrogen production	0	0	352	341	872	749	714	0.0	9.5	-2.0		
District heating	45	29	6	15	19	16	17	-18.1	11.9	-0.8		
Derived gases, cokeries etc.	16064	15452	14782	9016	9994	2978	1426	-0.8	-3.8	-17.7		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Belgium: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	137	145	154	158	169	174	183	1.2	1.0	0.7
Public road transport	13	18	17	18	18	18	18	1.8	2.7	0.2
Private cars and motorcycles	107	109	115	117	126	127	133	0.8	0.9	0.5
Rail	9	10	12	12	13	15	17	3.1	1.2	2.4
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.5
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.7
Freight transport activity (Gtkm)	70	65	63	66	76	82	91	-1.1	1.8	1.8
Heavy goods and light commercial vehicles	55	48	46	47	54	57	62	-1.7	1.6	1.4
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.6
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	10011	9459	9353	0.8	-0.6	-0.7
Public road transport	158	204	292	290	287	276	267	6.4	-0.2	-0.7
Private cars and motorcycles	4815	4463	5177	4757	4252	3646	3402	0.7	-1.9	-2.2
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3642	3568	3658	1.8	0.7	0.0
Rail	184	186	177	181	210	239	265	-0.4	1.7	2.4
Aviation	1530	1281	1382	1389	1445	1537	1550	-1.0	0.4	0.7
Inland navigation	204	219	152	164	175	192	212	-2.9	1.4	1.9
By transport activity										
Passenger transport	6608	6016	6932	6518	6073	5560	5327	0.5	-1.3	-1.3
Freight transport	3139	3956	3661	3660	3938	3899	4026	1.6	0.7	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.7	3.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.6	9.5			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46218	40580	31341	0.0	-1.3	-3.8
Final Energy Demand	37766	36705	37534	36239	36452	33649	26319	-0.1	-0.3	-3.2
by sector										
Industry	14218	11775	11688	11055	11246	10820	8339	-1.9	-0.4	-2.9
Energy intensive industries	10700	9088	8641	8013	8011	7745	5944	-2.1	-0.8	-2.9
Other industrial sectors	3518	2686	3047	3042	3235	3075	2395	-1.4	0.6	-3.0
Residential	8974	9299	9266	9230	9318	8254	4986	0.3	0.1	-6.1
Tertiary	4827	5658	5982	5722	5827	5064	3599	2.2	-0.3	-4.7
Transport ⁽⁵⁾	9747	9973	10598	10232	10062	9511	9395	0.8	-0.5	-0.7
by fuel										
Solids	3403	2019	1621	1505	1352	1285	923	-7.2	-1.8	-3.7
Oil	16661	16586	15314	14610	13010	10999	8895	-0.8	-1.6	-3.7
Gas	10010	10009	11147	10465	10559	9174	5562	1.1	-0.5	-6.2
Electricity	6667	6896	7163	7033	7268	8297	8011	0.7	0.1	1.0
Heat (from CHP and District Heating)	492	428	640	567	606	657	526	2.7	-0.5	-1.4
Renewable energy forms	533	767	1650	2058	3635	3101	2224	12.0	8.2	-4.8
Other	0	0	0	3	23	136	178	0.0	0.0	22.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	183	168	165	142	132	111	83	-1.0	-2.2	-4.5
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	70	51	-1.3	-1.3	-4.1
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	64	35	-1.1	-1.4	-7.6
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	74	48	0.5	-1.4	-6.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	26	24	-1.1	-2.5	-2.3
Freight transport (toe/Mtkm)	45	61	58	55	52	47	44	2.6	-1.1	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	154.0	148.3	136.1	127.3	112.1	111.9	87.2	-1.2	-1.9	-2.5
of which ETS sectors (2013 scope) GHG emissions	70.1	58.6	52.1	42.8	42.8	52.8	41.9		-3.1	-0.2
of which ESD sectors (2013 scope) GHG emissions	78.3	77.6	75.2	69.3	59.1	45.3			-1.1	-4.2
CO2 Emissions (energy related)	122.7	114.2	106.4	97.8	84.7	86.2	63.1	-1.4	-2.3	-2.9
Power generation/District heating	25.1	24.0	20.4	15.8	9.1	20.9	14.9	-2.0	-7.8	5.1
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.6	-2.3	0.4	-1.2
Industry	34.5	24.8	22.1	19.7	18.3	16.5	11.7	-4.4	-1.9	-4.4
Residential	20.3	20.5	18.9	18.4	16.9	12.7	4.2	-0.7	-1.1	-13.0
Tertiary	8.7	10.6	10.2	9.5	9.0	6.9	4.2	1.6	-1.3	-7.2
Transport	29.2	29.9	30.9	29.7	27.4	25.4	24.5	0.6	-1.2	-1.1
CO2 Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.4	8.9	1.6	0.4	-1.1
Non-CO2 GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	15.2	-1.3	-1.4	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	74.5	58.1	-1.2	-1.9	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.26	0.20	0.20	0.11	0.23	0.18	-3.5	-5.8	5.1
Final energy demand (t of CO2/toe)	2.45	2.34	2.19	2.14	1.96	1.83	1.70	-1.1	-1.1	-1.5
Industry	2.43	2.11	1.89	1.79	1.63	1.53	1.40	-2.5	-1.5	-1.5
Residential	2.26	2.21	2.04	2.00	1.81	1.54	0.84	-1.0	-1.2	-7.4
Tertiary	1.80	1.87	1.71	1.66	1.54	1.37	1.18	-0.5	-1.0	-2.7
Transport	2.99	3.00	2.91	2.91	2.72	2.67	2.61	-0.3	-0.7	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.1	16.4	21.8			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	14.1	15.5			
RES-E share	1.1	2.4	7.1	15.2	20.2	27.0	40.4			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	13.9	20.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	104	107	110	3.2	5.8	0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	145	154	173	0.9	0.4	1.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	59.4	66.7	83.1	4.0	2.0	3.4
as % of GDP	10.2	10.3	13.1	12.3	14.3	15.0	17.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EUCC+40					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7			
GDP (in 000 ME13)	25	33	38	40	45	50	53	4.1	1.8	1.7			
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16509	15633	12639	-0.4	-0.7	-2.6			
Solids	6433	6895	6887	5983	5983	5073	2821	0.7	-1.4	-7.2			
Oil	4068	4725	3888	3732	3539	3362	3118	-0.5	-0.9	-1.3			
Natural gas	2931	2804	2300	2118	1964	1877	1167	-2.4	-1.6	-5.1			
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0			
Electricity	-397	-652	-726	-1011	-914	-915	-852	6.2	2.3	-0.7			
Renewable energy forms	788	1156	1465	1870	2160	2460	2608	6.4	4.0	1.9			
Energy Branch Consumption	905	911	1032	907	884	796	658	1.3	-1.5	-2.9			
Non-Energy Uses	980	851	422	427	498	571	600	-8.1	1.7	1.9			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	9867	10629	10531	9856	11012	10428	9064	0.7	0.4	-1.9			
Solids	4295	4178	4942	4055	4967	4082	2598	1.4	0.0	-6.3			
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9			
Natural gas	12	384	59	125	125	127	130	17.0	7.8	0.4			
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0			
Renewable energy sources	792	1182	1512	1883	2125	2417	2531	6.7	3.5	1.8			
Hydro	230	373	435	350	373	364	363	6.6	-1.5	-0.3			
Biomass & Waste	562	776	975	1283	1477	1297	866	5.7	4.2	-5.2			
Wind	0	0	59	98	102	351	787	0.0	5.7	22.7			
Solar and others	0	0	12	118	138	382	460	0.0	28.2	12.8			
Geothermal	0	33	33	34	35	23	55	0.0	0.7	4.6			
Net Imports (ktoe)	8544	9276	7075	6717	5643	5367	3748	-1.9	-2.2	-4.0			
Solids	2258	2553	1700	1928	1016	991	223	-2.8	-5.0	-14.1			
Oil	3944	4943	4025	3820	3665	3495	3250	0.2	-0.9	-1.2			
Crude oil and Feedstocks	5228	6145	5916	6308	5989	5653	5292	1.2	0.1	-1.2			
Oil products	-1284	-1202	-1891	-2489	-2324	-2158	-2041	3.9	2.1	-1.3			
Natural gas	2742	2458	2131	1993	1840	1753	1049	-2.5	-1.5	-5.5			
Electricity	-397	-652	-726	-1011	-914	-915	-852	6.2	2.3	-0.7			
Import Dependency (%)	46.0	46.7	39.6	40.5	33.9	34.0	29.3						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48846	49216	50216	44636	1.2	0.7	-1.0			
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0			
Solids	16941	18458	22606	23317	24249	20248	11075	2.9	0.7	-7.5			
Oil (including refinery gas)	661	606	393	440	70	0	0	-5.1	-15.8	-100.0			
Gas (including derived gases)	2178	1896	1967	3035	2737	2383	58	-1.0	3.4	-32.0			
Biomass-waste	15	17	49	54	164	389	534	12.6	12.9	12.5			
Hydro (pumping excluded)	2673	4337	5057	4064	4334	4236	4218	6.6	-1.5	-0.3			
Wind	0	5	681	1144	1183	4081	9153	0.0	5.7	22.7			
Solar	0	0	15	1129	1152	3553	4273	0.0	54.2	14.0			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11827	13463	15414	-0.5	1.7	2.7			
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0			
Renewable energy	1016	1992	2697	4081	4110	7053	9196	10.3	4.3	8.4			
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0			
Wind	0	8	488	691	703	1971	3559	0.0	3.7	17.6			
Solar	0	0	25	1052	1069	2744	3299	0.0	45.6	11.9			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	5845	5878	5326	5967	5797	4490	4298	-0.9	0.8	-2.9			
of which cogeneration units	1129	1191	1017	1814	1702	1459	866	-1.0	5.3	-6.5			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	5100	5100	4703	5313	4991	3674	3563	-0.8	0.6	-3.3			
Gas fired	689	737	607	626	752	720	634	-1.3	2.2	-1.7			
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0			
Biomass-waste fired	0	0	3	15	51	94	99	0.0	32.3	6.9			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.5	39.7	31.4						
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	38.6	37.7	36.5						
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.2	8.5	6.1						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.1	45.0	54.9	75.1						
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7553	6282	6061	5245	2747	2.4	-2.2	-7.6			
Solids	4928	5817	6610	5466	5544	4746	2611	3.0	-1.7	-7.3			
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0			
Gas (including derived gases)	884	697	720	692	463	408	18	-2.0	-4.3	-27.8			
Biomass & Waste	3	2	4	15	38	91	118	1.4	26.0	11.9			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	12213	13505	11285	10638	10375	9993	9607	-0.8	-0.8	-0.8			
Refineries	5310	6421	6041	6617	6288	5944	5562	1.3	0.4	-1.2			
Biofuels and hydrogen production	0	0	13	106	188	173	181	0.0	30.2	-0.4			
District heating	324	368	304	96	98	85	80	-0.6	-10.7	-2.0			
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3791	3783	-2.9	-2.6	0.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	48	56	65	72	76	79	83	3.2	1.4	1.0
Public road transport	15	14	11	11	11	12	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	56	58	5.7	1.3	0.6
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.9
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.4
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	2.0	2.5
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2879	2768	2741	4.0	0.6	-0.5
Public road transport	399	362	262	263	270	269	264	-4.1	0.3	-0.2
Private cars and motorcycles	956	1389	1581	1628	1559	1372	1305	5.2	-0.1	-1.8
Heavy goods and light commercial vehicles	305	652	590	646	699	709	698	6.8	1.7	0.0
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.4
Aviation	101	201	182	207	244	300	349	6.1	3.0	3.6
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
By transport activity										
Passenger transport	1473	1965	2034	2106	2083	1952	1930	3.3	0.2	-0.8
Freight transport	369	718	685	731	796	816	811	6.4	1.5	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.9	1.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.5	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	16011	15063	12039	-0.1	-0.8	-2.8
Final Energy Demand	9106	10184	8843	9205	9481	9037	7394	-0.3	0.7	-2.5
by sector										
Industry	3967	4037	2561	2709	2797	2839	2303	-4.3	0.9	-1.9
Energy intensive industries	3124	3161	1789	1929	1934	1914	1535	-5.4	0.8	-2.3
Other industrial sectors	843	876	772	780	864	925	768	-0.9	1.1	-1.2
Residential	2155	2117	2246	2307	2371	2108	1391	0.4	0.5	-5.2
Tertiary	972	1128	1174	1179	1270	1167	827	1.9	0.8	-4.2
Transport ⁽⁵⁾	2013	2903	2862	3011	3043	2923	2873	3.6	0.6	-0.6
by fuel										
Solids	879	979	414	487	415	307	198	-7.3	0.0	-7.1
Oil	3026	3712	3125	3134	3042	2873	2648	0.3	-0.3	-1.4
Gas	1681	1565	1058	1052	1086	1025	738	-4.5	0.3	-3.8
Electricity	2085	2211	2331	2382	2529	2678	2401	1.1	0.8	-0.5
Heat (from CHP and District Heating)	880	939	960	841	863	818	504	0.9	-1.1	-5.2
Renewable energy forms	555	778	956	1309	1546	1331	897	5.6	4.9	-5.3
Other	0	0	0	0	0	5	8	0.0	0.0	38.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	733	599	472	415	366	313	236	-4.3	-2.5	-4.3
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	24	-9.4	-0.5	-3.7
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	46	28	-3.9	-1.4	-7.0
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	59	39	-2.1	-1.3	-5.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	23	22	0.0	-1.3	-1.9
Freight transport (toe/Mtkm)	35	44	37	37	36	33	31	0.7	-0.5	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	64.4	67.0	61.2	55.6	52.0	47.0	35.0	-0.5	-1.6	-3.9
of which ETS sectors (2013 scope) GHG emissions	39.4	35.6	30.0	30.0	29.4	25.7	15.0		-1.9	-6.5
of which ESD sectors (2013 scope) GHG emissions	27.6	25.6	25.6	22.7	21.3	19.9			-1.2	-1.3
CO2 Emissions (energy related)	44.3	49.1	45.9	40.1	39.1	34.4	22.4	0.4	-1.6	-5.4
Power generation/District heating	24.6	27.9	31.2	25.1	24.7	21.1	11.1	2.4	-2.3	-7.7
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.8	-1.8	-1.5
Industry	10.6	9.8	3.7	4.0	4.0	3.7	2.5	-10.0	0.7	-4.5
Residential	1.4	1.2	1.0	1.0	0.7	0.4	0.1	-3.1	-4.1	-17.5
Tertiary	1.2	1.1	0.8	0.7	0.7	0.5	0.3	-4.0	-1.7	-6.8
Transport	5.7	8.3	8.3	8.4	8.3	7.9	7.7	3.7	0.1	-0.7
CO2 Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.4
Non-CO2 GHG emissions	16.7	14.0	12.3	12.5	9.8	9.4	9.3	-3.0	-2.2	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	47.3	42.7	31.8	-0.5	-1.6	-3.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.46	0.49	0.51	0.41	0.40	0.34	0.22	1.2	-2.4	-6.0
Final energy demand (t of CO2/toe)	2.07	2.01	1.55	1.53	1.43	1.38	1.44	-2.8	-0.8	0.0
Industry	2.67	2.43	1.44	1.47	1.41	1.29	1.08	-6.0	-0.2	-2.6
Residential	0.63	0.58	0.44	0.41	0.28	0.17	0.07	-3.5	-4.6	-13.0
Tertiary	1.24	0.97	0.69	0.61	0.53	0.47	0.40	-5.8	-2.5	-2.8
Transport	2.85	2.88	2.88	2.80	2.73	2.72	2.68	0.1	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	20.9	24.8	31.4			
RES-H&C share	10.5	14.1	25.2	30.8	33.8	33.0	33.6			
RES-E share	4.0	8.5	12.3	17.4	17.9	31.3	53.1			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	11.1	15.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	63	67	75	0.8	1.0	1.7
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	98	115	128	5.4	2.7	2.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.5	18.5	6.2	3.1	3.7
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.1	34.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EUCC-40						
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30				
								Annual % Change						
Population (in million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3				
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3				
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8318	7889	6023	0.9	-0.3	-3.2				
Solids	431	683	683	751	886	821	266	4.7	2.6	-11.3				
Oil	3929	4490	3699	3414	3229	2950	2575	-0.6	-1.4	-2.2				
Natural gas	2210	2370	2632	2144	2374	2305	1120	1.8	-1.0	-7.2				
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0				
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1				
Renewable energy forms	880	906	1138	1195	1416	1463	1652	2.6	2.2	1.6				
Energy Branch Consumption	821	825	745	726	713	624	557	-1.0	-0.4	-2.4				
Non-Energy Uses	656	675	596	514	529	535	534	-0.9	-1.2	0.1				
SECURITY OF SUPPLY														
Production (incl.recovery of products) (ktoe)	3580	3799	4222	3368	3600	3358	3172	1.7	-1.6	-1.3				
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0				
Oil	1345	1029	767	466	461	434	387	-5.5	-5.0	-1.7				
Natural gas	1355	1865	2215	1431	1488	1270	1014	5.0	-3.9	-3.8				
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0				
Renewable energy sources	880	906	1240	1471	1650	1654	1771	3.5	2.9	0.7				
Hydro	505	545	716	533	544	549	569	3.6	-2.7	0.5				
Biomass & Waste	375	360	500	859	1020	887	672	2.9	7.4	-4.1				
Wind	0	1	12	56	56	56	211	0.0	16.6	14.2				
Solar and others	0	0	5	16	23	155	307	0.0	15.9	29.7				
Geothermal	0	0	7	7	8	7	13	0.0	1.2	5.0				
Net Imports (ktoe)	4134	5208	4461	4657	4725	4538	2857	0.8	0.6	-4.9				
Solids	478	624	699	751	886	821	266	3.9	2.4	-11.3				
Oil	2406	3583	2980	2955	2774	2523	2194	2.2	-0.7	-2.3				
Crude oil and Feedstocks	3952	4334	3647	2979	2837	2670	2436	-0.8	-2.5	-1.5				
Oil products	-1546	-751	-667	-24	-62	-148	-242	-8.1	-21.1	14.5				
Natural gas	905	562	476	713	886	1035	106	-6.2	6.4	-19.1				
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1				
Import Dependency (%)	52.9	58.4	52.1	58.0	56.8	57.5	47.4							
ELECTRICITY														
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14291	16617	13941	2.7	0.2	-0.2				
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0				
Solids	1551	2328	2385	2671	3604	3395	809	4.4	4.2	-13.9				
Oil (including refinery gas)	1687	1855	560	77	24	218	209	-10.4	-27.0	24.1				
Gas (including derived gases)	1571	1814	2553	2232	3345	4078	343	5.0	2.7	-20.4				
Biomass-waste	1	14	33	98	277	491	491	41.9	23.7	5.9				
Hydro (pumping excluded)	5874	6333	8329	6200	6323	6386	6616	3.6	-2.7	0.5				
Wind	0	10	139	650	650	650	2448	0.0	16.7	14.2				
Solar	0	0	0	68	68	1399	3024	0.0	0.0	46.2				
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0				
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0				
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4876	5615	7646	1.1	1.5	4.6				
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0				
Renewable energy	2079	2066	2220	2668	2668	3597	5750	0.7	1.9	8.0				
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2255	0.3	0.2	0.3				
Wind	0	6	79	423	423	423	1389	0.0	18.3	12.6				
Solar	0	0	0	55	55	984	2105	0.0	0.0	43.9				
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0				
Thermal power	1707	1879	1996	2216	2208	2018	1896	1.6	1.0	-1.5				
of which cogeneration units	558	515	486	298	613	828	604	-1.4	2.4	-0.2				
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0				
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0				
Gas fired	781	919	1031	1706	1378	1179	1069	2.8	2.9	-2.5				
Oil fired	615	646	649	185	150	156	112	0.5	-13.6	-2.9				
Biomass-waste fired	0	3	5	13	24	27	59	0.0	17.3	9.5				
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0				
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0				
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	32.4	32.9	20.6							
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	46.0	44.1	33.7							
% of gross electricity from CHP	16.8	0.0	14.3	15.5	17.7	13.6	9.3							
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	51.2	53.7	90.2							
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1355	1596	472	0.2	0.7	-10.0				
Solids	357	537	532	612	757	715	211	4.1	3.6	-12.0				
Oil (including refinery gas)	395	447	120	14	8	65	63	-11.3	-23.7	22.9				
Gas (including derived gases)	497	490	611	350	537	720	78	2.1	-1.3	-17.6				
Biomass & Waste	0	4	7	17	53	97	122	36.6	22.9	8.6				
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0				
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0				
Fuel Input to other conversion processes	5394	5327	4409	3555	3566	3342	3021	-2.0	-2.1	-1.6				
Refineries	5299	5210	4304	3414	3267	3079	2806	-2.1	-2.7	-1.5				
Biofuels and hydrogen production	0	0	3	70	223	194	172	0.0	56.1	-2.6				
District heating	83	104	97	70	74	59	30	1.6	-2.7	-8.6				
Derived gases, cokeries etc.	12	13	4	1	2	11	13	-10.0	-5.6	18.7				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	0.9
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.4
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.8
Rail	2	2	2	2	3	3	3	2.7	1.3	0.9
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.8	2.7
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.8
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.4
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.4
Rail	2	3	3	3	3	3	3	3.9	1.4	1.4
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2134	1999	1936	3.0	0.3	-1.0
Public road transport	41	39	61	63	66	64	63	3.9	0.8	-0.3
Private cars and motorcycles	1192	1192	1332	1324	1319	1179	1102	1.1	-0.1	-1.8
Heavy goods and light commercial vehicles	161	508	479	465	510	502	506	11.5	0.6	-0.1
Rail	46	52	50	48	52	53	55	0.8	0.5	0.5
Aviation	76	98	108	134	145	155	162	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	0.9
By transport activity										
Passenger transport	1329	1340	1514	1535	1542	1412	1342	1.3	0.2	-1.4
Freight transport	215	581	554	540	591	587	594	9.9	0.7	0.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.1	2.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.5	9.9			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7789	7354	5489	1.1	-0.2	-3.4
Final Energy Demand	5371	6343	6347	6190	6321	5811	4580	1.7	0.0	-3.2
by sector										
Industry	1378	1563	1366	1394	1411	1333	1035	-0.1	0.3	-3.1
Energy intensive industries	847	907	752	745	740	685	523	-1.2	-0.2	-3.4
Other industrial sectors	531	656	614	649	671	648	512	1.5	0.9	-2.7
Residential	1666	1922	1893	1784	1776	1561	959	1.3	-0.6	-6.0
Tertiary	781	935	1018	934	997	914	648	2.7	-0.2	-4.2
Transport ⁽⁵⁾	1547	1923	2070	2078	2137	2002	1938	3.0	0.3	-1.0
by fuel										
Solids	74	146	150	139	129	106	55	7.3	-1.5	-8.1
Oil	2683	3108	2902	2755	2562	2279	1939	0.8	-1.2	-2.8
Gas	1009	1236	1288	1170	1239	1053	585	2.5	-0.4	-7.2
Electricity	1018	1240	1364	1317	1402	1529	1402	3.0	0.3	0.0
Heat (from CHP and District Heating)	213	258	246	226	240	217	127	1.4	-0.2	-6.2
Renewable energy forms	375	356	397	582	747	616	457	0.6	6.5	-4.8
Other	0	0	0	1	2	11	15	0.0	0.0	19.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	214	196	184	179	170	152	109	-1.5	-0.8	-4.4
Industry (Energy on Value added, index 2000=100)	100	97	88	93	88	80	59	-1.3	0.0	-3.9
Residential (Energy on Private Income, index 2000=100)	100	91	88	84	76	62	36	-1.2	-1.6	-7.2
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	91	79	52	-0.1	-0.8	-5.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	33	30	-1.2	-1.3	-2.3
Freight transport (toe/Mtkm)	48	49	47	45	43	40	38	-0.2	-0.8	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	25.5	24.0	17.6	0.8	-1.1	-3.7
of which ETS sectors (2013 scope) GHG emissions	12.7	10.8	9.7	9.7	10.6	10.5	6.1	-0.2	-5.4	
of which ESD sectors (2013 scope) GHG emissions	17.9	17.7	15.7	15.7	15.0	13.5	11.5	-1.6	-2.6	
CO ₂ Emissions (energy related)	17.0	20.2	18.6	17.0	17.6	16.3	10.1	0.9	-0.6	-5.4
Power generation/District heating	4.1	5.1	4.3	3.5	4.6	4.9	1.3	0.3	0.7	-12.1
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.5	1.3	-1.0	-0.5	-2.6
Industry	2.9	3.5	2.8	2.9	2.7	2.4	1.5	-0.2	-0.4	-6.1
Residential	1.9	2.4	2.1	1.7	1.7	1.2	0.4	1.0	-2.1	-14.5
Tertiary	1.5	1.5	1.4	1.2	1.2	1.0	0.6	-0.6	-1.7	-6.0
Transport	4.5	5.7	6.2	6.0	5.7	5.3	5.0	3.1	-0.8	-1.2
CO ₂ Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.6	2.5	-0.3	0.2	-0.3
Non-CO2 GHG emissions	6.7	7.4	7.4	5.9	5.4	5.2	5.0	0.9	-3.1	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	72.0	67.6	49.6	0.8	-1.1	-3.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.30	0.32	0.25	0.23	0.26	0.25	0.08	-2.1	0.5	-11.2
Final energy demand (t of CO ₂ /toe)	2.01	2.06	1.97	1.90	1.79	1.70	1.64	-0.2	-1.0	-0.9
Industry	2.09	2.23	2.08	2.08	1.93	1.80	1.41	-0.1	-0.7	-3.1
Residential	1.15	1.24	1.12	0.95	0.96	0.78	0.37	-0.3	-1.5	-9.1
Tertiary	1.89	1.57	1.37	1.26	1.18	1.08	0.98	-3.2	-1.5	-1.8
Transport	2.94	2.97	2.97	2.88	2.65	2.63	2.60	0.1	-1.1	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.1	23.6	34.1			
RES-H&C share	13.0	10.9	13.1	18.0	18.6	19.6	27.4			
RES-E share	36.2	32.8	34.2	39.1	38.4	43.3	67.6			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.0	12.0	18.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	63	70	81	-2.1	-0.6	2.5
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	117	122	131	1.3	0.7	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.5	13.0	5.5	1.7	3.7
as % of GDP	12.2	12.9	16.4	16.8	18.5	20.3	23.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Cyprus: EUCo+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3		
GDP (in 000 M€13)	14	16	19	16	19	21	22	2.8	0.2	1.9		
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2158	2020	1724	1.3	-2.4	-2.2		
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-14.3		
Oil	2334	2446	2611	1995	1354	1166	1051	1.1	-6.4	-2.5		
Natural gas	0	0	0	0	558	585	391	0.0	0.0	-3.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy forms	46	57	112	162	246	269	283	9.4	8.2	1.4		
Energy Branch Consumption	54	22	19	17	15	12	7	-9.7	-2.3	-7.2		
Non-Energy Uses	86	73	85	38	42	44	44	-0.1	-7.0	0.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	44	51	89	137	196	2271	3108	7.2	8.2	31.9		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	2046	2866	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	44	51	89	137	196	225	242	7.2	8.2	2.1		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	9	10	24	28	37	44	44	10.5	4.4	1.8		
Wind	0	0	3	21	36	38	67	0.0	29.7	6.4		
Solar and others	36	41	61	86	118	139	129	5.6	6.8	0.9		
Geothermal	0	0	1	2	5	4	1	0.0	18.9	-12.7		
Net Imports (ktoe)	2565	2843	2945	2243	2205	15	-1099	1.4	-2.8	0.0		
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-14.3		
Oil	2531	2794	2910	2218	1595	1426	1311	1.4	-5.8	-1.9		
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0		
Oil products	1371	2794	2910	2218	1595	1426	1311	7.8	-5.8	-1.9		
Natural gas	0	0	0	0	561	-1456	-2451	0.0	0.0	0.0		
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0		
Import Dependency (%)	98.6	100.7	100.8	94.3	91.9	0.6	-54.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4959	5397	4497	4.7	-0.7	-1.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	3370	4376	5249	4086	459	29	22	4.5	-21.6	-26.1		
Gas (including derived gases)	0	0	0	0	3443	3925	2573	0.0	0.0	-2.9		
Biomass-waste	0	0	35	45	59	97	91	0.0	5.4	4.4		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	31	248	422	447	781	0.0	29.8	6.4		
Solar	0	0	6	195	576	899	1030	0.0	58.4	6.0		
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	1937	2164	4.3	2.8	0.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	89	292	554	723	949	0.0	20.1	5.5		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	82	158	216	224	389	0.0	10.2	6.1		
Solar	0	0	7	135	338	499	560	0.0	47.4	5.2		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	983	1119	1409	1462	1426	1215	1215	3.7	0.1	-1.6		
of which cogeneration units	0	5	22	2	2	1	1	0.0	-21.8	-10.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	34	274	274	0.0	0.0	23.3		
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9		
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.2		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.6	31.0	23.3					
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.8	57.8	56.4					
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	0.8					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.3	26.7	42.3					
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	657	603	409	3.0	-5.7	-4.6		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	881	1077	1178	731	86	1	0	2.9	-23.0	-100.0		
Gas (including derived gases)	0	0	0	0	558	584	389	0.0	0.0	-3.5		
Biomass & Waste	0	0	4	10	13	18	20	0.0	12.6	4.4		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	1178	0	15	17	41	36	34	-35.4	10.5	-1.9		
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0		
Biofuels and hydrogen production	0	0	15	17	41	36	33	0.0	10.5	-2.1		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	15.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.4	1.9
Public road transport	1	1	1	1	1	1	1	1	1.4	0.8
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.2
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.2
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	964	930	915	2.0	-0.9	-0.5
Public road transport	32	35	37	37	38	37	35	1.5	0.3	-0.7
Private cars and motorcycles	373	444	577	490	483	414	366	4.5	-1.8	-2.7
Heavy goods and light commercial vehicles	173	197	152	125	126	123	124	-1.3	-1.8	-0.2
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	317	356	390	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	687	785	898	791	837	806	791	2.7	-0.7	-0.6
Freight transport	173	197	152	125	126	123	124	-1.3	-1.8	-0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.7	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.8	3.2			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2116	1976	1680	1.3	-2.2	-2.3
Final Energy Demand	1650	1834	1926	1700	1766	1689	1478	1.6	-0.9	-1.8
by sector										
Industry	445	320	235	202	209	207	178	-6.2	-1.2	-1.6
Energy intensive industries	240	221	171	141	148	152	136	-3.3	-1.5	-0.8
Other industrial sectors	205	98	63	61	60	55	42	-11.1	-0.5	-3.5
Residential	211	322	333	323	315	276	195	4.7	-0.5	-4.7
Tertiary	134	209	309	259	279	277	190	8.7	-1.0	-3.8
Transport ⁽⁵⁾	860	983	1050	916	964	930	915	2.0	-0.9	-0.5
by fuel										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-14.3
Oil	1317	1403	1384	1226	1226	1121	1007	0.5	-1.2	-1.9
Gas	0	0	0	0	0	1	2	0.0	0.0	15.1
Electricity	258	341	420	360	393	431	358	5.0	-0.7	-0.9
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.4	-4.4
Renewable energy forms	42	54	105	114	147	135	106	9.6	3.4	-3.2
Other	0	0	0	0	0	1	4	-100.0	0.0	38.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	175	157	151	131	116	98	77	-1.5	-2.6	-4.0
Industry (Energy on Value added, index 2000=100)	100	70	56	57	54	50	40	-5.6	-0.4	-2.9
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	82	54	1.3	-1.1	-6.2
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	143	127	80	5.2	-1.5	-5.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	33	29	0.5	-3.2	-2.6
Freight transport (toe/Mtkm)	129	135	133	109	104	95	90	0.3	-2.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	11.3	10.4	10.3	8.2	7.3	6.9	6.2	-0.9	-3.4	-1.6
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.4	3.1		-4.8	-1.2
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.5	3.1		-1.8	-2.0
CO2 Emissions (energy related)	7.2	8.0	8.1	6.1	5.4	4.8	4.0	1.2	-4.0	-2.8
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.4	0.9	2.9	-8.3	-5.4
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.5	0.4	-7.6	-1.4	-3.6
Residential	0.2	0.5	0.4	0.3	0.3	0.1	0.0	4.7	-2.4	-20.9
Tertiary	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.0	-2.0	-7.3
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.6	1.8	-1.2	-0.5
CO2 Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.7	-3.5	-0.5	2.3
Non-CO2 GHG emissions	3.2	1.5	1.6	1.6	1.4	1.4	1.5	-6.9	-1.5	0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	116.0	109.8	99.0	-0.9	-3.4	-1.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.85	0.80	0.71	0.52	0.32	0.25	0.20	-1.7	-7.7	-4.5
Final energy demand (t of CO2/toe)	2.57	2.45	2.24	2.22	2.13	2.05	2.10	-1.3	-0.5	-0.1
Industry	3.16	3.11	2.70	2.73	2.63	2.47	2.12	-1.6	-0.3	-2.1
Residential	1.11	1.44	1.11	1.04	0.91	0.54	0.14	0.0	-1.9	-17.0
Tertiary	0.00	0.43	0.69	0.73	0.63	0.49	0.43	0.0	-1.0	-3.7
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.86	-0.2	-0.3	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.8	17.4	22.2			
RES-H&C share	7.9	10.0	18.2	21.8	24.2	27.3	31.7			
RES-E share	0.0	0.0	1.4	10.6	21.3	26.7	42.3			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	11.1	13.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	109	103	111	3.1	-3.4	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	194	177	186	3.2	0.6	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.5	3.1	3.4	4.0	8.1	2.1	2.8
as % of GDP	8.3	12.0	13.7	14.9	16.4	16.3	18.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EU20+40					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1		
GDP (in 000 ME13)	112	137	157	165	181	197	216	3.4	1.4	1.8		
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	41475	40768	35153	0.8	-0.7	-1.6		
Solids	21643	20248	18364	15061	15315	15536	12520	-1.6	-1.8	-2.0		
Oil	7881	9899	9306	8965	8806	8335	7985	1.7	-0.6	-1.0		
Natural gas	7500	7703	8070	7797	7209	6369	3539	0.7	-1.1	-6.9		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Renewable energy forms	1429	1955	2980	3521	3937	4342	5007	7.6	2.8	2.4		
Energy Branch Consumption	1768	1796	2068	1808	1798	1823	1601	1.6	-1.4	-1.2		
Non-Energy Uses	2093	2948	2783	2447	2583	2689	2729	2.9	-0.7	0.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	28357	29806	26722	0.3	-1.1	-0.6		
Solids	25049	23570	20730	16524	17290	18333	14654	-1.9	-1.8	-1.6		
Oil	386	591	290	223	222	210	189	-2.8	-2.7	-1.6		
Natural gas	169	154	202	191	181	170	152	1.8	-1.1	-1.7		
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0		
Renewable energy sources	1426	2142	3101	3560	3866	4296	4929	8.1	2.2	2.5		
Hydro	151	205	240	208	218	212	242	4.7	-0.9	1.0		
Biomass & Waste	1275	1933	2770	3106	3316	3464	3006	8.1	1.8	-1.0		
Wind	0	2	29	44	65	190	570	76.2	8.5	24.2		
Solar and others	0	3	62	202	265	426	432	0.0	15.7	5.0		
Geothermal	0	0	0	0	2	3	679	0.0	0.0	79.5		
Net Imports (ktoe)	9414	12641	11447	13826	13118	10962	8431	2.0	1.4	-4.3		
Solids	-4721	-3270	-2968	-1463	-1975	-2796	-2134	-4.5	-4.0	0.8		
Oil	7512	9649	8974	8742	8585	8126	7796	1.8	-0.4	-1.0		
Crude oil and Feedstocks	5596	7730	7837	6115	6047	5805	5643	3.4	-2.6	-0.7		
Oil products	1916	1919	1137	2627	2538	2321	2153	-5.1	8.4	-1.6		
Natural gas	7482	7535	6846	7606	7028	6199	3387	-0.9	0.3	-7.0		
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7		
Import Dependency (%)	22.9	28.0	25.6	33.6	31.6	26.9	24.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	82179	89131	86020	1.6	-0.4	0.5		
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0		
Solids	52752	49522	47113	41095	43904	45400	36634	-1.1	-0.7	-1.8		
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0		
Gas (including derived gases)	3907	4215	4121	5851	3804	4818	2456	0.5	-0.8	-4.3		
Biomass-waste	531	739	2188	2216	1359	2870	5111	15.2	-4.7	14.2		
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2460	2815	4.7	-0.9	1.0		
Wind	1	21	335	508	759	2215	6628	78.9	8.5	24.2		
Solar	0	0	615	2149	2214	3769	4057	0.0	13.7	6.2		
Geothermal and other renewables	0	0	1	0	2	2	724	0.0	9.0	79.5		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18571	20712	22530	2.5	0.3	2.0		
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0		
Renewable energy	953	1043	2989	3628	3816	5846	8156	12.1	2.5	7.9		
Hydro (pumping excluded)	952	1020	1049	1080	1080	1087	1163	1.0	0.3	0.7		
Wind	1	22	213	282	408	923	2831	70.9	6.7	21.4		
Solar	0	1	1727	2266	2328	3836	4162	0.0	3.0	6.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	11079	11265	11000	11182	10749	10860	10368	-0.1	-0.2	-0.4		
of which cogeneration units	3733	5199	4792	3849	3904	2898	2164	2.5	-2.0	-5.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	9823	9935	9571	9656	9487	9414	8797	-0.3	-0.1	-0.8		
Gas fired	1097	1110	1176	1220	931	1121	736	0.7	-2.3	-2.3		
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2		
Biomass-waste fired	19	80	136	171	259	261	644	21.7	6.6	9.5		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	127	0.0	0.0	79.5		
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	46.9	45.7	40.8					
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	33.0	32.8	31.0					
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.2	13.3	9.2					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	41.9	43.7	54.6					
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12791	13924	12461	-0.3	-1.7	-0.3		
Solids	13945	14025	13445	10677	11429	11988	9942	-0.4	-1.6	-1.4		
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0		
Gas (including derived gases)	1236	1292	1134	1938	1009	1179	750	-0.9	-1.2	-2.9		
Biomass & Waste	253	224	562	626	350	756	1146	8.3	-4.6	12.6		
Geothermal heat	0	0	0	0	2	2	623	0.0	0.0	79.5		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	15035	19758	20049	17183	17145	16704	15717	2.9	-1.6	-0.9		
Refineries	6151	8144	8337	6497	6442	6199	6013	3.1	-2.5	-0.7		
Biofuels and hydrogen production	62	3	231	285	594	513	501	14.1	9.9	-1.7		
District heating	975	916	787	650	693	616	342	-2.1	-1.3	-6.8		
Derived gases, cokeries etc.	7846	10696	10693	9751	9416	9377	8861	3.1	-1.3	-0.6		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Czech Republic: EUO0+40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
							Annual % Change				
TRANSPORT											
Passenger transport activity (Gpkm)	103	112	108	113	124	135	145	0.5	1.4	1.6	
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.2	
Private cars and motorcycles	67	72	67	68	75	80	86	0.0	1.1	1.4	
Rail	15	15	16	18	20	22	24	0.1	2.6	1.9	
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.5	
Heavy goods and light commercial vehicles	29	34	34	35	38	40	43	1.7	1.1	1.3	
Rail	17	15	14	15	17	19	21	-2.4	2.1	2.0	
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.2	
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6305	5874	5772	3.7	0.3	-0.9	
Public road transport	233	296	379	385	401	405	411	5.0	0.6	0.2	
Private cars and motorcycles	2563	3389	3394	3319	3296	2880	2696	2.8	-0.3	-2.0	
Heavy goods and light commercial vehicles	1038	1753	1810	1914	1996	1930	1951	5.7	1.0	-0.2	
Rail	216	197	193	211	235	249	265	-1.1	2.0	1.2	
Aviation	197	343	341	345	373	407	444	5.6	0.9	1.7	
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	2.0	
By transport activity											
Passenger transport	3107	4132	4229	4175	4215	3845	3716	3.1	0.0	-1.3	
Freight transport	1145	1850	1892	2003	2090	2029	2056	5.1	1.0	-0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	1.7				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.1				
ENERGY EFFICIENCY											
Primary energy consumption	39004	42175	41899	38675	38891	38079	32424	0.7	-0.7	-1.8	
Final Energy Demand	24798	26026	24853	24635	25451	23803	18562	0.0	0.2	-3.1	
by sector											
Industry	10129	9681	7933	7883	8197	8125	6429	-2.4	0.3	-2.4	
Energy intensive industries	6420	6748	5015	5079	5155	5043	3833	-2.4	0.3	-2.9	
Other industrial sectors	3709	2934	2919	2804	3042	3082	2596	-2.4	0.4	-1.6	
Residential	6150	6345	6665	6340	6583	5908	3632	0.8	-0.1	-5.8	
Tertiary	4151	3904	3979	4098	4212	3739	2572	-0.4	0.6	-4.8	
Transport ⁽⁵⁾	4368	6095	6276	6315	6458	6032	5929	3.7	0.3	-0.9	
by fuel											
Solids	5134	3769	2424	2616	2253	1931	1201	-7.2	-0.7	-6.1	
Oil	5322	6817	6541	6366	6147	5584	5206	2.1	-0.6	-1.6	
Gas	6491	6741	6662	6128	6349	5459	3308	0.3	-0.5	-6.3	
Electricity	4246	4754	4919	5012	5417	5927	5678	1.5	1.0	0.5	
Heat (from CHP and District Heating)	2624	2478	2249	2102	2275	2178	1287	-1.5	0.1	-5.5	
Renewable energy forms	981	1467	2058	2411	3008	2711	1848	7.7	3.9	-4.8	
Other	0	0	0	1	2	14	34	-100.0	0.0	32.1	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	366	329	285	250	229	207	163	-2.5	-2.2	-3.4	
Industry (Energy on Value added, index 2000=100)	100	69	44	43	41	37	27	-7.8	-0.8	-4.0	
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	57	31	-2.2	-1.4	-7.8	
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	68	55	34	-2.7	-1.1	-6.6	
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	26	23	2.2	-1.5	-2.9	
Freight transport (toe/Mtkm)	25	38	40	40	38	35	32	4.8	-0.4	-1.6	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	123.5	120.2	97.3	-0.8	-1.3	-2.4	
of which ETS sectors (2013 scope) GHG emissions	87.1	79.4	68.7	67.9	70.2	56.1			-1.6	-1.9	
of which ESD sectors (2013 scope) GHG emissions		63.6	61.4	59.9	55.7	50.0	41.2		-1.0	-3.0	
CO2 Emissions (energy related)	125.7	124.3	114.6	102.9	101.1	98.5	77.3	-0.9	-1.2	-2.6	
Power generation/District heating	66.8	66.2	63.2	52.9	53.3	55.9	45.5	-0.6	-1.7	-1.6	
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.6	2.2	1.6	-1.6	-1.5	
Industry	28.3	24.7	17.5	17.0	16.0	15.2	10.1	-4.7	-0.9	-4.5	
Residential	8.8	8.4	8.3	7.8	7.5	5.8	2.4	-0.6	-1.0	-10.8	
Tertiary	6.8	4.9	4.9	4.8	4.6	3.3	1.9	-3.3	-0.5	-8.7	
Transport	12.4	17.8	17.6	17.6	17.0	15.8	15.3	3.6	-0.4	-1.1	
CO2 Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.2	5.1	-1.7	1.2	-0.5	
Non-CO2 GHG emissions	21.7	21.1	21.5	20.5	17.1	16.4	14.9	-0.1	-2.3	-1.3	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	62.5	60.8	49.3	-0.8	-1.3	-2.4	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.60	0.55	0.52	0.46	0.46	0.46	0.43	-1.4	-1.3	-0.6	
Final energy demand (t of CO2/toe)	2.27	2.15	1.94	1.92	1.77	1.68	1.59	-1.6	-0.9	-1.1	
Industry	2.79	2.55	2.21	2.16	1.96	1.87	1.57	-2.3	-1.2	-2.2	
Residential	1.43	1.33	1.24	1.24	1.14	0.97	0.65	-1.4	-0.9	-5.4	
Tertiary	1.63	1.26	1.22	1.18	1.10	0.88	0.72	-2.9	-1.1	-4.1	
Transport	2.85	2.92	2.81	2.79	2.63	2.62	2.58	-0.1	-0.7	-0.2	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.7	15.5	19.1				
RES-H&C share	5.9	9.1	12.6	15.5	17.5	19.3	21.1				
RES-E share	3.4	3.8	7.5	10.3	9.1	13.8	24.8				
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.3	12.4				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	77	77	73	2.0	2.5	-0.6	
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	123	119	121	7.9	-1.5	-0.2	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.4	35.7	44.8	6.8	1.4	3.3	
as % of GDP	13.1	14.8	18.1	16.7	17.9	18.2	20.8				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	6	6	6	6	6	0.4	0.4	0.5
GDP (in 000 ME13)	233	248	247	256	289	321	350	0.6	1.6	1.9
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16863	15612	13323	0.2	-1.7	-2.3
Solids	3985	3713	3809	1860	1778	1011	221	-0.5	-7.3	-18.8
Oil	9101	8063	7568	6738	6242	5607	4890	-1.8	-1.9	-2.4
Natural gas	4465	4413	4435	3680	2582	2358	1525	-0.1	-5.3	-5.1
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Renewable energy forms	2124	3246	4326	3795	5646	5930	6322	7.4	2.7	1.1
Energy Branch Consumption	1121	1205	1132	911	891	745	607	0.1	-2.4	-3.8
Non-Energy Uses	301	289	263	283	313	339	344	-1.3	1.8	1.0
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	27958	30781	22915	15259	15895	13499	11440	-2.0	-3.6	-3.2
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil	18465	18464	12040	8158	7711	6395	4395	-4.2	-4.4	-5.5
Natural gas	7428	9397	7356	4188	3849	2444	1723	-0.1	-6.3	-7.7
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	2065	2920	3520	2913	4336	4660	5322	5.5	2.1	2.1
Hydro	3	2	2	2	2	2	2	-3.6	0.2	0.0
Biomass & Waste	1688	2335	2825	1819	2831	2892	2677	5.3	0.0	-0.6
Wind	365	569	672	1007	1318	1525	1961	6.3	7.0	4.1
Solar and others	8	10	16	80	100	124	123	7.2	19.9	2.1
Geothermal	1	4	5	6	85	117	559	13.8	32.6	20.7
Net Imports (ktoe)	-7370	-10130	-3257	2304	1770	2963	2788	-7.8	0.0	4.6
Solids	3783	3505	2642	1860	1778	1011	221	-3.5	-3.9	-18.8
Oil	-8386	-9068	-3586	-676	-674	45	1315	-8.1	-15.4	0.0
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-742	0	1392	-5.4	-17.4	0.0
Oil products	397	1865	1447	-7	68	46	-77	13.8	-26.3	0.0
Natural gas	-2882	-5010	-3022	-508	-1259	-68	-113	0.5	-8.4	-21.4
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	10.0	18.0	19.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30821	31635	34568	0.8	-2.3	1.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	16673	15463	17006	6498	5584	3106	795	0.2	-10.5	-17.7
Oil (including refinery gas)	4439	1375	774	214	7	79	66	-16.0	-37.5	25.1
Gas (including derived gases)	8774	8780	7906	4589	651	1401	795	-1.0	-22.1	2.0
Biomass-waste	1895	3989	5340	3164	8465	8529	9324	10.9	4.7	1.0
Hydro (pumping excluded)	30	23	21	21	21	21	21	-3.5	0.2	0.0
Wind	4241	6614	7809	11709	15325	17731	22798	6.3	7.0	4.1
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13411	13603	1.3	0.2	0.0
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2401	3141	3818	5910	6456	6892	8112	4.7	5.4	2.3
Hydro (pumping excluded)	10	11	9	9	9	9	9	-1.0	0.0	0.0
Wind	2390	3127	3802	5064	5609	6045	7265	4.8	4.0	2.6
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	9386	9880	9601	9297	7179	6520	5492	0.2	-2.9	-2.6
of which cogeneration units	5578	5685	5806	7114	5902	4953	1974	0.4	0.2	-10.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6
Gas fired	1862	2278	2274	2274	1135	1093	841	2.0	-6.7	-2.9
Oil fired	860	860	1017	1017	492	224	218	1.7	-7.0	-7.8
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2961	2.4	5.6	-0.7
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.8	26.0	28.2			
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.0	33.3	35.5			
% of gross electricity from CHP	52.6	52.1	49.2	53.6	45.5	37.0	22.0			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.1	79.7	85.5	95.2			
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3828	3391	2658	-0.3	-6.7	-3.6
Solids	3669	3444	3770	1696	1628	914	167	0.3	-8.1	-20.4
Oil (including refinery gas)	1354	346	221	65	2	22	19	-16.6	-39.0	28.2
Gas (including derived gases)	2112	1996	1812	1197	180	348	192	-1.5	-20.6	0.6
Biomass & Waste	699	1341	1821	880	2019	2107	2280	10.0	1.0	1.2
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	9001	8288	8139	8416	8095	7380	6951	-1.0	-0.1	-1.5
Refineries	8435	7700	7175	7493	6969	6389	5782	-1.6	-0.3	-1.9
Biofuels and hydrogen production	0	0	27	277	433	353	300	0.0	32.1	-3.6
District heating	549	575	923	644	682	588	804	5.3	-3.0	1.7
Derived gases, cokeries etc.	17	13	13	3	10	49	65	-2.9	-2.2	20.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Denmark: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.5
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3
Aviation ⁽³⁾	8	9	10	12	13	14	17	2.7	2.5	2.2
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1
Freight transport activity (Gtkm)	21	22	23	25	29	30	32	0.6	2.3	1.2
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.1
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.1
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4963	4592	4421	0.7	-0.4	-1.2
Public road transport	203	202	199	204	213	211	208	-0.2	0.7	-0.2
Private cars and motorcycles	2627	2866	2828	2599	2396	2015	1850	0.7	-1.6	-2.6
Heavy goods and light commercial vehicles	864	1003	1011	971	1059	1039	1019	1.6	0.5	-0.4
Rail	103	107	113	118	125	131	136	0.9	1.0	0.8
Aviation	856	955	874	960	999	1015	1021	0.2	1.3	0.2
Inland navigation	163	192	156	158	171	180	186	-0.4	0.9	0.9
By transport activity										
Passenger transport	3874	4197	4049	3915	3773	3417	3262	0.4	-0.7	-1.4
Freight transport	942	1128	1132	1094	1190	1175	1159	1.9	0.5	-0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.2	3.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.9	8.4			
ENERGY EFFICIENCY										
Primary energy consumption	19432	19264	19777	16536	16550	15274	12978	0.2	-1.8	-2.4
Final Energy Demand	14717	15497	15606	14800	14758	13775	11016	0.6	-0.6	-2.9
by sector										
Industry	2934	2864	2417	2568	2709	2677	2102	-1.9	1.1	-2.5
Energy intensive industries	1156	1107	849	908	930	859	659	-3.0	0.9	-3.4
Other industrial sectors	1778	1757	1569	1659	1779	1817	1443	-1.2	1.3	-2.1
Residential	4162	4453	4916	4345	4178	3836	2604	1.7	-1.6	-4.6
Tertiary	2805	2856	3094	2879	2908	2671	1890	1.0	-0.6	-4.2
Transport ⁽⁵⁾	4816	5324	5179	5009	4963	4592	4421	0.7	-0.4	-1.2
by fuel										
Solids	290	253	166	163	150	97	53	-5.4	-1.0	-9.8
Oil	7058	7293	6759	6083	5650	4998	4308	-0.4	-1.8	-2.7
Gas	1667	1708	1771	1744	1817	1587	1026	0.6	0.3	-5.6
Electricity	2791	2877	2783	2733	2858	3029	2985	0.0	0.3	0.4
Heat (from CHP and District Heating)	2255	2424	2840	2556	2504	2260	1318	2.3	-1.3	-6.2
Renewable energy forms	656	943	1287	1519	1768	1754	1251	7.0	3.2	-3.4
Other	0	0	0	3	10	50	74	-100.0	0.0	21.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	85	79	81	66	58	49	38	-0.4	-3.3	-4.2
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	81	59	-0.9	-0.1	-4.1
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	58	36	0.2	-3.6	-6.6
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	66	43	0.1	-2.3	-6.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	29	26	-0.4	-2.2	-2.7
Freight transport (toe/Mtkm)	44	51	50	44	42	39	36	1.3	-1.7	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.7	66.3	63.9	50.5	46.0	39.9	32.0	-1.1	-3.2	-3.6
of which ETS sectors (2013 scope) GHG emissions	29.3	27.9	18.0	14.9	11.8	7.4		-6.1	-6.7	
of which ESD sectors (2013 scope) GHG emissions	37.0	36.0	32.5	31.1	28.2	24.6		-1.5	-2.3	
CO ₂ Emissions (energy related)	53.3	50.0	48.8	35.8	31.3	25.6	18.2	-0.9	-4.3	-5.3
Power generation/District heating	24.5	20.3	21.2	10.6	7.4	4.8	1.3	-1.4	-10.0	-15.9
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.4
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.0	-3.2	0.4	-6.9
Residential	3.9	3.6	3.2	2.6	2.2	1.8	0.9	-2.0	-3.7	-8.5
Tertiary	3.0	2.7	2.9	2.5	2.4	1.7	1.1	-0.3	-1.8	-7.8
Transport	14.3	15.9	15.5	14.2	13.5	12.4	11.8	0.8	-1.3	-1.3
CO ₂ Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.6	1.5	1.5	-6.1	1.2	-0.4
Non-CO ₂ GHG emissions	15.8	14.0	13.7	13.3	13.1	12.7	12.3	-1.4	-0.4	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.6	55.3	44.3	-1.1	-3.2	-3.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.36	0.28	0.26	0.17	0.11	0.08	0.03	-3.0	-8.0	-14.0
Final energy demand (t of CO ₂ /toe)	1.81	1.76	1.63	1.58	1.50	1.41	1.43	-1.0	-0.8	-0.5
Industry	1.85	1.79	1.63	1.58	1.51	1.31	0.95	-1.3	-0.7	-4.5
Residential	0.95	0.80	0.66	0.59	0.53	0.48	0.35	-3.6	-2.2	-4.1
Tertiary	1.05	0.95	0.93	0.88	0.82	0.65	0.56	-1.2	-1.2	-3.7
Transport	2.97	2.99	2.99	2.83	2.72	2.71	2.68	0.0	-0.9	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	33.8	39.0	46.6			
RES-H&C share	15.3	22.2	30.8	28.3	36.7	43.8	52.2			
RES-E share	15.0	25.0	33.1	41.9	62.5	66.1	83.0			
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	17.2	26.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	105	107	97	1.8	1.7	-0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	204	209	223	1.4	0.4	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.7	36.3	2.4	1.0	3.5
as % of GDP	7.9	8.8	9.4	8.2	8.9	8.9	10.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Estonia: EUCC-40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual %	% Change		
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.8	
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6	
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6479	6210	4295	2.1	0.5	-4.0	
Solids	2968	3190	3917	3589	3747	3642	1905	2.8	-0.4	-6.5	
Oil	916	1182	1109	1065	974	867	783	1.9	-1.3	-2.2	
Natural gas	662	800	563	796	841	777	372	-1.6	4.1	-7.8	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	-80	-138	-280	-100	-114	-98	69	13.4	-8.6	0.0	
Renewable energy forms	513	589	847	995	1032	1023	1165	5.1	2.0	1.2	
Energy Branch Consumption	163	193	199	190	189	180	100	2.0	-0.5	-6.2	
Non-Energy Uses	180	229	90	280	295	304	305	-6.7	12.6	0.3	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	3435	4250	5467	5368	5455	5287	3620	4.8	0.0	-4.0	
Solids	2669	3176	3943	3594	3750	3651	1910	4.0	-0.5	-6.5	
Oil	249	375	532	681	647	568	494	7.9	2.0	-2.7	
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	512	692	988	1093	1069	1069	1217	6.8	0.8	1.3	
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0	
Biomass & Waste	512	686	962	1040	1007	1001	957	6.5	0.5	-0.5	
Wind	0	5	24	49	57	61	249	0.0	9.2	15.8	
Solar and others	0	0	0	0	2	3	7	0.0	0.0	16.6	
Geothermal	0	0	0	0	0	0	1	0.0	0.0	21.7	
Net Imports (ktoe)	1628	1489	862	1219	1249	1157	911	-6.2	3.8	-3.1	
Solids	270	23	-22	-5	-3	-9	-4	0.0	-18.3	4.2	
Oil	786	917	760	625	566	521	494	-0.3	-3.1	-1.2	
Crude oil and Feedstocks	-125	-225	-394	-560	-522	-450	-384	12.2	2.9	-3.0	
Oil products	911	1142	1153	1185	1078	971	878	2.4	-0.7	-2.0	
Natural gas	657	792	558	796	847	790	405	-1.6	4.3	-7.1	
Electricity	-80	-138	-280	-100	-114	-98	69	13.4	-8.6	0.0	
Import Dependency (%)	32.0	25.9	13.5	18.5	18.6	18.0	20.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11546	11638	7465	4.3	-1.2	-4.3	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	7682	9302	11167	8608	9379	9360	3160	3.8	-1.7	-10.3	
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0	
Gas (including derived gases)	757	760	712	689	593	640	444	-0.6	-1.8	-2.8	
Biomass-waste	13	35	740	859	873	893	930	49.8	1.7	0.6	
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0	
Solar	0	54	277	575	667	711	2896	0.0	9.2	15.8	
Geothermal and other renewables	0	0	0	1	1	1	1	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2342	2292	3134	-0.3	-1.9	3.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	2	36	114	312	343	365	1176	49.8	11.6	13.1	
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0	
Wind	0	31	108	303	334	356	1167	0.0	12.0	13.3	
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	2910	2648	2713	2377	1999	1928	1958	-0.7	-3.0	-0.2	
of which cogeneration units	452	1604	447	438	226	243	506	-0.1	-6.6	8.4	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	2684	2411	2430	1871	1469	1469	1469	-1.0	-4.9	0.0	
Gas fired	218	224	224	362	381	310	336	0.3	5.5	-1.3	
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0	
Biomass-waste fired	0	5	51	144	148	148	152	0.0	11.2	0.3	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	50.8	52.4	25.5				
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.2	33.8	34.2				
% of gross electricity from CHP	11.0	10.2	10.3	12.7	9.8	8.7	11.5				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.6	14.1	51.7				
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2725	2770	1141	2.5	-1.3	-8.3	
Solids	2199	2353	2715	2171	2364	2388	789	2.1	-1.4	-10.4	
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0	
Gas (including derived gases)	226	227	209	168	152	168	132	-0.8	-3.1	-1.4	
Biomass & Waste	2	10	179	205	208	214	220	55.3	1.5	0.6	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	926	1271	1523	1753	1788	1612	1347	5.1	1.6	-2.8	
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biofuels and hydrogen production	0	0	0	10	65	53	44	0.0	0.0	-3.8	
District heating	454	489	446	418	436	393	261	-0.2	-0.2	-5.0	
Derived gases, cokeries etc.	473	782	1077	1325	1287	1166	1042	8.6	1.8	-2.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.7
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.5
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.4
Rail	0	0	0	0	0	1	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.7
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.2
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	795	716	677	3.0	0.2	-1.6
Public road transport	62	62	67	74	76	75	73	0.7	1.3	-0.3
Private cars and motorcycles	349	475	499	524	484	394	343	3.6	-0.3	-3.4
Heavy goods and light commercial vehicles	95	135	116	132	139	140	142	2.0	1.9	0.2
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	66	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
By transport activity										
Passenger transport	441	589	614	647	619	537	492	3.4	0.1	-2.3
Freight transport	138	178	167	164	176	179	184	1.9	0.5	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.3	3.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.8	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6184	5906	3989	2.4	0.2	-4.3
Final Energy Demand	2434	2877	2907	3036	3096	2921	2283	1.8	0.6	-3.0
by sector										
Industry	571	718	575	713	750	750	603	0.1	2.7	-2.2
Energy intensive industries	245	273	231	294	306	303	250	-0.6	2.8	-2.0
Other industrial sectors	327	446	343	419	444	447	352	0.5	2.6	-2.3
Residential	929	890	1028	963	984	922	633	1.0	-0.4	-4.3
Tertiary	348	495	520	544	562	526	364	4.1	0.8	-4.2
Transport ⁽⁵⁾	586	774	785	816	801	722	683	3.0	0.2	-1.6
by fuel										
Solids	118	118	83	64	56	47	39	-3.4	-3.9	-3.7
Oil	772	982	941	966	858	740	654	2.0	-0.9	-2.7
Gas	177	263	207	286	327	317	160	1.6	4.7	-6.9
Electricity	431	519	594	614	668	700	589	3.3	1.2	-1.3
Heat (from CHP and District Heating)	511	547	531	484	513	477	323	0.4	-0.4	-4.5
Renewable energy forms	425	447	550	622	674	638	512	2.6	2.0	-2.7
Other	0	0	0	0	0	3	7	-100.0	0.0	39.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	465	372	405	346	317	280	179	-1.4	-2.4	-5.6
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	62	47	-4.0	-0.1	-3.4
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	44	27	-2.9	-3.5	-6.2
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	73	46	0.8	-2.3	-5.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	31	27	0.3	-1.6	-3.1
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.9	16.5	8.4	1.0	-1.0	-6.8
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	12.2	12.2	4.7		-1.2	-9.1
of which ESD sectors (2013 scope) GHG emissions		5.1	5.0	5.1	4.7	4.3	3.6		-0.6	-2.6
CO ₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.7	14.3	6.3	1.6	-1.1	-8.0
Power generation/District heating	10.7	11.3	12.7	10.1	10.9	10.9	3.7	1.7	-1.4	-10.2
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.1	-4.6
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.4	-1.8	-0.1	-6.9
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.1	-4.2	0.5	-6.3
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.2	2.1	1.7	-6.9
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.8	3.1	-0.6	-1.8
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.5	0.5	-6.0	3.0	-0.3
Non-CO2 GHG emissions	2.3	1.9	2.0	1.9	1.8	1.8	1.6	-1.4	-1.0	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	42.2	41.0	20.8	1.0	-1.0	-6.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.60	0.61	0.32	-0.6	-0.5	-6.0
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.09	1.11	-0.5	-0.8	-0.5
Industry	1.58	1.43	1.31	1.07	0.99	0.95	0.60	-1.8	-2.7	-4.9
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.16	-5.2	0.9	-2.1
Tertiary	0.91	1.05	0.75	0.92	0.82	0.67	0.62	-2.0	0.9	-2.8
Transport	2.96	2.98	2.99	2.96	2.75	2.73	2.69	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.4	26.4	39.5			
RES-H&C share	31.8	32.2	43.2	39.9	38.0	40.4	53.5			
RES-E share	0.2	1.1	10.4	14.4	14.6	14.8	45.8			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.3	16.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	43	47	65	57	57	88	1.0	2.0	4.4
Average Price of Electricity in Final demand sectors (€13/MWh)	59	63	80	109	111	115	142	3.2	3.4	2.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	6.2	8.6	4.1	3.5
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.7	25.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Finland: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5		
GDP (in 000 ME13)	157	179	187	188	199	210	226	1.7	0.6	1.3		
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35250	34848	28446	1.3	-0.5	-2.1		
Solids	5131	4936	6874	4106	4589	4228	2752	3.0	-4.0	-5.0		
Oil	9342	10335	10121	9288	8360	7167	5822	0.8	-1.9	-3.6		
Natural gas	3422	3598	3838	2821	2682	3105	1730	1.2	-3.5	-4.3		
Nuclear	5799	6003	5881	5763	8733	8733	6434	0.1	4.0	-3.0		
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8		
Renewable energy forms	7816	8195	9508	10767	10597	12132	11644	2.0	1.1	0.9		
Energy Branch Consumption	1168	1209	1529	1577	1550	1378	1279	2.7	0.1	-1.9		
Non-Energy Uses	1040	1155	1229	1157	1191	1240	1240	1.7	-0.3	0.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	21005	22686	19757	1.7	1.7	-0.6		
Solids	1088	2136	1803	1007	1108	1261	1182	5.2	-4.7	0.6		
Oil	189	257	389	433	393	346	297	7.5	0.1	-2.8		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	5799	6003	5881	5763	8733	8733	6434	0.1	4.0	-3.0		
Renewable energy sources	7816	8273	9589	10905	10770	12346	11845	2.1	1.2	1.0		
Hydro	1261	1185	1111	1350	1215	1298	1301	-1.3	0.9	0.7		
Biomass & Waste	6549	7072	8451	9354	9078	10096	9490	2.6	0.7	0.4		
Wind	7	15	25	198	464	928	928	14.2	33.8	7.2		
Solar and others	1	1	1	2	14	22	15	10.0	26.5	0.7		
Geothermal	0	0	0	0	0	2	112	0.0	0.0	91.2		
Net Imports (ktoe)	18337	18979	17869	16077	14452	12361	8886	-0.3	-2.1	-4.7		
Solids	3537	3341	3977	3099	3481	2967	1571	1.2	-1.3	-7.6		
Oil	10357	10655	9232	9068	8169	7012	5700	-1.1	-1.2	-3.5		
Crude oil and Feedstocks	11964	10713	11206	13148	11839	10550	9161	-0.7	0.6	-2.5		
Oil products	-1607	-58	-1974	-4080	-3670	-3538	-3461	2.1	6.4	-0.6		
Natural gas	3422	3598	3838	2821	2686	3113	1751	1.2	-3.5	-4.2		
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8		
Import Dependency (%)	55.2	54.2	47.9	47.0	40.8	35.3	31.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71480	84636	105929	87229	1.4	0.5	0.3		
Nuclear energy	22479	23271	22800	23137	36999	37079	27777	0.1	5.0	-2.8		
Solids	12452	10998	20826	8559	11108	12098	7056	5.3	-6.1	-4.4		
Oil (including refinery gas)	587	500	484	635	47	271	13	-1.9	-20.8	-11.8		
Gas (including derived gases)	10816	11921	11847	7771	6491	11301	2599	0.9	-5.8	-8.7		
Biomass-waste	8860	9891	11413	13361	10471	19300	23857	2.6	-0.9	8.6		
Hydro (pumping excluded)	14660	13784	12922	15702	14123	15088	15125	-1.3	0.9	0.7		
Wind	78	170	294	2307	5392	10788	10788	14.2	33.8	7.2		
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7		
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19642	22088	20566	0.4	1.6	0.5		
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5		
Renewable energy	2923	3121	3359	4289	5628	7543	7564	1.4	5.3	3.0		
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3450	3461	0.9	0.4	0.6		
Wind	38	82	197	1001	2343	4084	4084	17.9	28.1	5.7		
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	10363	10739	10605	11158	9637	10167	9603	0.2	-1.0	0.0		
of which cogeneration units	8280	5832	6168	6361	5478	5065	3682	-2.9	-1.2	-3.9		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	4676	4633	4532	4340	3303	2308	1763	-0.3	-3.1	-6.1		
Gas fired	2570	2481	2703	2698	2828	4100	4100	0.5	0.5	3.8		
Oil fired	1519	1505	1194	1532	643	643	623	-2.4	-6.0	-0.3		
Biomass-waste fired	1597	2120	2176	2589	2863	3117	3117	3.1	2.8	0.9		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.2	52.6	46.3					
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.4	37.1	33.3					
% of gross electricity from CHP	36.4	38.9	36.2	33.7	27.5	25.2	19.2					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	79.2	77.7	88.9					
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	7038	9968	8646	3.9	-3.9	2.1		
Solids	3181	2998	5098	2421	2886	2915	1748	4.8	-5.5	-4.9		
Oil (including refinery gas)	122	98	99	168	15	66	4	-2.1	-17.0	-11.7		
Gas (including derived gases)	2119	2385	2516	1493	1276	1955	533	1.7	-6.6	-8.4		
Biomass & Waste	1744	2302	2747	3480	2861	5032	6361	4.6	0.4	8.3		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	21306	21544	23155	24530	26266	23715	18874	0.8	1.3	-3.3		
Refineries	13059	12876	14265	15688	14222	12535	10749	0.9	0.0	-2.8		
Biofuels and hydrogen production	0	0	140	334	373	330	308	0.0	10.3	-1.9		
District heating	1059	1265	1600	1434	1509	940	467	4.2	-0.6	-11.1		
Derived gases, cokeries etc.	7188	7403	7149	7074	10162	9911	7349	-0.1	3.6	-3.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.6
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.3
Private cars and motorcycles	57	63	66	68	69	69	71	1.5	0.4	0.3
Rail	4	4	4	5	5	6	6	1.4	1.5	1.6
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.2
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.5
Freight transport activity (Gtkm)	42	42	42	43	46	48	52	-0.2	1.0	1.3
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.1
Rail	10	10	10	10	11	12	14	-0.4	1.4	1.9
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4737	4360	4089	1.1	-0.2	-1.5
Public road transport	120	116	121	121	121	118	115	0.1	0.0	-0.5
Private cars and motorcycles	2334	2542	2693	2631	2400	2038	1805	1.4	-1.1	-2.8
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1164	1118	1115	-0.3	0.3	-0.4
Rail	90	92	90	94	101	106	111	0.0	1.2	1.0
Aviation	469	526	619	746	786	808	764	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
<i>By transport activity</i>										
Passenger transport	3086	3310	3549	3604	3418	3079	2801	1.4	-0.4	-2.0
Freight transport	1251	1314	1278	1292	1319	1281	1288	0.2	0.3	-0.2
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.6	3.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.5			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32815	34059	33607	27208	1.3	-0.5	-2.2
Final Energy Demand	24510	25239	26243	24732	24603	22180	17283	0.7	-0.6	-3.5
<i>by sector</i>										
Industry	12313	11922	11428	10647	10649	9905	7892	-0.7	-0.7	-3.0
Energy intensive industries	10172	9616	9017	8347	8307	7496	5911	-1.2	-0.8	-3.3
Other industrial sectors	2141	2306	2412	2299	2342	2409	1981	1.2	-0.3	-1.7
Residential	4544	5053	5804	5338	5401	4353	2810	2.5	-0.7	-6.3
Tertiary	3296	3616	4169	3837	3802	3548	2480	2.4	-0.9	-4.2
Transport ⁽⁵⁾	4356	4648	4842	4910	4751	4373	4102	1.1	-0.2	-1.5
<i>by fuel</i>										
Solids	1109	873	843	702	695	609	483	-2.7	-1.9	-3.6
Oil	7850	8102	7619	7073	6483	5259	4075	-0.3	-1.6	-4.5
Gas	1209	1082	1012	981	987	1092	1189	-1.8	-0.3	1.9
Electricity	6507	6942	7178	6788	6911	7851	6888	1.0	-0.4	0.0
Heat (from CHP and District Heating)	3334	3972	4656	4143	4271	3173	1991	3.4	-0.9	-7.4
Renewable energy forms	4501	4268	4935	5042	5248	4172	2618	0.9	0.6	-6.7
Other	0	0	0	3	7	25	39	0.0	1586.2	19.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	207	193	199	181	177	166	126	-0.4	-1.1	-3.3
Industry (Energy on Value added, index 2000=100)	100	81	79	75	73	65	49	-2.3	-0.9	-3.9
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	62	37	-0.2	-1.8	-7.6
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	81	53	0.9	-1.7	-5.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	22	-0.6	-1.5	-2.8
Freight transport (toe/Mtkm)	30	31	31	30	29	26	25	0.4	-0.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	73.1	71.5	78.2	61.1	58.7	53.7	40.2	0.7	-2.8	-3.7
of which ETS sectors (2013 scope) GHG emissions		37.2	43.9	30.8	31.5	30.5	19.7		-3.2	-4.6
of which ESD sectors (2013 scope) GHG emissions		34.3	34.3	30.3	27.1	23.2	20.5		-2.3	-2.8
CO₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.5	42.8	29.7	1.2	-3.1	-4.6
Power generation/District heating	22.5	23.0	32.3	17.5	18.6	18.9	10.0	3.7	-5.4	-6.0
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.2	1.9	1.2	0.0	-3.6
Industry	14.2	12.7	11.0	10.1	9.5	8.1	6.2	-2.5	-1.5	-4.1
Residential	2.4	2.3	1.8	1.4	1.3	0.6	0.1	-2.6	-3.5	-24.4
Tertiary	3.6	3.5	3.4	2.8	2.3	1.3	0.6	-0.6	-3.6	-12.2
Transport	12.9	13.8	14.0	13.6	13.0	11.8	10.8	0.8	-0.8	-1.8
CO₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.2	2.2	3.8	0.3	-0.4
Non-CO₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.4	-2.3	-1.8	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.1	74.2	55.6	0.7	-2.8	-3.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.13	0.13	0.09	1.4	-5.3	-4.1
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.98	1.03	-1.6	-0.8	-0.3
Industry	1.15	1.06	0.96	0.95	0.89	0.82	0.79	-1.8	-0.8	-1.2
Residential	0.52	0.45	0.32	0.26	0.24	0.13	0.03	-5.0	-2.9	-19.2
Tertiary	1.09	0.97	0.81	0.74	0.62	0.36	0.26	-2.9	-2.7	-8.3
Transport	2.97	2.97	2.89	2.77	2.73	2.69	2.64	-0.3	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	41.9	45.9	44.7			
RES-H&C share	38.2	39.1	44.4	55.2	57.5	60.6	51.5			
RES-E share	27.3	26.9	27.7	36.2	33.7	44.9	56.2			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	23.6	29.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	91	86	94	1.4	4.3	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	130	138	145	3.7	2.9	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.8	35.9	43.5	4.4	2.4	2.9
as % of GDP	10.7	11.3	13.8	14.6	16.5	17.0	19.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										France: EUCC+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	57	60	61	63	64	66	67	0.7	0.5	0.4		
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4		
Gross Inland Consumption (ktoe)	257565	276646	267546	255764	249051	228788	185086	0.4	-0.7	-2.9		
Solids	15048	14303	12076	8763	8600	6261	4276	-2.2	-3.3	-6.7		
Oil	88937	93185	82668	79806	75211	66435	57766	-0.7	-0.9	-2.6		
Natural gas	35766	41025	42540	38807	36013	30554	16584	1.7	-1.7	-7.5		
Nuclear	107093	116474	110539	109294	97019	94378	79372	0.3	-1.3	-2.0		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Renewable energy forms	16695	16847	22365	24473	37903	36846	32634	3.0	5.4	-1.5		
Energy Branch Consumption	10822	9989	9635	8309	7420	6464	5367	-1.2	-2.6	-3.2		
Non-Energy Uses	16851	16704	14290	14232	14666	14892	14818	-1.6	0.3	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	135972	132060	112752	0.4	0.1	-1.9		
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0		
Oil	2023	1604	1542	1217	1122	952	893	-2.7	-3.1	-2.3		
Natural gas	1505	909	646	304	294	281	259	-8.1	-7.6	-1.3		
Nuclear	107093	116474	110539	109294	97019	94378	79372	0.3	-1.3	-2.0		
Renewable energy sources	16688	16902	22206	24212	37537	36449	32228	2.9	5.4	-1.5		
Hydro	5771	4442	5364	5476	5753	5515	5672	-0.7	0.7	-0.1		
Biomass & Waste	10763	12159	15690	15780	23630	18495	12865	3.8	4.2	-5.9		
Wind	7	83	855	1850	4741	7547	8420	62.6	18.7	5.9		
Solar and others	21	26	118	870	3087	4515	4851	18.7	38.6	4.6		
Geothermal	126	192	180	236	326	377	420	3.6	6.1	2.6		
Net Imports (ktoe)	134082	144103	132149	123217	115830	99593	75303	-0.1	-1.3	-4.2		
Solids	13005	13511	12192	8620	8600	6261	4276	-0.6	-3.4	-6.7		
Oil	91265	95114	82886	81211	76785	68222	59501	-1.0	-0.8	-2.5		
Crude oil and Feedstocks	85329	85302	65254	46552	45756	42410	38624	-2.6	-3.5	-1.7		
Oil products	5936	9813	17632	34659	31030	25812	20878	11.5	5.8	-3.9		
Natural gas	35779	40720	39553	38504	35774	30399	16665	1.0	-1.0	-7.4		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Import Dependency (%)	51.5	51.6	49.0	47.7	46.0	43.0	40.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584202	597785	630695	562856	0.5	0.6	-0.6		
Nuclear energy	415162	451529	428521	444338	396167	385196	322239	0.3	-0.8	-2.0		
Solids	27004	27515	23359	8820	9111	765	0	-1.4	-9.0	-100.0		
Oil (including refinery gas)	7165	7925	5565	516	0	539	204	-2.5	-100.0	0.0		
Gas (including derived gases)	15365	26254	26385	25753	23979	27775	4767	5.6	-1.0	-14.9		
Biomass-waste	3559	5016	6675	10512	14131	18290	21966	6.5	7.8	4.5		
Hydro (pumping excluded)	67121	51658	62388	63671	66898	64123	65948	-0.7	0.7	-0.1		
Wind	77	964	9942	21517	55129	87758	97912	62.6	18.7	5.9		
Solar	5	10	620	8601	31589	45050	47812	63.1	48.2	4.2		
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148954	162325	166727	0.7	1.9	1.1		
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3		
Renewable energy	23570	24601	32099	40333	66684	85168	90795	3.1	7.6	3.1		
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	24036	0.2	-0.1	0.2		
Wind	57	777	7050	10358	22130	32373	35752	61.9	12.1	4.9		
Solar	7	13	1030	6100	20535	28589	30093	64.7	34.9	3.9		
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1		
Thermal power	26680	25361	27256	23974	20944	17665	16439	0.2	-2.6	-2.4		
of which cogeneration units	7013	5779	4606	10620	6040	4070	2007	-4.1	2.7	-10.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2		
Gas fired	4116	6055	9334	9646	9183	8976	7997	8.5	-0.2	-1.4		
Oil fired	11328	9794	9643	7693	5008	1849	1676	-1.6	-6.3	-10.4		
Biomass-waste fired	684	876	1049	1249	2898	3003	2984	4.4	10.7	0.3		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	42.9	37.4					
Efficiency of gross thermal power generation (%)	34.9	33.3	30.0	39.7	38.8	39.8	36.4					
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.9	1.5	1.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.5	95.4	99.1					
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10467	10234	6365	3.0	-5.2	-4.9		
Solids	6559	6402	4717	2258	2334	193	0	-3.2	-6.8	-100.0		
Oil (including refinery gas)	1242	2160	1639	135	0	148	68	2.8	-79.3	250.7		
Gas (including derived gases)	4002	6298	8178	4941	3991	4980	1225	7.4	-6.9	-11.1		
Biomass & Waste	1476	2469	3352	2529	4127	4898	5057	8.5	2.1	2.1		
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	205144	211862	191250	166425	153164	147010	126862	-0.7	-2.2	-1.9		
Refineries	90823	88392	73306	49009	48042	44536	40563	-2.1	-4.1	-1.7		
Biofuels and hydrogen production	325	651	2397	2746	3119	2771	2713	22.1	2.7	-1.4		
District heating	312	448	608	546	576	467	354	6.9	-0.5	-4.8		
Derived gases, cokeries etc.	113684	122371	114938	114124	101426	99237	83232	0.1	-1.2	-2.0		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1196	1250	0.8	1.2	0.7
Public road transport	42	42	50	55	60	62	65	1.7	1.9	0.8
Private cars and motorcycles	754	801	811	850	901	901	925	0.7	1.1	0.3
Rail	81	90	101	107	118	131	145	2.1	1.6	2.0
Aviation ⁽³⁾	69	62	68	76	86	97	111	-0.1	2.4	2.5
Inland navigation	3	3	3	3	3	4	4	-0.8	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	504	563	-0.5	1.8	1.8
Heavy goods and light commercial vehicles	311	319	296	310	357	373	418	-0.5	1.9	1.6
Rail	58	41	30	37	42	51	60	-6.3	3.5	3.6
Inland navigation	43	49	66	66	71	80	85	4.4	0.8	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	49971	45737	43883	-0.2	0.1	-1.3
Public road transport	536	519	595	654	704	710	710	1.0	1.7	0.1
Private cars and motorcycles	31157	31368	31602	31615	29849	25287	22839	0.1	-0.6	-2.6
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10233	9882	10333	-1.5	0.8	0.1
Rail	1134	980	932	1017	1080	1165	1232	-1.9	1.5	1.3
Aviation	6088	6291	6294	6827	7569	8103	8146	0.3	1.9	0.7
Inland navigation	483	481	500	499	535	591	623	0.4	0.7	1.5
By transport activity										
Passenger transport	38753	38887	39197	39839	38894	34901	32517	0.1	-0.1	-1.8
Freight transport	11607	11307	10150	10316	11076	10836	11366	-1.3	0.9	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	2.1	4.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234385	213895	170270	0.5	-0.8	-3.1
Final Energy Demand	154639	160337	155397	155251	156511	138318	106994	0.0	0.1	-3.7
by sector										
Industry	36670	34356	28478	30330	31277	30269	23921	-2.5	0.9	-2.6
Energy intensive industries	20906	20576	16506	17590	18028	17078	13433	-2.3	0.9	-2.9
Other industrial sectors	15764	13780	11972	12740	13250	13191	10487	-2.7	1.0	-2.3
Residential	42153	45931	45463	44159	45074	35979	21705	0.8	-0.1	-7.0
Tertiary	25209	29569	31792	30270	29823	25939	17064	2.3	-0.6	-5.4
Transport ⁽⁵⁾	50607	50482	49664	50492	50337	46131	44305	-0.2	0.1	-1.3
by fuel										
Solids	5775	5218	4547	4076	4210	3767	2412	-2.4	-0.8	-5.4
Oil	72503	71421	64647	63583	58939	50285	42163	-1.1	-0.9	-3.3
Gas	30907	33744	32430	32675	30981	25160	14938	0.5	-0.5	-7.0
Electricity	33096	36352	38185	37788	39013	41830	37007	1.4	0.2	-0.5
Heat (from CHP and District Heating)	3236	4163	3525	3658	3406	2801	1498	0.9	-0.3	-7.9
Renewable energy forms	9123	9439	12064	13458	19916	14252	8562	2.8	5.1	-8.1
Other	0	0	0	12	46	223	415	0.0	0.0	24.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	141	132	122	110	95	71	-0.7	-1.8	-4.2
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	71	53	-2.5	-0.1	-3.6
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	60	33	-0.9	-1.3	-8.3
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	92	74	45	1.0	-1.8	-6.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	23	20	-0.7	-1.6	-2.9
Freight transport (toe/Mtkm)	28	28	26	25	24	21	20	-0.9	-0.9	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	585.3	552.1	512.0	482.2	445.2	390.4	316.8	-1.3	-1.4	-3.3
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	131.7	125.9	116.6	91.8			-1.6	-3.1
of which ESD sectors (2013 scope) GHG emissions	378.8	364.7	350.4	319.4	273.7	225.0			-1.3	-3.4
CO2 Emissions (energy related)	388.3	394.4	360.0	332.5	308.1	259.4	191.1	-0.8	-1.5	-4.7
Power generation/District heating	46.7	53.6	48.1	26.7	22.6	18.0	8.2	0.3	-7.3	-9.7
Energy Branch	19.9	16.3	15.0	13.6	11.6	9.9	8.3	-2.7	-2.6	-3.3
Industry	74.6	67.0	54.1	59.9	57.6	51.8	35.1	-3.2	0.6	-4.8
Residential	59.3	64.8	57.2	51.5	43.7	28.3	7.5	-0.4	-2.7	-16.1
Tertiary	39.8	44.4	44.7	38.9	33.3	26.7	16.0	1.1	-2.9	-7.1
Transport	148.0	148.1	140.9	141.9	139.3	124.7	116.0	-0.5	-0.1	-1.8
CO2 Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	27.0	25.9	24.7	-1.2	0.5	-0.9
Non-CO2 GHG emissions	168.1	129.2	126.3	124.1	110.1	105.1	101.0	-2.8	-1.4	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.5	69.7	56.6	-1.3	-1.4	-3.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.08	0.09	0.08	0.04	0.04	0.03	0.01	-0.3	-7.8	-8.8
Final energy demand (t of CO2/toe)	2.08	2.02	1.91	1.88	1.75	1.67	1.63	-0.8	-0.9	-0.7
Industry	2.03	1.95	1.90	1.98	1.84	1.71	1.47	-0.7	-0.3	-2.3
Residential	1.41	1.41	1.26	1.17	0.97	0.79	0.35	-1.1	-2.6	-9.8
Tertiary	1.58	1.50	1.41	1.29	1.12	1.03	0.94	-1.2	-2.3	-1.7
Transport	2.92	2.93	2.84	2.81	2.77	2.70	2.62	-0.3	-0.2	-0.6
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	26.4	29.9			
RES-H&C share	12.4	12.3	15.8	19.4	29.9	31.2	34.4			
RES-E share	14.7	13.7	14.9	19.8	31.5	38.1	47.1			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	13.8	21.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	81	78	-0.7	5.1	-1.7
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	148	169	0.0	2.9	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	274.8	283.9	327.2	2.4	3.4	1.8
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.7	12.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Germany: EUCC+40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual %	% Change		
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1	
GDP (in 000 ME13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9	
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	309895	288100	220869	-0.3	-0.7	-3.3	
Solids	84802	81952	78824	78036	79846	83384	53214	-0.7	0.1	-4.0	
Oil	130980	121460	111798	111688	102598	88388	74232	-1.6	-0.9	-3.2	
Natural gas	71878	77782	75905	74011	67814	63494	41443	0.5	-1.1	-4.8	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Renewable energy forms	10665	19054	31477	39195	50606	51448	50660	11.4	4.9	0.0	
Energy Branch Consumption	14566	14384	13378	13631	12342	11700	9481	-0.8	-0.8	-2.6	
Non-Energy Uses	25064	24662	22582	24685	25861	26624	26344	-1.0	1.4	0.2	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	135549	137356	129648	120921	111021	100130	82729	-0.4	-1.5	-2.9	
Solids	60629	56484	45906	42340	38457	37768	24141	-2.7	-1.8	-4.5	
Oil	4680	5782	4754	4964	3809	2904	2210	0.2	-2.2	-5.3	
Natural gas	15825	14334	11113	10749	9878	8195	5915	-3.5	-1.2	-5.0	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Renewable energy sources	10665	18695	31618	39044	50404	51263	50464	11.5	4.8	0.0	
Hydro	1869	1689	1802	1925	1936	2069	2116	-0.4	0.7	0.9	
Biomass & Waste	7876	14249	24988	27662	32516	30238	24096	12.2	2.7	-3.0	
Wind	804	2341	3250	5689	9409	10536	14641	15.0	11.2	4.5	
Solar and others	116	371	1493	3575	5517	7370	8200	29.1	14.0	4.0	
Geothermal	0	46	86	192	1026	1049	1410	0.0	28.1	3.2	
Net Imports (ktoe)	204709	208118	201696	204465	201870	191042	141335	-0.1	0.0	-3.5	
Solids	21663	25972	31644	35695	41389	45616	29073	3.9	2.7	-3.5	
Oil	125918	120239	109834	109501	101726	88424	74970	-1.4	-0.8	-3.0	
Crude oil and Feedstocks	101441	111039	91612	87783	82298	72811	63352	-1.0	-1.1	-2.6	
Oil products	24477	9200	18222	21718	19429	15613	11618	-2.9	0.6	-5.0	
Natural gas	56865	61940	61645	63262	57995	55432	35775	0.8	-0.6	-4.7	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Import Dependency (%)	59.4	60.4	60.1	62.8	64.5	65.6	63.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645694	603107	684933	588809	0.9	-0.4	-0.2	
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0	
Solids	296687	288142	262896	272904	280833	305258	190991	-1.2	0.7	-3.8	
Oil (including refinery gas)	4785	11997	8741	1079	941	2322	1280	6.2	-20.0	3.1	
Gas (including derived gases)	59970	83608	100912	92793	69626	117635	74391	5.3	-3.6	0.7	
Biomass-waste	10121	20849	42975	58720	35885	45374	47023	15.6	-1.8	2.7	
Hydro (pumping excluded)	21732	19638	20953	22381	22507	24060	24609	-0.4	0.7	0.9	
Wind	9352	27229	37793	66153	109411	122513	170245	15.0	11.2	4.5	
Solar	60	1283	11727	34612	48465	66801	79300	69.3	15.2	5.0	
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207072	223841	240347	3.1	3.0	1.5	
Nuclear energy	21644	20656	20656	12188	6907	0	0	-0.5	-10.4	-100.0	
Renewable energy	11040	25641	50141	90293	120216	142062	171551	16.3	9.1	3.6	
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5905	6013	1.1	0.3	0.7	
Wind	6095	18375	27180	44946	61821	66205	84035	16.1	8.6	3.1	
Solar	114	2056	17554	39757	52803	69952	81503	65.5	11.6	4.4	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	81689	77676	83806	86551	79949	81779	68796	0.3	-0.5	-1.5	
of which cogeneration units	14369	20840	24554	17062	6161	9765	8874	5.5	-12.9	3.7	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	50924	48087	47789	52819	49148	44037	36732	-0.6	0.3	-2.9	
Gas fired	21336	21671	26890	25178	21891	28933	23471	2.3	-2.0	0.7	
Oil fired	8066	5686	5688	5028	1674	1568	1358	-3.4	-11.5	-2.1	
Biomass-waste fired	1363	2232	3432	3501	7065	7070	7064	9.7	7.5	0.0	
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0	
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.4	33.1	26.8				
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	39.9	40.6				
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.1	8.3	6.9				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	41.7	37.9	54.7				
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	88768	101645	66702	0.7	-0.2	-2.8	
Solids	67101	65740	59687	61356	62515	67123	41090	-1.2	0.5	-4.1	
Oil (including refinery gas)	1411	1427	855	236	311	730	418	-4.9	-9.6	3.0	
Gas (including derived gases)	12891	17808	19955	16546	12076	19404	12360	4.5	-4.9	0.2	
Biomass & Waste	3158	5100	10066	12030	13033	13554	11999	12.3	2.6	-0.8	
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	180304	187908	163048	142875	120646	99860	85546	-1.0	-3.0	-3.4	
Refineries	119420	125092	103238	98875	92740	82360	71699	-1.4	-1.1	-2.5	
Biofuels and hydrogen production	237	1859	2884	3011	2841	2521	2649	28.4	-0.1	-0.7	
District heating	1198	3942	4754	4043	3524	2481	1547	14.8	-3.0	-7.9	
Derived gases, cokeries etc.	59450	57015	52171	36947	21540	12498	9651	-1.3	-8.5	-7.7	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUO+40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1209	1216	1247	0.6	0.7	0.3	
Public road transport	69	67	62	63	66	66	67	-1.1	0.7	0.1	
Private cars and motorcycles	850	876	905	942	949	936	951	0.6	0.5	0.0	
Rail	90	92	100	111	116	131	140	1.1	1.4	2.0	
Aviation ⁽³⁾	55	62	61	69	75	80	85	1.1	2.1	1.3	
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.8	
Freight transport activity (Gtkm)	493	545	592	619	682	698	745	1.9	1.4	0.9	
Heavy goods and light commercial vehicles	342	385	422	439	486	479	515	2.1	1.4	0.6	
Rail	83	95	107	116	126	139	148	2.6	1.6	1.6	
Inland navigation	68	65	63	65	70	79	82	-0.7	1.1	1.6	
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56123	49877	46701	-1.1	-0.4	-1.8	
Public road transport	1047	897	803	815	835	810	787	-2.6	0.4	-0.6	
Private cars and motorcycles	42176	37675	35607	35814	31214	25930	23152	-1.7	-1.3	-2.9	
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12339	11280	11374	-0.8	0.9	-0.8	
Rail	1947	1580	1414	1496	1456	1553	1556	-3.2	0.3	0.7	
Aviation	7345	8265	8719	9601	9972	9962	9481	1.7	1.4	-0.5	
Inland navigation	283	323	278	285	307	343	351	-0.2	1.0	1.3	
By transport activity											
Passenger transport	51841	47805	45951	47113	42835	37573	34278	-1.2	-0.7	-2.2	
Freight transport	13261	11992	12194	12678	13288	12304	12423	-0.8	0.9	-0.7	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	2.1	4.5				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	6.0	6.2				
ENERGY EFFICIENCY											
Primary energy consumption	317273	317254	310393	297924	284034	261476	194525	-0.2	-0.9	-3.7	
Final Energy Demand	219989	218456	219721	217308	213373	190912	146257	0.0	-0.3	-3.7	
by sector											
Industry	57570	59093	60563	62096	65192	63669	49233	0.5	0.7	-2.8	
Energy intensive industries	39345	40705	42170	43510	45946	44602	34303	0.7	0.9	-2.9	
Other industrial sectors	18225	18389	18393	18586	19246	19067	14930	0.1	0.5	-2.5	
Residential	63072	63498	62442	58726	57212	47373	30769	-0.1	-0.9	-6.0	
Tertiary	34239	35302	38222	36396	34567	29740	19358	1.1	-1.0	-5.6	
Transport ⁽⁵⁾	65109	60563	58494	60090	56402	50130	46896	-1.1	-0.4	-1.8	
by fuel											
Solids	10958	8238	9379	9284	10076	9850	6884	-1.5	0.7	-3.7	
Oil	99738	90309	83168	82419	73061	58525	45827	-1.8	-1.3	-4.6	
Gas	56064	55136	56501	56368	55329	43831	28640	0.1	-0.2	-6.4	
Electricity	41570	44907	45781	44880	46202	53333	45958	1.0	0.1	-0.1	
Heat (from CHP and District Heating)	6831	10751	11268	9856	9727	8698	5778	5.1	-1.5	-5.1	
Renewable energy forms	4828	9116	13625	14468	18884	16190	12326	10.9	3.3	-4.2	
Other	0	0	0	32	94	483	843	0.0	0.0	24.5	
Energy intensity indicators											
Gross Int. Cons./GDP (toe/M€13)	144	140	128	116	104	92	68	-1.2	-2.0	-4.2	
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	85	64	-0.7	-0.3	-3.4	
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	59	36	-0.6	-2.2	-7.1	
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	63	39	-0.2	-2.4	-6.6	
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	24	21	-2.2	-1.7	-2.9	
Freight transport (toe/Mtkm)	27	22	21	20	19	18	17	-2.6	-0.6	-1.5	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	1076.8	1015.8	957.1	943.5	899.4	850.9	617.2	-1.2	-0.6	-3.7	
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	510.9	503.5	527.7	364.8	0.0	-0.3	-3.2	
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	395.9	323.2	252.4			-1.3	-4.4	
CO2 Emissions (energy related)	852.1	825.2	787.8	777.7	740.3	698.0	473.3	-0.8	-0.6	-4.4	
Power generation/District heating	330.6	344.9	324.5	317.5	310.4	345.7	218.6	-0.2	-0.4	-3.4	
Energy Branch	28.1	26.2	23.5	25.9	22.2	19.5	16.2	-1.8	-0.6	-3.1	
Industry	130.2	115.3	115.3	112.7	115.4	105.1	69.5	-1.2	0.0	-4.9	
Residential	119.4	110.8	104.3	98.0	87.6	58.0	28.0	-1.3	-1.7	-10.8	
Tertiary	58.5	55.9	56.3	55.4	47.7	33.7	18.0	-0.4	-1.7	-9.3	
Transport	185.3	172.2	163.8	168.2	157.1	135.9	123.0	-1.2	-0.4	-2.4	
CO2 Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.6	58.8	58.2	-1.4	0.5	-0.1	
Non-CO2 GHG emissions	161.0	128.9	113.7	109.1	100.4	94.0	85.7	-3.4	-1.2	-1.6	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	71.4	67.5	49.0	-1.2	-0.6	-3.7	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.50	0.46	0.42	0.41	0.43	0.43	0.33	-1.7	0.1	-2.5	
Final energy demand (t of CO2/toe)	2.24	2.08	2.00	2.00	1.91	1.74	1.63	-1.1	-0.5	-1.6	
Industry	2.26	1.95	1.90	1.81	1.77	1.65	1.41	-1.7	-0.7	-2.2	
Residential	1.89	1.74	1.67	1.67	1.53	1.22	0.91	-1.2	-0.9	-5.1	
Tertiary	1.71	1.58	1.47	1.52	1.38	1.13	0.93	-1.5	-0.7	-3.9	
Transport	2.85	2.84	2.80	2.80	2.79	2.71	2.62	-0.2	-0.1	-0.6	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	21.6	28.2				
RES-H&C share	4.2	6.7	9.6	10.6	17.5	20.1	23.1				
RES-E share	6.1	10.5	18.1	29.5	34.7	36.2	52.5				
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	16.4	26.5				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	101	92	95	3.7	5.0	-0.7	
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	164	168	182	2.2	0.0	1.1	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	345.7	373.0	458.2	3.0	1.3	2.9	
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.9	14.1				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Greece: EUCC+40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual %	Change			
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.8		
GDP (in 000 ME13)	190	231	232	200	207	213	225	2.0	-1.1	0.8		
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25318	23200	15982	0.2	-1.3	-4.5		
Solids	9038	8944	7863	6765	5799	6139	1827	-1.4	-3.0	-10.9		
Oil	16085	18119	14974	12997	12129	10101	7932	-0.7	-2.1	-4.2		
Natural gas	1705	2354	3235	2979	3765	3275	1293	6.6	1.5	-10.1		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Renewable energy forms	1466	1668	2163	2714	3224	3439	4747	4.0	4.1	3.9		
Energy Branch Consumption	1634	1820	1839	1906	1787	1705	1487	1.2	-0.3	-1.8		
Non-Energy Uses	719	761	1108	824	846	842	826	4.4	-2.7	-0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	10012	10326	9461	9027	8511	9147	6357	-0.6	-1.1	-2.9		
Solids	8222	8538	7315	6430	5499	5865	1711	-1.2	-2.8	-11.0		
Oil	282	101	132	75	73	70	67	-7.3	-5.7	-0.8		
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	1466	1668	2006	2521	2939	3213	4578	3.2	3.9	4.5		
Hydro	318	431	641	506	508	477	479	7.3	-2.3	-0.6		
Biomass & Waste	1009	1015	919	1157	1350	1186	981	-0.9	3.9	-3.1		
Wind	39	109	233	330	448	634	1737	19.7	6.7	14.5		
Solar and others	99	101	197	514	618	899	1367	7.1	12.1	8.3		
Geothermal	2	12	16	16	15	16	13	25.9	-0.4	-1.3		
Net Imports (ktoe)	22151	23498	21712	20057	19792	16980	12587	-0.2	-0.9	-4.4		
Solids	769	364	401	335	300	274	116	-6.3	-2.9	-9.1		
Oil	19695	20476	17433	15950	15006	12887	10640	-1.2	-1.5	-3.4		
Crude oil and Feedstocks	20596	19488	20633	24349	23244	21220	19179	0.0	1.2	-1.9		
Oil products	-900	988	-3200	-8399	-8237	-8333	-8539	13.5	9.9	0.4		
Natural gas	1689	2332	3231	2979	3799	3347	1480	6.7	1.6	-9.0		
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5		
Import Dependency (%)	69.5	68.6	69.1	69.0	69.9	65.0	66.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58892	61590	48526	0.7	0.3	-1.9		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	34313	35543	30797	26751	23831	26398	7295	-1.1	-2.5	-11.2		
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	127	-3.7	-1.7	-30.9		
Gas (including derived gases)	5920	8171	9830	8817	13734	11366	456	5.2	3.4	-28.9		
Biomass-waste	163	222	319	195	382	676	994	6.9	1.8	10.0		
Hydro (pumping excluded)	3693	5017	7460	5880	5901	5552	5575	7.3	-2.3	-0.6		
Wind	451	1266	2714	3834	5207	7370	20202	19.7	6.7	14.5		
Solar	0	1	158	3757	4715	7844	13878	0.0	40.4	11.4		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19796	21752	28674	3.5	2.2	3.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	3298	3598	4715	8146	9363	12217	19994	3.6	7.1	7.9		
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0		
Wind	226	491	1298	2152	2637	3588	7603	19.1	7.3	11.2		
Solar	0	1	202	2605	3147	5050	8812	0.0	31.6	10.8		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	7914	9610	11174	11062	10434	9535	8680	3.5	-0.7	-1.8		
of which cogeneration units	195	3051	588	284	299	251	297	11.7	-6.5	-0.1		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	4454	4754	4312	3923	3135	3204	2949	-0.3	-3.1	-0.6		
Gas fired	1157	2203	4189	5062	5295	5265	4730	13.7	2.4	-1.1		
Oil fired	2302	2625	2618	2022	1824	834	732	1.3	-3.6	-8.7		
Biomass-waste fired	1	28	55	55	180	232	268	50.5	12.6	4.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.7	30.2	18.9					
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	41.6	36.4					
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.2	2.4	2.2					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.5	34.8	83.8					
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8951	8431	2099	-0.6	-1.8	-13.5		
Solids	8170	8694	7567	6558	5607	5980	1746	-0.8	-3.0	-11.0		
Oil (including refinery gas)	1978	1992	1278	1005	1071	505	42	-4.3	-1.8	-27.7		
Gas (including derived gases)	1280	1605	1863	1435	2190	1802	111	3.8	1.6	-25.8		
Biomass & Waste	64	52	79	43	83	144	200	2.2	0.4	9.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	22570	21629	22585	24150	24031	22120	20135	0.0	0.6	-1.8		
Refineries	22508	21536	22462	23941	23745	21835	19835	0.0	0.6	-1.8		
Biofuels and hydrogen production	0	0	124	207	279	263	272	0.0	8.4	-0.2		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	62	93	0	2	7	21	27	-95.7	1750.6	15.0		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EUO0+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	129	153	161	164	172	173	180	2.2	0.7	0.4
Public road transport	22	22	21	21	22	22	23	-0.3	0.6	0.1
Private cars and motorcycles	67	90	105	106	108	105	106	4.7	0.2	-0.2
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.7
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.4
Inland navigation	7	7	7	7	7	7	7	-0.1	0.2	0.0
Freight transport activity (Gtkm)	38	34	37	37	39	40	41	-0.1	0.5	0.5
Heavy goods and light commercial vehicles	28	24	30	30	32	32	33	0.8	0.5	0.4
Rail	0	1	1	1	1	1	1	3.7	0.8	1.0
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7252	6631	6225	1.1	-1.2	-1.5
Public road transport	423	438	403	403	408	386	373	-0.5	0.1	-0.9
Private cars and motorcycles	3327	4435	4483	4018	3693	3127	2697	3.0	-1.9	-3.1
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1486	1390	1340	-0.4	-0.7	-1.0
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.2
Aviation	1325	1181	919	936	1020	1097	1168	-3.6	1.0	1.4
Inland navigation	495	648	717	612	621	608	624	3.8	-1.4	0.0
By transport activity										
Passenger transport	5530	6460	6297	5784	5550	5021	4656	1.3	-1.3	-1.7
Freight transport	1756	1714	1850	1688	1701	1610	1569	0.5	-0.8	-0.8
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.2	4.6			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24472	22358	15156	0.0	-1.2	-4.7
Final Energy Demand	18676	20958	19197	17486	17146	15439	12108	0.3	-1.1	-3.4
by sector										
Industry	4450	4161	3672	3224	3319	3230	2502	-1.9	-1.0	-2.8
Energy intensive industries	2737	2588	2427	2157	2198	2107	1604	-1.2	-1.0	-3.1
Other industrial sectors	1714	1573	1245	1067	1121	1123	899	-3.1	-1.0	-2.2
Residential	4502	5510	4615	4351	4276	3586	2122	0.2	-0.8	-6.8
Tertiary	2426	3100	2752	2426	2286	1979	1244	1.3	-1.8	-5.9
Transport ⁽⁵⁾	7297	8188	8158	7484	7265	6645	6240	1.1	-1.2	-1.5
by fuel										
Solids	891	458	302	208	192	158	81	-10.3	-4.4	-8.3
Oil	12744	14413	12110	10307	9448	8085	6527	-0.5	-2.5	-3.6
Gas	257	586	982	1018	1035	937	633	14.3	0.5	-4.8
Electricity	3710	4377	4568	4397	4639	4700	3692	2.1	0.2	-2.3
Heat (from CHP and District Heating)	28	49	46	44	50	46	27	5.2	0.8	-6.0
Renewable energy forms	1046	1076	1191	1510	1773	1488	1103	1.3	4.1	-4.6
Other	0	0	0	2	7	26	44	0.0	0.0	19.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	149	136	124	130	122	109	71	-1.8	-0.1	-5.3
Industry (Energy on Value added, index 2000=100)	100	88	101	99	98	93	69	0.1	-0.3	-3.4
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	73	41	-2.2	0.9	-7.3
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	80	67	40	-1.5	-0.8	-6.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.3
Freight transport (toe/Mtkm)	46	51	50	45	43	40	38	0.7	-1.4	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	133.3	139.6	121.4	105.7	97.4	90.6	56.0	-0.9	-2.2	-5.4
of which ETS sectors (2013 scope) GHG emissions	77.2	64.9	57.3	53.8	52.8	52.8	24.1		-1.9	-7.7
of which ESD sectors (2013 scope) GHG emissions	62.4	56.5	48.4	43.6	37.8	31.9	31.9		-2.6	-3.1
CO2 Emissions (energy related)	98.4	106.4	92.1	79.6	73.8	68.2	34.4	-0.7	-2.2	-7.3
Power generation/District heating	52.1	55.6	47.9	40.9	37.9	37.1	9.5	-0.8	-2.3	-12.9
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	2.9	1.6	-0.1	-2.0
Industry	10.4	8.9	7.2	6.2	5.9	5.3	3.4	-3.7	-2.0	-5.3
Residential	7.6	9.9	6.7	5.0	4.3	2.8	0.6	-1.3	-4.2	-17.6
Tertiary	3.4	4.3	2.8	1.8	1.2	0.8	0.4	-2.1	-8.1	-10.3
Transport	21.8	24.4	24.0	21.7	20.9	19.0	17.5	1.0	-1.4	-1.7
CO2 Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	7.5	-2.9	0.1	1.2
Non-CO2 GHG emissions	26.1	23.6	22.6	19.3	16.9	15.4	14.0	-1.4	-2.9	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.7	84.3	52.1	-0.9	-2.2	-5.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.97	0.93	0.83	0.75	0.64	0.60	0.19	-1.6	-2.6	-11.2
Final energy demand (t of CO2/toe)	2.32	2.26	2.12	1.99	1.88	1.80	1.81	-0.9	-1.2	-0.4
Industry	2.35	2.13	1.96	1.91	1.78	1.65	1.37	-1.8	-1.0	-2.5
Residential	1.69	1.79	1.45	1.16	1.02	0.77	0.30	-1.5	-3.5	-11.6
Tertiary	1.41	1.38	1.01	0.76	0.52	0.40	0.32	-3.3	-6.4	-4.7
Transport	2.99	2.98	2.94	2.90	2.87	2.85	2.81	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.4	22.2	39.2			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.9	44.4			
RES-E share	7.2	8.2	12.3	22.4	25.5	33.3	83.7			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.3	22.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	91	87	96	1.9	2.3	0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	131	133	160	3.8	1.9	2.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	15.2	20.2	26.7	26.6	31.5	33.5	38.2	5.8	1.7	2.0
as % of GDP	8.0	8.7	11.5	13.3	15.2	15.7	17.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Hungary: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1
GDP (in 000 ME13)	83	102	101	107	117	131	145	1.9	1.5	2.2
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24466	24670	21368	0.2	-0.5	-1.3
Solids	3850	3031	2730	2635	2434	2019	1346	-3.4	-1.1	-5.8
Oil	6964	7115	6699	6271	6311	6259	6113	-0.4	-0.6	-0.3
Natural gas	9657	12094	9816	7786	8502	6645	3904	0.2	-1.4	-7.5
Nuclear	3672	3585	4078	3666	3677	6045	6381	1.1	-1.0	5.7
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Renewable energy forms	859	1251	2042	1931	2681	2877	2935	9.0	2.8	0.9
Energy Branch Consumption	1164	1062	1095	1029	965	968	919	-0.6	-1.3	-0.5
Non-Energy Uses	1587	2169	1974	2275	2502	2826	3072	2.2	2.4	2.1
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	10207	11288	11129	-0.5	-0.8	0.9
Solids	2893	1748	1593	1794	1700	1271	870	-5.8	0.7	-6.5
Oil	1699	1457	1150	795	619	274	190	-3.8	-6.0	-11.1
Natural gas	2475	2331	2235	1857	1194	517	466	-1.0	-6.1	-9.0
Nuclear	3672	3585	4078	3666	3677	6045	6381	1.1	-1.0	5.7
Renewable energy sources	859	1251	2010	2132	3017	3181	3222	8.9	4.1	0.7
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0
Biomass & Waste	758	1145	1844	1905	2639	2467	2041	9.3	3.7	-2.5
Wind	0	1	46	50	77	77	311	0.0	5.3	15.0
Solar and others	0	2	6	9	45	205	220	0.0	23.5	17.1
Geothermal	86	87	99	148	236	412	630	1.4	9.1	10.3
Net Imports (ktoe)	13956	17421	14988	13249	14259	13382	10239	0.7	-0.5	-3.3
Solids	1087	1299	1143	841	733	747	476	0.5	-4.3	-4.2
Oil	5291	5780	5637	5476	5693	5985	5922	0.6	0.1	0.4
Crude oil and Feedstocks	5887	5988	5806	5273	5500	5839	5845	-0.1	-0.5	0.6
Oil products	-596	-208	-169	203	193	146	78	-11.9	0.0	-8.7
Natural gas	7283	9808	7726	5929	7307	6128	3438	0.6	-0.6	-7.3
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2
Import Dependency (%)	55.2	63.1	58.1	56.4	58.3	54.2	47.9			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33680	39084	37884	0.6	-1.0	1.2
Nuclear energy	14180	13834	15761	15087	15024	24706	26081	1.1	-0.5	5.7
Solids	9590	7023	6234	6436	6271	4482	3020	-4.2	0.1	-7.0
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0
Gas (including derived gases)	6719	12502	11714	3383	8861	4712	511	5.7	-2.8	-24.8
Biomass-waste	120	1730	2449	2015	2241	2342	2464	35.2	-0.9	1.0
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0
Wind	0	10	534	585	890	890	3615	0.0	5.2	15.0
Solar	0	0	1	32	97	1656	1896	0.0	55.6	34.7
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7159	9454	12182	-0.4	-1.5	5.5
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6
Renewable energy	48	66	348	431	640	2098	3824	21.9	6.3	19.6
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0
Wind	0	17	293	329	477	477	1974	0.0	5.0	15.3
Solar	0	0	2	45	106	1564	1793	0.0	48.7	32.7
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	6621	6311	6024	5103	4560	4135	3876	-0.9	-2.7	-1.6
of which cogeneration units	1464	2047	1862	1144	1574	886	400	2.4	-1.7	-12.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1747	1380	1155	1137	851	585	574	-4.1	-3.0	-3.9
Gas fired	4160	4622	4605	3496	3290	3130	2876	1.0	-3.3	-1.3
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3
Biomass-waste fired	112	133	173	349	356	358	369	4.4	7.5	0.4
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.5	44.6	33.7			
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	39.5	37.1	32.2			
% of gross electricity from CHP	13.5	19.1	19.6	14.4	12.2	7.7	4.9			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.1	76.5	90.7			
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3793	2693	1619	-1.3	-3.2	-8.2
Solids	2755	1924	1646	1611	1596	1155	783	-5.0	-0.3	-6.9
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0
Gas (including derived gases)	2140	3079	2704	657	1490	812	157	2.4	-5.8	-20.2
Biomass & Waste	61	534	777	436	652	670	623	28.9	-1.7	-0.4
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12946	13165	14441	12781	12806	15068	15092	1.1	-1.2	1.7
Refineries	7638	8118	8427	6997	7085	7076	6961	1.0	-1.7	-0.2
Biofuels and hydrogen production	0	3	175	182	348	312	311	0.0	7.1	-1.1
District heating	471	627	474	648	635	577	661	0.1	3.0	0.4
Derived gases, cokeries etc.	4837	4417	5365	4954	4738	7103	7159	1.0	-1.2	4.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Hungary: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	80	84	84	86	96	102	110	0.5	1.3	1.4
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	63	67	1.4	1.1	1.1
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.4
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	41	45	2.3	1.1	1.8
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.8	1.5
Rail	9	9	9	10	11	12	14	0.0	2.0	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	0.9	1.8
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4116	3998	4033	2.8	-0.5	-0.2
Public road transport	339	361	335	346	353	348	342	-0.1	0.5	-0.3
Private cars and motorcycles	1805	2191	2208	2035	2070	1909	1833	2.0	-0.6	-1.2
Heavy goods and light commercial vehicles	763	1341	1418	1214	1275	1245	1284	6.4	-1.1	0.1
Rail	171	154	150	152	171	192	207	-1.3	1.3	1.9
Aviation	230	261	230	207	244	300	363	0.0	0.6	4.1
Inland navigation	1	1	1	4	4	4	5	3.1	14.5	1.6
By transport activity										
Passenger transport	2449	2877	2826	2642	2730	2628	2613	1.4	-0.3	-0.4
Freight transport	860	1431	1515	1316	1386	1370	1420	5.8	-0.9	0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.6	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21963	21844	18296	0.1	-0.8	-1.8
Final Energy Demand	16139	18218	16596	15895	16184	15042	11659	0.3	-0.3	-3.2
by sector										
Industry	3513	3369	2890	3081	3053	3183	2578	-1.9	0.6	-1.7
Energy intensive industries	2517	2267	1854	1941	1877	1921	1524	-3.0	0.1	-2.1
Other industrial sectors	996	1102	1036	1141	1176	1262	1053	0.4	1.3	-1.1
Residential	5603	6464	5740	5253	5249	4625	2957	0.2	-0.9	-5.6
Tertiary	3712	4072	3625	3566	3727	3203	2066	-0.2	0.3	-5.7
Transport ⁽⁵⁾	3311	4313	4341	3995	4155	4031	4059	2.7	-0.4	-0.2
by fuel										
Solids	665	690	481	501	372	392	180	-3.2	-2.5	-7.0
Oil	4218	4904	4638	4261	4173	3883	3596	1.0	-1.1	-1.5
Gas	6503	7852	6261	5868	5824	4877	2835	-0.4	-0.7	-6.9
Electricity	2531	2780	2941	2977	3120	3489	3333	1.5	0.6	0.7
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	848	557	-2.8	-0.8	-5.8
Renewable energy forms	774	683	1184	1301	1683	1533	1132	4.3	3.6	-3.9
Other	0	0	0	1	5	19	26	0.0	0.0	18.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	305	271	257	219	209	188	147	-1.7	-2.0	-3.4
Industry (Energy on Value added, index 2000=100)	100	74	64	63	57	53	39	-4.4	-1.0	-3.7
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	56	32	-1.4	-2.0	-7.6
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	55	32	-2.0	-1.3	-7.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	24	22	0.8	-1.7	-2.0
Freight transport (toe/Mtkm)	32	41	45	38	37	33	31	3.5	-2.0	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	79.8	76.9	67.7	59.4	56.8	49.5	38.9	-1.6	-1.7	-3.7
of which ETS sectors (2013 scope) GHG emissions	30.6	25.6	19.8	19.8	20.7	17.0	12.6		-2.1	-4.8
of which ESD sectors (2013 scope) GHG emissions	46.3	42.1	39.6	39.6	36.2	32.4	26.3		-1.5	-3.1
CO ₂ Emissions (energy related)	55.0	56.4	49.0	41.5	41.7	34.7	24.5	-1.1	-1.6	-5.2
Power generation/District heating	22.1	18.3	16.0	10.5	11.9	8.1	4.8	-3.2	-2.9	-8.7
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.4
Industry	6.8	6.7	5.3	5.8	5.0	4.9	3.0	-2.4	-0.5	-4.9
Residential	8.8	10.7	8.6	7.3	7.0	5.8	2.7	-0.2	-2.1	-9.1
Tertiary	6.1	6.7	5.2	5.2	5.2	3.8	2.2	-1.6	-0.1	-8.2
Transport	9.7	12.7	12.3	11.2	11.2	10.7	10.6	2.4	-1.0	-0.5
CO ₂ Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.1	5.4	-1.9	2.5	1.3
Non-CO ₂ GHG emissions	20.3	15.6	15.0	13.5	10.4	9.6	8.9	-3.0	-3.6	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	60.0	52.2	41.0	-1.6	-1.7	-3.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.34	0.31	0.26	0.25	0.16	0.10	-2.7	-1.9	-8.4
Final energy demand (t of CO ₂ /toe)	1.94	2.02	1.90	1.85	1.75	1.68	1.59	-0.2	-0.8	-1.0
Industry	1.92	2.00	1.84	1.87	1.65	1.52	1.18	-0.4	-1.1	-3.3
Residential	1.57	1.66	1.50	1.39	1.33	1.26	0.91	-0.4	-1.2	-3.7
Tertiary	1.65	1.65	1.44	1.45	1.39	1.19	1.06	-1.4	-0.4	-2.6
Transport	2.92	2.94	2.83	2.81	2.69	2.66	2.61	-0.3	-0.5	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.0	14.3	17.6			
RES-H&C share	7.6	6.0	11.1	13.4	16.9	19.0	24.2			
RES-E share	0.6	4.4	7.1	6.7	7.8	10.4	17.8			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	9.9	10.1	11.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	67	74	89	3.5	0.0	2.8
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	125	134	165	5.4	-0.5	2.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.3	25.7	34.1	6.1	0.9	4.4
as % of GDP	13.5	15.9	20.2	16.7	19.0	19.7	23.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Ireland: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0		
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6		
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14549	14010	10805	0.5	-0.4	-2.9		
Solids	2601	2664	1979	2028	1900	1829	914	-2.7	-0.4	-7.1		
Oil	8145	8589	7818	6926	6741	6089	5292	-0.4	-1.5	-2.4		
Natural gas	3436	3470	4683	4016	4092	3953	1553	3.1	-1.3	-9.2		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1		
Renewable energy forms	235	366	671	1152	1955	2287	3171	11.1	11.3	5.0		
Energy Branch Consumption	254	300	243	250	209	210	167	-0.4	-1.5	-2.2		
Non-Energy Uses	675	516	341	360	405	441	448	-6.6	1.7	1.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1920	2239	3115	-1.6	0.4	5.0		
Solids	965	820	981	740	0	1	1	0.2	-56.6	13.6		
Oil	0	0	0	44	0	0	0	0.0	0.0	13.6		
Natural gas	958	461	233	231	237	236	216	-13.2	0.2	-0.9		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	235	366	628	1016	1682	2002	2898	10.3	10.4	5.6		
Hydro	73	54	52	62	66	65	74	-3.4	2.6	1.0		
Biomass & Waste	141	216	327	420	651	788	819	8.8	7.1	2.3		
Wind	21	96	242	520	907	1070	1639	27.7	14.1	6.1		
Solar and others	0	1	8	13	57	78	365	54.0	22.6	20.3		
Geothermal	0	0	0	0	0	1	2	0.0	0.0	17.3		
Net Imports (ktoe)	12370	13765	13215	12285	12738	11886	7811	0.7	-0.4	-4.8		
Solids	1681	1886	945	1288	1900	1828	913	-5.6	7.2	-7.1		
Oil	8203	8694	7706	6991	6849	6201	5399	-0.6	-1.2	-2.4		
Crude oil and Feedstocks	3016	3166	2987	2873	2871	2553	2203	-0.1	-0.4	-2.6		
Oil products	5186	5527	4718	4118	3977	3648	3196	-0.9	-1.7	-2.2		
Natural gas	2478	3010	4480	3784	3856	3719	1351	6.1	-1.5	-10.0		
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1		
Import Dependency (%)	84.9	89.6	86.5	85.8	86.9	84.1	71.5					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31605	35915	32809	1.8	1.1	0.4		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	8587	8839	6384	6793	6337	6799	3639	-2.9	-0.1	-5.4		
Oil (including refinery gas)	4638	3340	605	15	3	15	6	-18.4	-41.0	7.3		
Gas (including derived gases)	9263	11574	17705	12617	13252	14996	4330	6.7	-2.9	-10.6		
Biomass-waste	95	130	317	660	682	886	1485	12.8	8.0	8.1		
Hydro (pumping excluded)	846	631	599	721	771	760	856	-3.4	2.6	1.0		
Wind	244	1112	2815	6049	10545	12443	19056	27.7	14.1	6.1		
Solar	0	0	0	1	16	16	3436	0.0	0.0	71.6		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9577	9605	15228	6.2	1.7	4.7		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	355	751	1611	2724	4113	4767	10858	16.3	9.8	10.2		
Hydro (pumping excluded)	236	234	237	237	258	258	283	0.0	0.8	1.0		
Wind	119	517	1374	2486	3837	4491	6596	27.7	10.8	5.6		
Solar	0	0	0	1	19	19	3979	0.0	0.0	70.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	4097	5179	6480	6366	5464	4838	4370	4.7	-1.7	-2.2		
of which cogeneration units	77	240	285	264	63	268	255	14.0	-14.0	15.0		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0		
Gas fired	1872	2625	4081	3969	3624	3472	3130	8.1	-1.2	-1.5		
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2		
Biomass-waste fired	14	43	43	69	197	198	225	11.4	16.6	1.3		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	36.6	41.4	24.2					
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.7	46.8	42.9					
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.7	10.8	10.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	38.0	39.3	75.7					
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3659	4174	1895	-0.4	-2.3	-6.4		
Solids	1930	1920	1358	1448	1402	1511	815	-3.5	0.3	-5.3		
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4		
Gas (including derived gases)	1825	2040	3039	2066	2103	2448	733	5.2	-3.6	-10.0		
Biomass & Waste	24	30	75	143	153	212	345	12.2	7.5	8.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	3341	3204	3033	3024	3131	2827	2488	-1.0	0.3	-2.3		
Refineries	3341	3203	2940	2933	2924	2601	2245	-1.3	-0.1	-2.6		
Biofuels and hydrogen production	0	1	93	89	199	184	184	0.0	7.9	-0.8		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	2	8	41	59	0.0	2204.7	22.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.6
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.7
Rail	1	2	2	2	2	2	2	2.7	1.0	1.1
Aviation ⁽³⁾	6	10	10	11	14	16	17	5.2	3.2	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	1.0
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.3
Heavy goods and light commercial vehicles	11	17	10	11	13	15	16	-0.5	2.4	2.3
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.6
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4764	4620	4622	1.5	0.1	-0.3
Public road transport	96	101	110	111	111	112	113	1.4	0.2	0.1
Private cars and motorcycles	2206	2577	2807	2583	2525	2316	2187	2.4	-1.1	-1.4
Heavy goods and light commercial vehicles	1086	1482	967	1019	1135	1197	1291	-1.2	1.6	1.3
Rail	40	42	44	44	47	49	50	0.8	0.7	0.7
Aviation	629	857	767	809	923	923	957	2.0	1.9	0.4
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.9
<i>By transport activity</i>										
Passenger transport	2958	3559	3724	3544	3604	3397	3303	2.3	-0.3	-0.9
Freight transport	1124	1519	990	1042	1160	1223	1318	-1.3	1.6	1.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.2	2.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.9	5.3			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14145	13569	10357	0.8	-0.5	-3.1
Final Energy Demand	10779	12597	11957	11423	11784	10899	8936	1.0	-0.1	-2.7
<i>by sector</i>										
Industry	2498	2582	2146	2453	2572	2453	1942	-1.5	1.8	-2.8
Energy intensive industries	1245	1341	1023	1166	1181	1026	775	-1.9	1.4	-4.1
Other industrial sectors	1252	1241	1123	1287	1392	1427	1167	-1.1	2.2	-1.7
Residential	2513	2954	3296	2823	2855	2481	1475	2.7	-1.4	-6.4
Tertiary	1684	1979	1799	1556	1588	1340	892	0.7	-1.2	-5.6
Transport ⁽⁵⁾	4085	5082	4715	4590	4769	4625	4627	1.4	0.1	-0.3
<i>by fuel</i>										
Solids	671	751	604	567	498	318	99	-1.0	-1.9	-14.9
Oil	7045	8204	7270	6439	6226	5547	4753	0.3	-1.5	-2.7
Gas	1200	1364	1593	1883	1923	1444	799	2.9	1.9	-8.4
Electricity	1745	2094	2186	2107	2296	2615	2414	2.3	0.5	0.5
Heat (from CHP and District Heating)	0	0	0	1	14	36	50	0.0	0.0	13.5
Renewable energy forms	118	184	304	424	819	897	759	10.0	10.4	-0.8
Other	0	0	0	2	8	42	63	0.0	1734.2	23.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	93	92	78	70	62	44	-1.9	-2.7	-4.5
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	65	48	-2.8	-0.2	-4.2
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	57	30	-0.2	-2.7	-8.7
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	45	27	-1.9	-3.6	-7.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	33	30	-1.2	-1.8	-2.5
Freight transport (toe/Mtkm)	96	88	92	89	86	80	78	-0.3	-0.7	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	71.8	73.1	65.0	63.1	61.7	59.5	47.8	-1.0	-0.5	-2.5
of which ETS sectors (2013 scope) GHG emissions	25.4	20.0	18.5	18.1	18.7	11.1		-1.0	-4.8	
of which ESD sectors (2013 scope) GHG emissions	47.8	45.0	44.6	43.6	40.8	36.7		-0.3	-1.7	
CO₂ Emissions (energy related)	43.2	47.3	42.0	37.8	36.5	33.8	22.1	-0.3	-1.4	-4.9
Power generation/District heating	15.6	15.3	13.3	11.0	10.7	12.0	5.1	-1.6	-2.1	-7.2
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-2.1
Industry	5.3	5.6	3.6	3.8	3.4	2.6	1.6	-3.9	-0.5	-7.4
Residential	6.4	7.2	7.8	6.5	6.1	4.1	1.2	2.1	-2.5	-15.1
Tertiary	3.4	3.5	3.1	2.5	2.4	1.7	1.0	-0.7	-2.8	-8.0
Transport	12.3	15.3	13.9	13.6	13.8	13.2	13.0	1.3	-0.1	-0.6
CO₂ Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	2.0	1.9	1.9	-7.0	3.2	-0.2
Non-CO₂ GHG emissions	25.6	23.1	21.5	23.5	23.2	23.8	23.8	-1.7	0.8	0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.7	103.0	82.7	-1.0	-0.5	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.66	0.60	0.47	0.41	0.34	0.33	0.15	-3.4	-3.2	-7.6
Final energy demand (t of CO ₂ /toe)	2.53	2.51	2.38	2.31	2.17	1.99	1.88	-0.6	-0.9	-1.4
Industry	2.13	2.16	1.66	1.55	1.32	1.08	0.81	-2.5	-2.3	-4.7
Residential	2.53	2.44	2.37	2.30	2.12	1.64	0.80	-0.7	-1.1	-9.3
Tertiary	1.99	1.77	1.74	1.63	1.48	1.30	1.15	-1.3	-1.6	-2.5
Transport	3.00	3.01	2.96	2.96	2.89	2.85	2.81	-0.2	-0.2	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.2	19.6	33.8			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	19.4	31.0			
RES-E share	4.8	7.2	14.5	26.5	40.0	41.2	79.7			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	13.3	22.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	88	89	93	5.9	1.7	0.6
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	172	171	191	3.0	0.9	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.8	13.9	15.5	15.6	18.9	20.9	24.8	4.7	2.0	2.8
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.3	10.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Italy: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	Annual % Change				
								'00-'10	'10-'20	'20-'30		
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3		
GDP (in 000 ME13)	1564	1643	1622	1565	1675	1776	1885	0.4	0.3	1.2		
Gross Inland Consumption (ktoe)	174219	187471	174761	159035	161765	149076	116923	0.0	-0.8	-3.2		
Solids	12550	16461	14170	16106	18620	12599	6540	1.2	2.8	-9.9		
Oil	89540	83963	69558	61171	56686	50083	42494	-2.5	-2.0	-2.8		
Natural gas	57945	70651	68057	56177	60402	57056	36731	1.6	-1.2	-4.9		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7		
Renewable energy forms	10371	12170	19180	21627	23479	26574	28405	6.3	2.0	1.9		
Energy Branch Consumption	7704	10052	9539	8520	8177	7207	6231	2.2	-1.5	-2.7		
Non-Energy Uses	9019	8607	9560	7050	7322	7453	7350	0.6	-2.6	0.0		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	28400	27839	29560	30750	31731	33580	35063	0.4	0.7	1.0		
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0		
Oil	4915	6376	5687	5142	5666	5600	5569	1.5	0.0	-0.2		
Natural gas	13627	9886	6885	6760	5827	4634	3879	-6.6	-1.7	-4.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	9856	11516	16924	18793	20238	23346	25615	5.6	1.8	2.4		
Hydro	3800	3101	4395	4138	4087	4212	4337	1.5	-0.7	0.6		
Biomass & Waste	1736	3392	6670	10105	11322	12204	11695	14.4	5.4	0.3		
Wind	48	202	785	1258	1260	1589	3432	32.1	4.8	10.5		
Solar and others	12	30	298	2199	2490	4182	4962	37.4	23.6	7.2		
Geothermal	4259	4791	4776	1092	1089	1158	1189	1.2	-13.7	0.9		
Net Imports (ktoe)	152069	160241	149804	131764	133615	119219	85703	-0.1	-1.1	-4.3		
Solids	13133	16367	14301	16050	18620	12599	6540	0.9	2.7	-9.9		
Oil	87599	79154	67826	59509	54545	48076	40420	-2.5	-2.2	-3.0		
Crude oil and Feedstocks	89451	94307	84882	68525	61685	54026	45809	-0.5	-3.1	-2.9		
Oil products	-1852	-15153	-17056	-9016	-7140	-5950	-5389	24.9	-8.3	-2.8		
Natural gas	47008	59840	61600	49416	54631	52551	33200	2.7	-1.2	-4.9		
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7		
Import Dependency (%)	86.5	84.5	84.3	81.1	80.8	78.0	71.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288963	320362	315164	271582	1.0	0.7	-1.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	26272	43606	39734	58856	67235	45093	20976	4.2	5.4	-11.0		
Oil (including refinery gas)	85878	47124	21714	8781	7800	7288	3400	-12.8	-9.7	-8.0		
Gas (including derived gases)	106398	156191	158215	110293	130191	115945	60512	4.0	-1.9	-7.4		
Biomass-waste	1908	6153	11586	18671	21440	29693	38051	19.8	6.3	5.9		
Hydro (pumping excluded)	44199	36067	51116	48114	47525	48980	50428	1.5	-0.7	0.6		
Wind	563	2344	9126	14628	14646	18480	39907	32.1	4.8	10.5		
Solar	17	31	1906	23409	25315	43474	52098	59.9	29.5	7.5		
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122381	124230	130402	3.9	1.6	0.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	16770	18701	26470	46375	47699	60383	74958	4.7	6.1	4.6		
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	19051	0.7	0.7	0.1		
Wind	363	1635	5794	8958	8963	10203	18796	31.9	4.5	7.7		
Solar	17	30	3113	18905	19930	31375	37111	68.3	20.4	6.4		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	55126	64249	78450	81079	74682	63847	55444	3.6	-0.5	-2.9		
of which cogeneration units	6476	5888	7351	17208	18366	17261	12544	1.3	9.6	-3.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4		
Gas fired	22819	36431	51677	52045	51023	46261	40729	8.5	-0.1	-2.2		
Oil fired	21763	17998	14748	13928	8629	6019	2206	-3.8	-5.2	-12.8		
Biomass-waste fired	436	870	1774	4810	5388	5678	6626	15.1	11.7	2.1		
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0		
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.7	28.0	23.1					
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.7	46.0	44.5					
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.1	10.7	9.4					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	35.9	46.6	68.7					
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43823	38207	24982	0.9	-2.1	-5.5		
Solids	6045	10399	9484	12963	14712	9221	4261	4.6	4.5	-11.7		
Oil (including refinery gas)	18954	12079	7365	1905	1673	1539	865	-9.0	-13.8	-6.4		
Gas (including derived gases)	19668	29585	28966	18745	22167	20092	10993	3.9	-2.6	-6.8		
Biomass & Waste	438	2270	3527	3795	4331	6414	7923	23.2	2.1	6.2		
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	101609	106909	97409	78677	74313	66355	57431	-0.4	-2.7	-2.5		
Refineries	95900	101959	91472	74873	68907	61332	53081	-0.5	-2.8	-2.6		
Biofuels and hydrogen production	0	177	1419	1593	2218	1908	1793	0.0	4.6	-2.1		
District heating	0	0	110	121	123	119	95	0.0	1.2	-2.5		
Derived gases, cokeries etc.	5709	4773	4408	2090	3065	2995	2462	-2.6	-3.6	-2.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	943	931	952	967	1020	1031	1070	0.1	0.7	0.5
Public road transport	93	101	102	105	107	108	109	0.9	0.5	0.2
Private cars and motorcycles	756	727	740	746	781	778	803	-0.2	0.5	0.3
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.1
Aviation ⁽³⁾	34	43	51	56	64	70	75	4.3	2.2	1.7
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.2
Freight transport activity (Gtkm)	253	303	268	271	290	300	319	0.6	0.8	1.0
Heavy goods and light commercial vehicles	192	226	202	203	217	221	235	0.5	0.7	0.8
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	55	58	2.4	0.5	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	39000	35802	34279	-0.2	-0.6	-1.3
Public road transport	1061	1231	1245	1278	1308	1287	1269	1.6	0.5	-0.3
Private cars and motorcycles	27882	27505	25835	24747	23388	20317	18750	-0.8	-1.0	-2.2
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8424	8095	8115	0.9	-0.3	-0.4
Rail	526	492	463	487	523	564	590	-1.3	1.2	1.2
Aviation	3491	3700	3863	4073	4292	4396	4366	1.0	1.1	0.2
Inland navigation	1269	1387	1128	1012	1065	1143	1189	-1.2	-0.6	1.1
By transport activity										
Passenger transport	33399	32865	31375	30531	29445	26495	24904	-0.6	-0.6	-1.7
Freight transport	8775	11512	9844	9324	9555	9308	9375	1.2	-0.3	-0.2
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.7	5.6			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	154443	141623	109573	0.0	-0.7	-3.4
Final Energy Demand	125579	134544	124781	122385	122673	114299	89337	-0.1	-0.2	-3.1
by sector										
Industry	40502	39858	30905	27952	28844	27778	21514	-2.7	-0.7	-2.9
Energy intensive industries	25289	25477	19382	16985	17788	17129	13070	-2.6	-0.9	-3.0
Other industrial sectors	15214	14382	11523	10966	11056	10649	8443	-2.7	-0.4	-2.7
Residential	27656	31313	31959	34859	34779	32062	20944	1.5	0.8	-4.9
Tertiary	14901	18537	20182	19017	19306	17897	11860	3.1	-0.4	-4.8
Transport ⁽⁵⁾	42519	44836	41734	40557	39744	36561	35020	-0.2	-0.5	-1.3
by fuel										
Solids	3586	3980	2910	2094	2651	2303	1303	-2.1	-0.9	-6.9
Oil	57249	59005	48733	45659	41824	36007	29914	-1.6	-1.5	-3.3
Gas	38022	40609	38499	36390	37374	36143	25086	0.1	-0.3	-3.9
Electricity	23472	25871	25736	25288	26461	26433	23151	0.9	0.3	-1.3
Heat (from CHP and District Heating)	1449	3082	3332	3592	3773	3820	2595	8.7	1.2	-3.7
Renewable energy forms	1802	1997	5570	9356	10574	9478	7065	11.9	6.6	-4.0
Other	0	0	0	6	17	115	224	0.0	0.0	29.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	114	108	102	97	84	62	-0.3	-1.1	-4.3
Industry (Energy on Value added, index 2000=100)	100	100	83	79	78	73	54	-1.8	-0.7	-3.5
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	98	60	0.9	0.4	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	99	62	2.3	-1.0	-6.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	21	-1.0	-1.5	-2.3
Freight transport (toe/Mtkm)	35	38	37	34	33	31	29	0.6	-1.1	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	558.5	592.5	509.9	457.0	460.2	400.8	301.5	-0.9	-1.0	-4.1
of which ETS sectors (2013 scope) GHG emissions		261.5	213.8	172.1	189.6	156.9	103.9		-1.2	-5.8
of which ESD sectors (2013 scope) GHG emissions		331.0	296.1	284.8	270.5	243.9	197.6		-0.9	-3.1
CO2 Emissions (energy related)	432.5	470.4	404.2	354.7	362.7	309.6	215.6	-0.7	-1.1	-5.1
Power generation/District heating	137.1	158.5	135.9	106.9	123.1	93.9	50.3	-0.1	-1.0	-8.6
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.2	9.8	0.4	-2.4	-2.7
Industry	78.0	72.5	49.5	42.3	42.9	38.7	25.8	-4.5	-1.4	-5.0
Residential	53.4	59.9	53.6	51.4	49.7	45.2	24.1	0.0	-0.7	-7.0
Tertiary	24.4	29.3	30.2	26.0	25.4	22.6	14.3	2.2	-1.7	-5.6
Transport	123.7	131.8	118.6	114.0	108.7	98.0	91.3	-0.4	-0.9	-1.7
CO2 Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	22.0	22.0	21.8	-1.7	-0.9	-0.1
Non-CO2 GHG emissions	97.3	91.3	81.6	81.2	75.5	69.2	64.1	-1.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.6	76.3	57.4	-0.9	-1.0	-4.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.47	0.45	0.38	0.31	0.32	0.25	0.16	-2.0	-1.7	-6.8
Final energy demand (t of CO2/toe)	2.23	2.18	2.02	1.91	1.85	1.79	1.74	-1.0	-0.9	-0.6
Industry	1.93	1.82	1.60	1.51	1.49	1.39	1.20	-1.8	-0.7	-2.1
Residential	1.93	1.91	1.68	1.48	1.43	1.41	1.15	-1.4	-1.6	-2.1
Tertiary	1.64	1.58	1.50	1.37	1.32	1.27	1.20	-0.9	-1.3	-0.9
Transport	2.91	2.94	2.84	2.81	2.73	2.68	2.61	-0.2	-0.4	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.8	25.3	40.4			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	28.4	51.0			
RES-E share	15.7	16.3	20.1	33.6	32.2	41.7	60.9			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.7	13.9	21.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	66	77	90	86	90	94	97	3.2	0.0	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	153	161	170	0.9	0.0	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.9	206.3	260.6	2.0	1.5	3.2
as % of GDP	8.6	9.2	10.2	10.9	11.4	11.6	13.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Latvia: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4		
GDP (in 000 ME13)	13	20	19	23	27	29	31	3.6	3.5	1.7		
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4526	4522	3601	1.8	-0.2	-2.3		
Solids	132	82	109	84	73	52	33	-1.9	-3.9	-7.8		
Oil	1295	1487	1521	1464	1433	1353	1197	1.6	-0.6	-1.8		
Natural gas	1092	1358	1462	867	914	1123	469	3.0	-4.6	-6.4		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6		
Renewable energy forms	1191	1481	1463	1758	1962	1918	1734	2.1	3.0	-1.2		
Energy Branch Consumption	39	42	48	33	36	45	29	2.1	-2.8	-2.2		
Non-Energy Uses	75	97	73	105	127	142	144	-0.3	5.7	1.3		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	1411	1868	1979	2228	2489	2402	2121	3.4	2.3	-1.6		
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0		
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	1393	1858	1975	2228	2489	2402	2121	3.6	2.3	-1.6		
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0		
Biomass & Waste	1150	1568	1668	1972	2162	2073	1695	3.8	2.6	-2.4		
Wind	0	4	4	8	54	55	151	30.2	29.1	10.8		
Solar and others	0	0	0	0	1	2	3	0.0	0.0	7.9		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	-9.9		
Net Imports (ktoe)	2361	3097	2220	2456	2396	2489	1857	-0.6	0.8	-2.5		
Solids	61	77	112	84	73	52	33	6.3	-4.2	-7.8		
Oil	1235	1783	1671	1807	1787	1710	1545	3.1	0.7	-1.4		
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0		
Oil products	1148	1779	1669	1807	1787	1710	1545	3.8	0.7	-1.4		
Natural gas	1113	1434	903	867	919	1135	499	-2.1	0.2	-5.9		
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6		
Import Dependency (%)	61.0	63.9	45.5	52.4	49.0	50.9	46.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6716	8064	6592	4.8	0.1	-0.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	78	0	2	78	112	113	98	-30.7	49.6	-1.4		
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0		
Gas (including derived gases)	1128	1486	2988	2023	2153	3378	528	10.2	-3.2	-13.1		
Biomass-waste	0	41	66	511	662	771	1047	0.0	25.9	4.7		
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0		
Wind	4	47	49	95	628	640	1758	28.5	29.1	10.8		
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3104	3574	2.0	2.0	1.4		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	1515	1562	1606	1652	1872	1873	2296	0.6	1.5	2.1		
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0		
Wind	2	26	30	62	281	283	705	31.1	25.1	9.6		
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	574	600	940	1185	1229	1231	1278	5.1	2.7	0.4		
of which cogeneration units	254	586	870	1026	1080	1038	1122	13.1	2.2	0.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0		
Gas fired	522	572	893	1098	1098	1089	1089	5.5	2.1	-0.1		
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0		
Biomass-waste fired	2	10	10	50	95	105	152	17.8	24.9	4.8		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.2	27.7	20.1					
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.8	47.1	31.9					
% of gross electricity from CHP	31.4	30.7	45.0	38.6	34.2	45.5	15.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.3	56.7	90.5					
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	549	778	451	4.1	-3.9	-2.0		
Solids	53	1	9	13	18	18	15	-15.9	6.8	-1.6		
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0		
Gas (including derived gases)	408	562	767	360	387	568	165	6.5	-6.6	-8.2		
Biomass & Waste	0	22	29	117	144	192	271	0.0	17.4	6.5		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	570	479	383	344	422	385	274	-3.9	1.0	-4.2		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	3	27	37	89	71	65	0.0	12.6	-3.1		
District heating	569	476	356	307	333	312	205	-4.6	-0.7	-4.7		
Derived gases, cokeries etc.	1	0	0	0	0	2	3	-95.3	1788.1	25.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.1
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.3
Private cars and motorcycles	12	12	13	13	14	14	14	0.8	0.7	0.5
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.1
Aviation ⁽³⁾	0	1	2	2	2	3	4	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	5	5.8	2.2	1.4
Rail	13	20	17	20	21	24	27	2.6	2.2	2.6
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1154	1103	4.9	-0.1	-0.8
Public road transport	51	67	68	65	66	67	67	2.9	-0.3	0.0
Private cars and motorcycles	502	603	673	613	590	505	440	3.0	-1.3	-2.9
Heavy goods and light commercial vehicles	89	242	260	255	292	308	305	11.2	1.2	0.5
Rail	76	94	76	87	91	101	110	0.1	1.8	2.0
Aviation	27	59	118	132	148	166	172	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.1
By transport activity										
Passenger transport	582	729	861	811	805	738	680	4.0	-0.7	-1.7
Freight transport	163	335	340	347	389	416	423	7.6	1.4	0.8
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.5	6.1			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4399	4379	3457	1.9	-0.4	-2.4
Final Energy Demand	3254	4018	4120	4104	4248	4082	3215	2.4	0.3	-2.7
by sector										
Industry	576	699	774	912	994	1028	816	3.0	2.5	-2.0
Energy intensive industries	229	282	305	277	305	303	238	2.9	0.0	-2.5
Other industrial sectors	348	417	469	635	689	725	579	3.0	3.9	-1.7
Residential	1327	1504	1389	1286	1295	1192	808	0.5	-0.7	-4.6
Tertiary	602	749	756	744	762	705	486	2.3	0.1	-4.4
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1158	1105	4.8	0.0	-0.8
by fuel										
Solids	62	74	94	70	54	34	17	4.2	-5.4	-10.9
Oil	1056	1323	1446	1355	1306	1210	1053	3.2	-1.0	-2.1
Gas	329	508	498	391	437	446	303	4.2	-1.3	-3.6
Electricity	385	493	534	568	624	670	632	3.3	1.6	0.1
Heat (from CHP and District Heating)	598	603	575	524	571	529	350	-0.4	-0.1	-4.8
Renewable energy forms	824	1018	973	1194	1256	1191	854	1.7	2.6	-3.8
Other	0	0	0	0	0	2	7	0.0	0.0	34.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	293	235	246	189	171	154	115	-1.8	-3.6	-3.9
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	88	66	0.2	-0.9	-3.4
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	37	23	-4.0	-3.9	-6.3
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	49	32	-2.0	-3.2	-6.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	32	27	1.7	-1.8	-3.0
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.5	11.3	12.3	10.6	10.1	10.1	8.0	1.6	-1.9	-2.3
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	3.0	1.7		-3.7	-3.9
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.2	6.3		-1.3	-1.9
CO2 Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.5	4.4	2.0	-2.6	-3.6
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.7	0.5	-0.9	-6.7	-9.2
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.4	0.0	-2.9	-5.9
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.2	6.5	-2.1	-6.6
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.4	2.1	-1.8	-6.0
Transport	2.2	3.2	3.5	3.4	3.3	3.2	3.0	4.9	-0.6	-1.1
CO2 Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.7	10.4	2.8	0.0
Non-CO2 GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.8	-0.1	-1.3	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.2	30.1	1.6	-1.9	-2.3
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.21	0.17	0.16	0.09	0.08	0.11	0.04	-2.2	-6.5	-7.0
Final energy demand (t of CO2/toe)	1.29	1.37	1.45	1.30	1.23	1.19	1.24	1.1	-1.6	0.1
Industry	1.80	1.55	1.34	0.85	0.78	0.72	0.52	-2.9	-5.3	-4.0
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.28	6.0	-1.5	-2.1
Tertiary	1.14	1.10	1.12	0.98	0.92	0.82	0.78	-0.2	-1.9	-1.6
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.68	0.0	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.5	41.6	47.6			
RES-H&C share	40.1	43.0	40.9	51.2	52.0	55.1	63.7			
RES-E share	52.7	43.0	42.1	46.2	53.1	51.1	70.2			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.1	21.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	107	86	93	77	83	88	111	-1.4	-1.1	2.9
Average Price of Electricity in Final demand sectors (€133/MWh)	57	66	107	102	113	120	134	6.5	0.6	1.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.9	8.0	10.0	0.1	4.5
as % of GDP	14.8	17.3	27.0	19.0	19.4	20.2	25.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EUCC-40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8		
GDP (in 000 ME13)	19	27	29	35	40	42	43	4.4	3.3	0.7		
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6577	6280	6151	-0.4	-0.3	-0.7		
Solids	91	185	213	254	209	150	91	8.8	-0.2	-8.0		
Oil	2125	2710	2502	2432	2366	2219	1901	1.6	-0.6	-2.2		
Natural gas	2064	2477	2492	2122	2082	2264	1140	1.9	-1.8	-5.8		
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0		
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0		
Renewable energy forms	675	881	1065	1249	1353	1254	1123	4.7	2.4	-1.9		
Energy Branch Consumption	610	853	743	680	613	600	572	2.0	-1.9	-0.7		
Non-Energy Uses	662	804	714	717	793	787	754	0.8	1.1	-0.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3269	3900	1318	1358	1484	1380	3267	-8.7	1.2	8.2		
Solids	12	20	9	19	7	8	8	-3.0	-2.1	1.2		
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.2		
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0		
Nuclear	2223	2713	0	0	0	0	2010	-100.0	0.0	0.0		
Renewable energy sources	682	900	1185	1262	1400	1300	1182	5.7	1.7	-1.7		
Hydro	29	39	46	38	38	38	44	4.7	-2.0	1.5		
Biomass & Waste	653	858	1114	1158	1288	1037	884	5.5	1.5	-3.7		
Wind	0	0	19	60	60	201	207	0.0	12.0	13.2		
Solar and others	0	0	0	5	8	8	12	0.0	0.0	4.1		
Geothermal	0	3	5	1	6	16	35	0.0	3.1	18.9		
Net Imports (ktoe)	4247	5026	5668	5454	5258	5069	3054	2.9	-0.7	-5.3		
Solids	80	174	196	235	202	143	83	9.4	0.3	-8.5		
Oil	2223	2622	2607	2516	2450	2308	1990	1.6	-0.6	-2.1		
Crude oil and Feedstocks	4760	9029	9339	9639	9123	8556	7857	7.0	-0.2	-1.5		
Oil products	-2537	-6408	-6732	-7123	-6673	-6247	-5867	10.3	-0.1	-1.3		
Natural gas	2065	2493	2485	2122	2085	2271	1153	1.9	-1.7	-5.8		
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0		
Import Dependency (%)	59.4	56.8	81.8	80.1	78.0	78.6	48.3					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	6078	8949	13888	-7.7	2.0	8.6		
Nuclear energy	8419	10337	0	0	0	0	9377	-100.0	0.0	0.0		
Solids	0	0	0	0	52	46	29	0.0	0.0	-5.5		
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0		
Gas (including derived gases)	1707	3217	3436	3028	4101	5417	451	7.2	1.8	-19.8		
Biomass-waste	0	7	147	657	726	633	1047	0.0	17.3	3.7		
Hydro (pumping excluded)	340	451	540	440	440	447	513	4.7	-2.0	1.5		
Solar	0	2	224	695	695	2341	2407	0.0	12.0	13.2		
Geothermal and other renewables	0	0	0	64	64	64	64	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2425	3210	4203	-6.3	-1.7	5.7		
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0		
Renewable energy	103	118	249	614	614	1550	1595	9.2	9.4	10.0		
Hydro (pumping excluded)	103	117	116	116	116	118	135	1.2	0.0	1.6		
Wind	0	1	133	424	424	1358	1385	0.0	12.3	12.6		
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2556	2577	2629	2829	1811	1660	1491	0.3	-3.7	-1.9		
of which cogeneration units	650	1038	1100	1799	579	916	547	5.4	-6.2	-0.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	3	3	0	0	6	6	6	-100.0	0.0	0.0		
Gas fired	1736	1781	1822	1992	1515	1515	1344	0.5	-1.8	-1.2		
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4		
Biomass-waste fired	0	0	37	67	90	91	141	0.0	9.3	4.6		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.7	30.1	35.8					
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	47.4	47.1	28.9					
% of gross electricity from CHP	15.5	15.5	34.6	45.5	49.5	38.2	6.7					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	31.7	39.0	96.5					
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	885	1112	455	3.3	-3.6	-6.4		
Solids	0	0	0	0	12	14	10	-100.0	0.0	-1.9		
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0		
Gas (including derived gases)	723	1057	1117	725	710	923	142	4.4	-4.4	-14.9		
Biomass & Waste	1	5	65	135	163	175	304	59.7	9.7	6.4		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	7911	12651	9987	10232	9879	9293	10396	2.4	-0.1	0.5		
Refineries	5032	9415	9446	9704	9276	8791	8099	6.5	-0.2	-1.3		
Biofuels and hydrogen production	0	3	45	59	113	99	91	0.0	9.7	-2.2		
District heating	656	520	496	468	489	402	195	-2.7	-0.1	-8.8		
Derived gases, cokeries etc.	2223	2713	0	0	0	1	2011	0.0	0.0	154.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Lithuania: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.6
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.5
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.4
Inland navigation	0	0	0	0	0	0	0	0.4	1.4	0.8
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.3
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6
Inland navigation	0	0	0	0	0	0	0	0.4	1.7	0.6
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1630	1536	1427	3.7	0.7	-1.3
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4
Private cars and motorcycles	705	845	919	881	871	777	689	2.7	-0.5	-2.3
Heavy goods and light commercial vehicles	204	387	443	517	555	546	533	8.1	2.3	-0.4
Rail	76	79	65	67	78	81	80	-1.5	1.8	0.3
Aviation	27	46	49	69	79	84	78	6.1	5.0	-0.1
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5
By transport activity										
Passenger transport	777	947	1013	998	998	910	813	2.7	-0.2	-2.0
Freight transport	277	466	508	584	632	626	614	6.2	2.2	-0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.6	6.5			
ENERGY EFFICIENCY										
Primary energy consumption	6401	7907	6073	5934	5784	5494	5397	-0.5	-0.5	-0.7
Final Energy Demand	3767	4601	4763	4996	5043	4629	3458	2.4	0.6	-3.7
by sector										
Industry	780	987	898	1172	1198	1211	875	1.4	2.9	-3.1
Energy intensive industries	363	436	486	689	696	700	499	3.0	3.7	-3.3
Other industrial sectors	416	551	412	483	502	511	375	-0.1	2.0	-2.9
Residential	1368	1509	1599	1498	1432	1210	722	1.6	-1.1	-6.6
Tertiary	563	672	720	718	757	647	415	2.5	0.5	-5.8
Transport ⁽⁵⁾	1057	1433	1546	1608	1656	1561	1446	3.9	0.7	-1.3
by fuel										
Solids	82	177	208	238	180	118	62	9.8	-1.4	-10.2
Oil	1356	1616	1613	1664	1692	1558	1344	1.7	0.5	-2.3
Gas	363	519	567	649	607	581	330	4.6	0.7	-5.9
Electricity	533	686	717	832	900	943	861	3.0	2.3	-0.4
Heat (from CHP and District Heating)	827	905	922	870	914	814	437	1.1	-0.1	-7.1
Renewable energy forms	605	698	738	743	751	614	422	2.0	0.2	-5.6
Other	0	0	0	0	0	1	3	0.0	0.0	31.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	374	317	234	191	165	148	144	-4.6	-3.5	-1.3
Industry (Energy on Value added, index 2000=100)	100	80	66	74	70	68	49	-4.1	0.6	-3.5
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	49	39	23	-2.7	-4.2	-7.4
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	52	33	-1.3	-2.9	-6.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	18	0.3	-1.2	-2.6
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.6
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	19.0	15.0	1.5	-1.6	-2.6
of which ETS sectors (2013 scope) GHG emissions	11.7	9.4	7.8	7.0	7.0	7.5	4.6		-2.9	-4.0
of which ESD sectors (2013 scope) GHG emissions	13.2	13.6	13.4	13.4	12.5	11.6	10.3		-0.8	-1.9
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.5	6.7	1.8	-1.4	-4.6
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.6	0.5	-0.8	-5.4	-13.0
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.2
Industry	1.1	1.3	1.2	1.5	1.5	1.5	0.8	0.7	2.3	-6.4
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.2	3.7	-2.7	-12.2
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.2	2.2	-0.7	-9.3
Transport	3.1	4.2	4.5	4.6	4.6	4.3	3.9	3.7	0.2	-1.5
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.4	2.3	6.0	-1.4	-0.5
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	6.2	6.0	0.0	-2.1	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.5	39.4	31.0	1.5	-1.6	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.14	0.03	2.3	-5.5	-13.7
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.41	1.46	0.6	-0.3	0.2
Industry	1.38	1.35	1.29	1.31	1.22	1.20	0.86	-0.7	-0.6	-3.4
Residential	0.40	0.43	0.50	0.51	0.42	0.31	0.23	2.1	-1.6	-5.9
Tertiary	0.88	0.84	0.86	0.82	0.76	0.61	0.52	-0.3	-1.2	-3.7
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.71	-0.2	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.3	24.4	27.4			
RES-H&C share	26.1	30.4	33.2	36.7	38.7	35.3	45.1			
RES-E share	4.0	3.8	7.4	15.6	15.3	26.2	32.6			
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.2	10.9	12.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	106	102	108	8.7	-4.8	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	117	132	160	5.7	0.4	3.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	8.0	9.6	7.6	2.5	3.0
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.9	22.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Luxembourg: EUCL-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2
GDP (in 000 ME13)	32	38	41	45	52	60	68	2.6	2.3	2.8
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4732	4610	4166	2.4	0.2	-1.3
Solids	108	77	66	51	44	32	16	-4.8	-4.0	-9.4
Oil	2320	3160	2869	2908	2863	2641	2601	2.2	0.0	-1.0
Natural gas	671	1176	1197	1031	1051	1149	709	6.0	-1.3	-3.9
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Renewable energy forms	64	106	160	245	390	400	421	9.6	9.3	0.8
Energy Branch Consumption	26	30	50	51	55	62	62	6.9	1.0	1.1
Non-Energy Uses	55	29	33	39	42	45	46	-5.1	2.5	0.9
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	64	111	122	148	263	286	299	6.7	8.0	1.3
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	64	111	122	148	263	286	299	6.7	8.0	1.3
Hydro	11	8	9	9	9	10	13	-1.4	0.2	3.3
Biomass & Waste	51	97	105	119	185	199	162	7.5	5.9	-1.4
Wind	2	5	5	7	42	41	61	7.4	24.4	3.8
Solar and others	0	2	3	13	27	35	64	0.0	25.3	9.1
Geothermal	0	0	0	0	0	0	0	0.0	0.0	17.9
Net Imports (ktoe)	3639	4671	4503	4468	4468	4325	3869	2.2	-0.1	-1.4
Solids	108	77	66	51	44	32	16	-4.8	-4.0	-9.4
Oil	2368	3141	2852	2908	2863	2641	2601	1.9	0.0	-1.0
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil products	2368	3141	2852	2908	2863	2641	2601	1.9	0.0	-1.0
Natural gas	671	1176	1197	1031	1051	1149	709	6.0	-1.3	-3.9
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.8	92.8			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3301	4147	3605	22.6	0.2	0.9
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0
Gas (including derived gases)	215	3107	2916	2304	2408	3218	2031	29.8	-1.9	-1.7
Biomass-waste	56	76	129	158	172	209	272	8.7	2.9	4.6
Hydro (pumping excluded)	124	94	108	110	110	114	152	-1.4	0.2	3.3
Wind	27	52	55	78	486	482	705	7.4	24.3	3.8
Solar	0	17	21	112	121	121	442	0.0	19.2	13.8
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	163	574	597	702	961	943	1448	13.8	4.9	4.2
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	47	93	107	212	456	447	968	8.6	15.6	7.8
Hydro (pumping excluded)	33	34	34	34	34	35	47	0.3	0.0	3.3
Wind	14	35	44	58	291	282	419	12.1	20.8	3.7
Solar	0	24	29	120	131	131	501	0.0	16.2	14.4
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	116	481	490	490	505	496	481	15.5	0.3	-0.5
of which cogeneration units	63	101	121	229	178	108	155	6.7	4.0	-1.4
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0
Gas fired	103	468	469	469	469	457	442	16.4	0.0	-0.6
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0
Biomass-waste fired	9	9	17	20	34	37	37	7.1	7.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	38.7	49.5	28.0			
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.4	48.6			
% of gross electricity from CHP	17.7	10.1	9.6	23.3	15.8	6.3	7.7			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.0	22.3	43.6			
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	444	610	408	19.1	-2.2	-0.8
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0
Gas (including derived gases)	66	544	520	383	399	553	346	22.8	-2.6	-1.4
Biomass & Waste	29	32	33	36	45	57	62	1.5	3.1	3.2
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1	3	46	113	153	145	163	57.2	12.7	0.7
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0
Biofuels and hydrogen production	0	1	42	108	147	138	158	0.0	13.4	0.7
District heating	1	2	4	5	5	5	3	23.1	2.3	-4.8
Derived gases, cokeries etc.	0	0	0	0	0	2	2	0.0	0.0	20.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Luxembourg: EUO0+40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.2
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.2
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.2
Rail	0	0	0	0	0	1	1	0.4	3.1	2.9
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	3	3	3	3	4	4	5	0.8	3.6	1.8
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.6
Rail	1	0	0	0	0	0	1	-6.5	2.0	3.2
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.8
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2761	2595	2686	3.1	0.6	-0.3
Public road transport	60	92	106	115	122	120	123	5.9	1.4	0.1
Private cars and motorcycles	1153	1521	1341	1311	1217	1031	1077	1.5	-1.0	-1.2
Heavy goods and light commercial vehicles	364	721	709	818	956	939	939	6.9	3.0	-0.2
Rail	12	11	13	14	16	18	20	0.8	1.9	2.3
Aviation	321	432	431	435	447	483	523	3.0	0.3	1.6
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.6
By transport activity										
Passenger transport	1535	2046	1880	1863	1787	1636	1725	2.0	-0.5	-0.3
Freight transport	379	735	724	834	974	959	961	6.7	3.0	-0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.9	1.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.3	5.3			
ENERGY EFFICIENCY										
Primary energy consumption	3599	4771	4609	4576	4690	4566	4122	2.5	0.2	-1.3
Final Energy Demand	3505	4477	4327	4382	4471	4245	3883	2.1	0.3	-1.4
by sector										
Industry	714	754	739	585	591	560	437	0.4	-2.2	-3.0
Energy intensive industries	583	598	601	438	432	396	296	0.3	-3.2	-3.7
Other industrial sectors	130	156	139	148	159	164	141	0.6	1.4	-1.2
Residential	468	525	508	498	520	507	327	0.8	0.2	-4.5
Tertiary	409	418	477	601	600	584	432	1.5	2.3	-3.2
Transport ⁽⁵⁾	1914	2781	2604	2697	2761	2595	2686	3.1	0.6	-0.3
by fuel										
Solids	108	77	66	51	44	32	16	-4.8	-4.0	-9.4
Oil	2261	3106	2835	2869	2821	2597	2555	2.3	-0.1	-1.0
Gas	605	631	675	645	651	596	362	1.1	-0.4	-5.7
Electricity	497	529	568	557	601	666	634	1.4	0.6	0.5
Heat (from CHP and District Heating)	13	75	74	80	75	75	53	19.2	0.2	-3.4
Renewable energy forms	22	59	108	181	278	274	242	17.2	9.9	-1.4
Other	0	0	0	0	1	5	19	0.0	0.0	40.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	115	126	113	103	92	77	61	-0.1	-2.1	-4.0
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	55	2.9	-3.6	-4.9
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	71	40	-0.7	-1.2	-7.2
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	71	45	-1.5	-0.1	-6.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	161	132	125	0.3	-2.5	-2.6
Freight transport (toe/Mtkm)	139	268	247	245	234	214	194	5.9	-0.5	-1.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.7	14.1	13.3	12.9	12.8	12.3	11.0	2.2	-0.4	-1.5
of which ETS sectors (2013 scope) GHG emissions		4.2	3.8	3.5	3.4	3.8	3.2		-1.0	-0.7
of which ESD sectors (2013 scope) GHG emissions		9.9	9.5	9.5	9.4	8.5	7.8		-0.2	-1.8
CO2 Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	10.8	9.5	2.9	-0.4	-1.7
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.3	0.8	22.6	-2.6	-1.4
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.4	-2.0	-2.8	-6.4
Residential	1.1	1.2	1.1	1.1	1.0	0.9	0.4	0.5	-1.1	-8.8
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.4	-0.6	0.6	-5.6
Transport	5.8	8.4	7.8	7.9	7.9	7.4	7.6	3.1	0.2	-0.5
CO2 Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.5	-2.1	-1.1	-0.5
Non-CO2 GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	1.0	-0.9	0.1	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.4	92.5	82.9	2.2	-0.4	-1.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.30	0.30	0.25	0.22	0.26	0.19	0.7	-2.8	-1.5
Final energy demand (t of CO2/toe)	2.49	2.52	2.43	2.40	2.31	2.23	2.25	-0.2	-0.5	-0.3
Industry	1.71	1.47	1.36	1.39	1.27	1.14	0.89	-2.3	-0.6	-3.5
Residential	2.29	2.28	2.22	2.14	1.93	1.73	1.23	-0.3	-1.4	-4.4
Tertiary	1.59	1.25	1.28	1.23	1.08	0.96	0.84	-2.1	-1.7	-2.5
Transport	3.01	3.04	2.99	2.92	2.88	2.85	2.82	-0.1	-0.4	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	9.0	10.6			
RES-H&C share	1.4	3.6	4.8	6.4	12.4	15.4	19.3			
RES-E share	2.1	3.2	3.8	6.1	11.7	10.9	19.4			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.8	12.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	93	89	99	-1.1	1.7	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	120	130	138	0.1	1.0	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.5	8.3	4.3	2.5	3.5
as % of GDP	9.5	11.5	11.2	10.4	11.4	11.0	12.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Malta: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	0	0	0	0	0	0	0	0.9	0.6	0.4		
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9		
Gross Inland Consumption (ktoe)	802	972	908	675	752	698	580	1.3	-1.9	-2.6		
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.9		
Oil	802	972	903	579	343	315	283	1.2	-9.2	-1.9		
Natural gas	0	0	0	0	344	309	209	0.0	0.0	-4.9		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Renewable energy forms	0	1	5	21	49	57	72	0.0	25.7	3.9		
Energy Branch Consumption	10	2	10	6	5	4	3	0.5	-7.0	-6.3		
Non-Energy Uses	0	20	9	11	12	13	12	0.0	3.4	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	0	1	4	16	38	48	67	0.0	24.3	5.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	0	1	4	16	38	48	67	0.0	24.3	5.9		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	0	0	1	3	1	2	4	0.0	9.5	9.1		
Wind	0	0	0	0	0	0	2	0.0	0.0	0.0		
Solar and others	0	1	4	13	36	46	62	0.0	25.6	5.5		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	-0.4		
Net Imports (ktoe)	1458	1630	2362	2099	2103	2073	1987	4.9	-1.2	-0.6		
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.9		
Oil	1458	1630	2361	2019	1720	1713	1639	4.9	-3.1	-0.5		
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil products	1458	1630	2361	2019	1720	1713	1639	4.9	-3.1	-0.5		
Natural gas	0	0	0	0	356	335	326	0.0	0.0	-0.9		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.7	96.7					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2512	2545	2045	1.0	1.7	-2.0		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	1917	2240	2113	1293	3	0	0	1.0	-48.5	-100.0		
Gas (including derived gases)	0	0	0	0	2176	2188	1484	0.0	0.0	-3.8		
Biomass-waste	0	0	0	6	8	11	20	0.0	0.0	9.3		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	18	0.0	0.0	0.0		
Solar	0	0	0	103	326	346	523	0.0	0.0	4.8		
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	577	577	579	541	785	928	935	0.0	3.1	1.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	2	60	185	196	310	0.0	57.2	5.3		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	12	0.0	0.0	0.0		
Solar	0	0	2	60	185	196	297	0.0	57.2	4.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	577	577	577	481	601	732	625	0.0	0.4	0.4		
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-5.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	237	477	477	0.0	0.0	7.2		
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8		
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	5.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.7	30.7	24.6					
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.4	61.0	61.7					
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.3	14.0	27.4					
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	346	310	210	2.1	-4.9	-4.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-50.7	-100.0		
Gas (including derived gases)	0	0	0	0	344	309	208	0.0	0.0	-4.9		
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	0.4		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	0	0	1	3	7	7	5	0.0	23.3	-2.9		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	1	3	7	7	5	0.0	23.3	-2.9		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	23.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.3	1.2
Public road transport	0	0	1	1	1	1	1	0.8	0.5	0.3
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0.3	1.3	1.6
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0.3	1.3	1.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	265	261	-0.5	0.6	-0.3
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.8
Private cars and motorcycles	97	105	110	109	102	88	80	1.2	-0.7	-2.4
Heavy goods and light commercial vehicles	36	37	31	31	34	35	36	-1.5	0.7	0.7
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	122	87	102	105	122	132	134	-1.8	1.9	0.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	232	205	224	225	236	231	225	-0.4	0.6	-0.5
Freight transport	36	37	31	31	34	35	36	-1.5	0.7	0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.1	2.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.1			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	740	685	568	1.2	-1.9	-2.6
Final Energy Demand	483	478	476	501	549	533	463	-0.1	1.4	-1.7
by sector										
Industry	83	74	48	51	52	55	45	-5.4	0.9	-1.4
Energy intensive industries	13	19	8	8	8	8	7	-4.8	0.0	-1.4
Other industrial sectors	70	55	40	44	44	47	39	-5.5	1.1	-1.4
Residential	76	77	80	85	101	90	67	0.5	2.4	-4.0
Tertiary	55	85	94	108	126	122	89	5.4	3.0	-3.4
Transport ⁽⁵⁾	268	242	255	256	270	265	261	-0.5	0.6	-0.3
by fuel										
Solids	0	0	0	0	0	0	0	0.0	0.0	-13.9
Oil	348	309	316	323	330	303	270	-1.0	0.4	-2.0
Gas	0	0	0	0	0	0	0	0.0	0.0	8.2
Electricity	135	168	155	166	199	203	168	1.4	2.5	-1.7
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-3.2
Renewable energy forms	0	1	5	11	20	26	24	0.0	14.2	1.9
Other	0	0	0	0	0	0	0	0.0	0.0	34.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	162	134	89	90	76	58	-0.6	-3.9	-4.4
Industry (Energy on Value added, index 2000=100)	100	116	74	73	68	67	51	-2.9	-0.9	-2.9
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	77	52	-1.1	0.9	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	131	115	76	2.1	0.7	-5.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.7
Freight transport (toe/Mtkm)	139	135	116	113	110	106	101	-1.7	-0.6	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	2.8	3.3	3.1	2.1	2.1	1.9	1.5	1.0	-3.8	-3.2
of which ETS sectors (2013 scope) GHG emissions		2.4	2.1	1.1	1.2	1.1	0.9		-5.8	-2.7
of which ESD sectors (2013 scope) GHG emissions		1.0	1.0	1.0	0.9	0.8	0.6		-0.4	-3.8
CO ₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.6	1.3	0.9	-4.3	-3.1
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.7	0.5	2.1	-7.9	-4.9
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.4	-11.6
Residential	0.1	0.1	0.1	0.1	0.1	0.0	0.0	-1.2	2.4	-22.1
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.0	6.2	-0.8	-5.6
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.4
CO ₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO2 GHG emissions	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.6	-0.5	-3.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	95.5	86.2	69.2	1.0	-3.8	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.28	0.24	1.1	-9.5	-2.9
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.71	1.76	-0.9	-1.0	-0.2
Industry	1.55	1.43	0.97	1.00	0.93	0.84	0.31	-4.6	-0.5	-10.3
Residential	1.02	0.80	0.86	0.91	0.86	0.41	0.11	-1.7	0.0	-18.8
Tertiary	0.67	0.40	0.72	0.73	0.50	0.44	0.40	0.7	-3.6	-2.3
Transport	3.00	3.00	2.99	2.96	2.92	2.91	2.90	0.0	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.6	14.4	20.8			
RES-H&C share	0.0	1.0	7.0	17.5	23.9	39.3	57.6			
RES-E share	0.0	0.0	0.1	4.8	12.4	13.0	25.0			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.8	12.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€133/MWh)	78	111	173	117	87	92	100	8.4	-6.6	1.3
Average Price of Electricity in Final demand sectors (€133/MWh)	75	84	201	177	165	159	150	10.4	-1.9	-1.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.4	8.2	2.3	2.5
as % of GDP	6.8	8.9	12.5	11.2	12.8	13.0	13.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Netherlands: EUCC-40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2		
GDP (in 000 ME13)	537	573	613	620	668	706	738	1.3	0.9	1.0		
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83731	80293	67439	1.4	-0.3	-2.1		
Solids	7852	8195	7596	9274	8128	9523	6258	-0.3	0.7	-2.6		
Oil	28245	32464	34649	34892	34352	32606	30557	2.1	-0.1	-1.2		
Natural gas	35009	35334	39309	33859	31117	29899	19859	1.2	-2.3	-4.4		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Renewable energy forms	1827	2872	3796	3906	9101	8832	10354	7.6	9.1	1.3		
Energy Branch Consumption	5353	6336	5088	5605	5452	5038	4708	-0.5	0.7	-1.5		
Non-Energy Uses	10491	13013	17582	13895	14822	15340	15320	5.3	-1.7	0.3		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	57555	62220	70219	51471	52868	45407	38259	2.0	-2.8	-3.2		
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0		
Oil	2405	2328	1985	1381	1414	955	736	-1.9	-3.3	-6.3		
Natural gas	52203	56276	63534	44126	40638	33735	25227	2.0	-4.4	-4.7		
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4		
Renewable energy sources	1926	2577	3671	5009	9860	9727	11306	6.7	10.4	1.4		
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1		
Biomass & Waste	1831	2371	3282	4236	7011	6480	7213	6.0	7.9	0.3		
Wind	71	178	343	618	2253	2544	3208	17.0	20.7	3.6		
Solar and others	11	21	29	123	547	619	738	9.8	34.1	3.0		
Geothermal	0	0	8	24	41	76	136	0.0	18.2	12.9		
Net Imports (ktoe)	33759	37076	30549	47678	46241	50954	46346	-1.0	4.2	0.0		
Solids	7998	8312	9228	9274	8128	9523	6258	1.4	-1.3	-2.6		
Oil	41425	47836	45167	48901	48036	47126	45564	0.9	0.6	-0.5		
Crude oil and Feedstocks	61018	61724	60676	53468	50698	47753	44966	-0.1	-1.8	-1.2		
Oil products	-19594	-13888	-15508	-4567	-2863	-627	599	-2.3	-16.2	0.0		
Natural gas	-17191	-20941	-24211	-10267	-9241	-4153	-3946	3.5	-9.2	-8.2		
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0		
Import Dependency (%)	38.0	37.7	30.4	48.1	46.7	52.9	54.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107581	124120	137593	124930	2.8	0.5	0.1		
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4		
Solids	24276	23500	22588	29437	24668	33483	20809	-0.7	0.9	-1.7		
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0		
Gas (including derived gases)	54606	61588	77566	56695	48327	53033	39441	3.6	-4.6	-2.0		
Biomass-waste	3203	6683	8606	8344	15918	12287	17662	10.4	6.3	1.0		
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1		
Wind	829	2067	3993	7185	26193	29579	37307	17.0	20.7	3.6		
Solar	8	34	60	1113	5003	5003	5503	22.2	55.5	1.0		
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	21048	21728	25072	30866	37963	36789	35760	1.8	4.2	-0.6		
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0		
Renewable energy	497	1312	2362	4706	15358	16375	19263	16.9	20.6	2.3		
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0		
Wind	447	1224	2237	3431	9735	10753	13063	17.5	15.8	3.0		
Solar	13	51	88	1238	5586	5586	6163	21.1	51.4	1.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	20066	19931	22225	25674	22121	19928	16012	1.0	0.0	-3.2		
of which cogeneration units	7372	7162	9300	8514	2409	4117	3861	2.4	-12.6	4.8		
of which CCS units	0	0	0	0	0	250	250	0.0	0.0	0.0		
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9		
Gas fired	14667	14529	16575	17356	14401	12540	9260	1.2	-1.4	-4.3		
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6		
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	36.0	41.1	38.6					
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.7	43.4	43.3					
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.8	17.7	20.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.3	1.7					
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	41.2	37.1	51.7					
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17484	19585	15470	1.9	-1.9	-1.2		
Solids	4998	4958	4669	6490	5046	6756	4217	-0.7	0.8	-1.8		
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4		
Gas (including derived gases)	10671	11953	13773	9489	7992	9198	6975	2.6	-5.3	-1.4		
Biomass & Waste	1213	2052	2460	1892	4446	3612	4259	7.3	6.1	-0.4		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	86454	91417	68924	63771	61753	59187	56091	-2.2	-1.1	-1.0		
Refineries	82233	86869	64188	58847	56701	54672	52012	-2.4	-1.2	-0.9		
Biofuels and hydrogen production	0	0	230	579	485	456	517	0.0	7.8	0.6		
District heating	398	436	499	366	338	305	217	2.3	-3.8	-4.3		
Derived gases, cokeries etc.	3824	4113	4007	3979	4229	3754	3344	0.5	0.5	-2.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Netherlands: EUO+40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	184	195	183	191	200	204	211	-0.1	0.9	0.6
Public road transport	11	12	12	13	13	13	14	0.8	0.9	0.5
Private cars and motorcycles	143	152	138	141	147	146	149	-0.4	0.6	0.2
Rail	16	17	17	19	21	23	25	0.5	2.1	1.9
Aviation ⁽³⁾	13	14	15	17	18	20	22	1.1	2.5	1.7
Inland navigation	1	1	1	1	1	1	1	0.1	1.2	1.7
Freight transport activity (Gtkm)	94	100	106	111	121	126	133	1.3	1.3	0.9
Heavy goods and light commercial vehicles	48	51	54	55	61	60	62	1.2	1.3	0.2
Rail	5	6	6	6	7	8	8	2.7	1.5	2.0
Inland navigation	41	42	47	50	53	58	62	1.2	1.3	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14217	12822	12024	0.5	-0.5	-1.7
Public road transport	212	224	260	267	271	263	256	2.1	0.4	-0.5
Private cars and motorcycles	8007	8288	8206	7708	6905	5760	5151	0.2	-1.7	-2.9
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2740	2536	2514	2.2	0.1	-0.9
Rail	184	172	182	189	205	221	230	-0.1	1.2	1.2
Aviation	3382	3712	3463	3821	3843	3765	3581	0.2	1.0	-0.7
Inland navigation	328	207	159	239	253	277	292	-7.0	4.8	1.4
By transport activity										
Passenger transport	11703	12265	11985	11861	11088	9864	9069	0.2	-0.8	-2.0
Freight transport	2594	2933	3001	2957	3129	2958	2955	1.5	0.4	-0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.2	2.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.1	4.5			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68908	64953	52119	0.6	0.0	-2.8
Final Energy Demand	50505	51654	51835	50854	50377	45888	35610	0.3	-0.3	-3.4
by sector										
Industry	14804	14814	12208	12815	13623	12903	10072	-1.9	1.1	-3.0
Energy intensive industries	10277	10532	8224	8734	9341	8869	7038	-2.2	1.3	-2.8
Other industrial sectors	4527	4281	3984	4082	4282	4034	3034	-1.3	0.7	-3.4
Residential	10299	10143	11518	10892	10504	9580	6430	1.1	-0.9	-4.8
Tertiary	11104	11499	13124	12329	12032	10583	7084	1.7	-0.9	-5.2
Transport ⁽⁵⁾	14297	15198	14985	14817	14217	12822	12024	0.5	-0.5	-1.7
by fuel										
Solids	1330	1515	1270	1402	1595	1584	966	-0.5	2.3	-4.9
Oil	16505	17382	16113	15746	14883	12950	11320	-0.2	-0.8	-2.7
Gas	21011	20346	22378	21405	20265	17016	10344	0.6	-1.0	-6.5
Electricity	8408	8986	9189	9034	9616	9964	8953	0.9	0.5	-0.7
Heat (from CHP and District Heating)	2893	2981	2106	2038	2148	2232	1680	-3.1	0.2	-2.4
Renewable energy forms	358	444	780	1223	1842	2028	2112	8.1	9.0	1.4
Other	0	0	0	8	27	115	235	-100.0	0.0	24.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	141	142	141	135	125	114	91	0.0	-1.2	-3.1
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	66	50	-2.9	-0.1	-3.9
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	74	46	0.6	-2.0	-6.1
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	70	45	0.1	-1.7	-6.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	27	23	-0.4	-2.4	-3.1
Freight transport (toe/Mtkm)	28	29	28	27	26	23	22	0.2	-0.9	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	222.8	221.6	216.9	209.7	194.4	185.5	144.6	-0.3	-1.1	-2.9
of which ETS sectors (2013 scope) GHG emissions	103.3	95.6	95.8	86.5	86.5	90.2	67.9		-1.0	-2.4
of which ESD sectors (2013 scope) GHG emissions	118.2	121.4	113.8	107.9	95.3	76.6			-1.2	-3.4
CO2 Emissions (energy related)	168.5	175.7	175.0	171.3	157.1	149.0	108.5	0.4	-1.1	-3.6
Power generation/District heating	51.9	55.5	57.7	54.3	45.0	52.4	36.7	1.1	-2.4	-2.0
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.7	8.0	-2.3	1.2	-2.2
Industry	26.6	26.5	22.9	26.6	27.6	24.0	15.4	-1.5	1.9	-5.7
Residential	18.9	17.9	20.6	19.1	17.4	14.5	7.1	0.9	-1.7	-8.6
Tertiary	17.5	18.3	21.1	18.7	16.6	13.3	8.4	1.9	-2.4	-6.5
Transport	42.4	45.3	43.9	42.3	40.6	36.1	32.9	0.4	-0.8	-2.1
CO2 Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.9	9.0	8.9	2.0	0.4	-0.1
Non-CO2 GHG emissions	47.3	37.0	33.3	29.9	28.3	27.5	27.2	-3.4	-1.6	-0.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	86.4	82.4	64.2	-0.3	-1.1	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.40	0.38	0.37	0.38	0.28	0.30	0.24	-0.6	-2.7	-1.7
Final energy demand (t of CO2/toe)	2.09	2.09	2.09	2.10	2.03	1.92	1.79	0.0	-0.3	-1.2
Industry	1.80	1.79	1.87	2.07	2.02	1.86	1.53	0.4	0.8	-2.8
Residential	1.84	1.77	1.79	1.75	1.66	1.51	1.10	-0.2	-0.8	-4.0
Tertiary	1.58	1.59	1.61	1.51	1.38	1.26	1.19	0.2	-1.6	-1.4
Transport	2.97	2.98	2.93	2.86	2.86	2.81	2.74	-0.1	-0.3	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	12.9	14.5	22.1			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.7	14.7			
RES-E share	2.6	6.3	9.7	12.9	36.5	34.9	49.9			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.7	14.1	21.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	81	83	89	2.7	2.1	0.9
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	133	136	149	0.9	0.3	1.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	78.5	85.7	106.8	3.5	1.5	3.1
as % of GDP	8.9	10.6	11.0	10.5	11.8	12.1	14.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Poland: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2		
GDP (in 000 ME13)	253	294	371	425	492	559	623	3.9	2.9	2.4		
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	106243	103045	86680	1.3	0.5	-2.0		
Solids	56291	54612	54808	53011	51207	46763	35225	-0.3	-0.6	-3.7		
Oil	19037	21696	25747	25895	26572	24657	22770	3.1	0.3	-1.5		
Natural gas	9964	12237	12807	13159	16062	17130	13346	2.5	2.3	-1.8		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-548	-962	-116	6	64	167	81	-14.4	0.0	2.3		
Renewable energy forms	3905	4643	7684	9863	12338	14327	15259	7.0	4.8	2.1		
Energy Branch Consumption	6664	6104	6095	6243	6203	5499	5048	-0.9	0.2	-2.0		
Non-Energy Uses	4357	4573	4961	5545	6359	7000	7321	1.3	2.5	1.4		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	79590	78592	67394	70900	71201	65958	55808	-1.6	0.6	-2.4		
Solids	71299	68857	55381	55586	52958	45468	32662	-2.5	-0.4	-4.7		
Oil	1062	1143	1063	1539	1579	1528	1479	0.0	4.0	-0.7		
Natural gas	3317	3887	3696	3947	4546	4727	6459	1.1	2.1	3.6		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3912	4705	7254	9829	12118	14235	15208	6.4	5.3	2.3		
Hydro	181	189	251	206	209	226	246	3.3	-1.8	1.7		
Biomass & Waste	3728	4493	6838	8749	10806	11649	11441	6.3	4.7	0.6		
Wind	0	12	143	832	984	2122	2697	80.0	21.3	10.6		
Solar and others	0	0	8	22	81	193	516	0.0	25.5	20.3		
Geothermal	3	11	13	21	38	45	308	16.1	11.1	23.1		
Net Imports (ktoe)	8773	15932	31567	31285	35334	37406	31214	13.7	1.1	-1.2		
Solids	-16353	-13039	-2814	-2575	-1751	1296	2562	-16.1	-4.6	0.0		
Oil	19067	21466	25187	24607	25281	23440	21610	2.8	0.0	-1.6		
Crude oil and Feedstocks	17616	17893	22965	24633	24805	22820	20898	2.7	0.8	-1.7		
Oil products	1451	3573	2222	-26	476	620	712	4.4	-14.3	4.1		
Natural gas	6607	8531	8874	9213	11520	12411	6910	3.0	2.6	-5.0		
Electricity	-548	-962	-116	6	64	167	81	-14.4	0.0	2.3		
Import Dependency (%)	9.9	17.2	31.3	30.6	33.2	36.2	35.9					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	181863	195579	184285	0.9	1.5	0.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	135888	142161	136592	137628	147291	137819	117481	0.1	0.8	-2.2		
Oil (including refinery gas)	1916	2757	2892	9	0	468	468	4.2	-100.0	0.0		
Gas (including derived gases)	2961	6573	6689	2968	9219	17631	8898	8.5	3.3	-0.4		
Biomass-waste	298	1532	6332	9667	11421	12288	19457	35.7	6.1	5.5		
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2629	2865	3.3	-1.8	1.7		
Wind	5	135	1664	9669	11437	24676	31362	78.7	21.3	10.6		
Solar	0	0	0	29	67	67	3753	0.0	0.0	49.6		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	30310	31721	33411	38260	34305	39405	45169	1.0	0.3	2.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	821	1036	2044	6084	6756	12811	19854	9.6	12.7	11.4		
Hydro (pumping excluded)	817	915	936	949	949	1006	1063	1.4	0.1	1.1		
Wind	4	121	1108	5100	5728	11726	14444	75.5	17.9	9.7		
Solar	0	0	0	35	79	79	4346	0.0	0.0	49.2		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	29489	30685	31367	32176	27549	26593	25316	0.6	-1.3	-0.8		
of which cogeneration units	9354	8313	8693	6564	6647	7760	4882	-0.7	-2.6	-3.0		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	28214	28608	29158	28543	23719	21465	20038	0.3	-2.0	-1.7		
Gas fired	764	1548	1592	1659	1678	2926	2766	7.6	0.5	5.1		
Oil fired	396	396	396	398	170	161	155	0.0	-8.1	-0.9		
Biomass-waste fired	115	133	221	1574	1982	2040	2357	6.8	24.5	1.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.6	52.6	43.4					
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.6	37.6	37.7					
% of gross electricity from CHP	16.1	16.8	17.6	18.2	21.1	17.6	12.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	13.9	20.3	31.2					
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	38386	38445	33366	0.5	0.0	-1.4		
Solids	35247	36349	34345	33735	34059	32367	27411	-0.3	-0.1	-2.1		
Oil (including refinery gas)	245	184	171	2	0	153	153	-3.5	-74.4	286.5		
Gas (including derived gases)	1032	1805	2179	913	1874	3209	1813	7.8	-1.5	-0.3		
Biomass & Waste	102	434	1645	2046	2453	2716	3989	32.1	4.1	5.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	32964	31279	38702	40301	40674	37304	32064	1.6	0.5	-2.4		
Refineries	18969	18975	24192	27120	27416	25425	23452	2.5	1.3	-1.5		
Biofuels and hydrogen production	0	49	887	1100	1395	1333	1266	0.0	4.6	-1.0		
District heating	4179	3465	3716	3183	3579	3082	2083	-1.2	-0.4	-5.3		
Derived gases, cokeries etc.	9816	8789	9908	8898	8283	7465	5263	0.1	-1.8	-4.4		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	225	233	268	302	344	371	404	1.7	2.6	1.6
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.6
Private cars and motorcycles	134	156	194	223	254	268	288	3.8	2.7	1.3
Rail	29	23	22	24	31	39	47	-2.5	3.2	4.3
Aviation ⁽³⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.1
Freight transport activity (Gtkm)	114	140	170	201	228	256	286	4.0	3.0	2.3
Heavy goods and light commercial vehicles	59	90	121	150	167	185	206	7.4	3.3	2.1
Rail	54	50	49	51	61	71	80	-1.0	2.3	2.8
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.5
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19785	18791	18595	5.9	1.3	-0.6
Public road transport	654	581	610	632	668	680	669	-0.7	0.9	0.0
Private cars and motorcycles	6314	7213	9660	10120	10619	9376	8920	4.3	1.0	-1.7
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7370	7479	7577	11.9	1.6	0.3
Rail	541	469	372	366	429	481	538	-3.7	1.4	2.3
Aviation	274	319	508	613	694	771	886	6.4	3.2	2.5
Inland navigation	6	5	3	3	4	4	5	-7.4	2.3	2.5
By transport activity										
Passenger transport	7317	8170	10823	11407	12035	10893	10554	4.0	1.1	-1.3
Freight transport	2514	4095	6636	7283	7750	7898	8041	10.2	1.6	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.6	1.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99884	96045	79359	1.3	0.4	-2.3
Final Energy Demand	55260	58986	67070	68144	71874	68582	55001	2.0	0.7	-2.6
by sector										
Industry	18504	16147	14193	16600	17563	18488	15024	-2.6	2.2	-1.5
Energy intensive industries	13031	10951	9372	10814	11168	11346	9029	-3.2	1.8	-2.1
Other industrial sectors	5473	5196	4821	5786	6395	7142	5994	-1.3	2.9	-0.6
Residential	17193	19454	22501	20556	21323	19312	12739	2.7	-0.5	-5.0
Tertiary	9644	10846	12664	12057	12931	11724	8418	2.8	0.2	-4.2
Transport ⁽⁵⁾	9919	12539	17712	18930	20057	19057	18820	6.0	1.3	-0.6
by fuel										
Solids	13215	12285	14494	13387	11207	9396	4850	0.9	-2.5	-8.0
Oil	15500	17844	20727	21289	21472	19260	17350	2.9	0.4	-2.1
Gas	7574	8780	9468	9673	11110	10685	7978	2.3	1.6	-3.3
Electricity	8482	9064	10238	11011	12598	13949	13110	1.9	2.1	0.4
Heat (from CHP and District Heating)	6886	7056	6547	6063	6915	6324	4583	-0.5	0.5	-4.0
Renewable energy forms	3602	3957	5596	6721	8570	8949	7055	4.5	4.4	-1.9
Other	0	0	0	1	1	19	75	0.0	0.0	50.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	350	313	272	240	216	184	139	-2.5	-2.3	-4.3
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	29	21	-9.7	-1.2	-4.1
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	52	31	-0.8	-3.4	-7.4
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	77	62	40	0.0	-2.6	-6.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	28	25	2.0	-1.5	-3.0
Freight transport (toe/Mtkm)	22	29	39	36	34	31	28	5.9	-1.4	-1.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	400.5	403.1	411.9	407.8	403.7	378.2	313.2	0.3	-0.2	-2.5
of which ETS sectors (2013 scope) GHG emissions	222.2	210.3	210.3	208.8	210.0	201.2	162.1	0.0	-2.6	-6.4
of which ESD sectors (2013 scope) GHG emissions	180.9	201.6	199.0	190.9	193.7	177.0	151.1	-0.4	-2.5	-6.4
CO ₂ Emissions (energy related)	303.3	307.5	320.7	311.8	310.6	287.0	224.3	0.6	-0.3	-3.2
Power generation/District heating	167.4	171.0	165.6	157.9	162.0	156.2	125.4	-0.1	-0.2	-2.5
Energy Branch	10.2	7.7	8.5	9.6	9.2	7.7	7.3	-1.8	0.8	-2.2
Industry	51.9	36.9	30.4	35.0	32.1	30.0	19.6	-5.2	0.5	-4.8
Residential	27.4	35.5	44.9	37.8	34.5	28.1	14.0	5.1	-2.6	-8.6
Tertiary	18.4	20.7	21.9	19.1	18.0	13.5	7.9	1.7	-1.9	-7.9
Transport	28.0	35.8	49.3	52.4	54.8	51.6	50.1	5.8	1.1	-0.9
CO ₂ Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.7	26.5	26.9	-1.0	2.4	0.5
Non-CO ₂ GHG emissions	75.0	74.7	71.0	73.2	67.5	64.6	62.1	-0.5	-0.5	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	85.1	79.7	66.0	0.3	-0.2	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.71	0.69	0.67	0.65	0.59	0.56	0.51	-0.6	-1.1	-1.5
Final energy demand (t of CO ₂ /toe)	2.27	2.18	2.19	2.12	1.94	1.80	1.67	-0.4	-1.2	-1.5
Industry	2.81	2.28	2.14	2.11	1.83	1.62	1.30	-2.6	-1.6	-3.3
Residential	1.59	1.83	2.00	1.84	1.62	1.45	1.10	2.3	-2.1	-3.8
Tertiary	1.91	1.91	1.73	1.59	1.39	1.15	0.94	-1.0	-2.1	-3.8
Transport	2.82	2.85	2.79	2.77	2.73	2.71	2.66	-0.1	-0.2	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.0	17.6	21.7			
RES-H&C share	9.6	10.2	11.6	13.8	19.1	21.3	26.2			
RES-E share	1.6	2.7	6.6	13.4	13.9	20.1	31.0			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.5	11.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	65	69	75	2.6	3.0	1.3
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	121	123	130	5.2	-0.6	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	93.6	110.2	146.7	6.9	3.6	4.6
as % of GDP	13.4	15.7	17.8	16.7	19.0	19.7	23.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Portugal: EUCO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4		
GDP (in 000 ME13)	169	176	181	174	187	204	217	0.7	0.4	1.5		
Gross Inland Consumption (ktoe)	25285	27475	24205	22984	21512	20100	16127	-0.4	-1.2	-2.8		
Solids	3805	3349	1658	3347	1141	11	5	-8.0	-3.7	-42.4		
Oil	15475	16174	12215	10669	10362	9439	8401	-2.3	-1.6	-2.1		
Natural gas	2078	3751	4489	3446	3286	3626	1388	8.0	-3.1	-8.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Renewable energy forms	3846	3615	5618	5328	6272	6524	5897	3.9	1.1	-0.6		
Energy Branch Consumption	1028	1235	1195	1417	1215	1212	1175	1.5	0.2	-0.3		
Non-Energy Uses	2393	2587	1728	1470	1485	1524	1505	-3.2	-1.5	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5217	6141	6404	5755	4.1	0.6	-0.6		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3846	3615	5800	5217	6141	6404	5755	4.2	0.6	-0.6		
Hydro	974	407	1389	820	1596	1562	1622	3.6	1.4	0.2		
Biomass & Waste	2770	2967	3375	3181	3259	3064	2245	2.0	-0.4	-3.7		
Wind	14	153	790	1004	1012	1201	1313	49.2	2.5	2.6		
Solar and others	19	23	66	136	199	500	496	13.6	11.6	9.6		
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4		
Net Imports (ktoe)	22072	24845	18588	16330	15925	14235	10896	-1.7	-1.5	-3.7		
Solids	3914	3225	1629	3347	1141	11	5	-8.4	-3.5	-42.4		
Oil	16039	17140	12436	11231	10910	9965	8892	-2.5	-1.3	-2.0		
Crude oil and Feedstocks	12316	13795	11875	14608	14053	13031	11907	-0.4	1.7	-1.6		
Oil products	3723	3345	561	-3376	-3143	-3066	-3015	-17.2	0.0	-0.4		
Natural gas	2039	3893	4505	3446	3292	3639	1421	8.2	-3.1	-8.1		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Import Dependency (%)	85.1	88.6	75.1	77.8	72.2	69.0	65.4					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50200	48969	51847	42246	2.2	-0.9	-1.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	14595	15226	7100	14862	4970	0	0	-7.0	-3.5	-100.0		
Oil (including refinery gas)	8421	8791	3008	770	1922	1287	607	-9.8	-4.4	-10.9		
Gas (including derived gases)	7231	13606	14900	9528	7710	10225	421	7.5	-6.4	-25.2		
Biomass-waste	1553	1987	2942	2936	3049	3893	2778	6.6	0.4	-0.9		
Hydro (pumping excluded)	11323	4731	16148	9540	18554	18167	18864	3.6	1.4	0.2		
Wind	168	1773	9182	11676	11767	13962	15264	49.2	2.5	2.6		
Solar	1	3	212	680	789	4104	4104	68.3	14.1	17.9		
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21871	22915	23774	5.6	1.5	0.8		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	4619	6083	9036	12611	14827	17410	18379	6.9	5.1	2.2		
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8		
Wind	83	1064	3796	5079	5113	5818	6225	46.6	3.0	2.0		
Solar	1	2	134	467	531	2183	2183	63.2	14.8	15.2		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6370	7378	9885	8484	7044	5506	5395	4.5	-3.3	-2.6		
of which cogeneration units	1676	1079	1310	1491	1505	1369	1054	-2.4	1.4	-3.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0		
Gas fired	1542	2477	4799	5062	5011	4132	4056	12.0	0.4	-2.1		
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6		
Biomass-waste fired	221	244	343	521	643	650	641	4.5	6.5	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	25.1	25.5	20.1					
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.0	41.3	29.2					
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.2	12.6	9.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.2	77.8	97.6					
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3576	3253	1183	-1.2	-4.7	-10.5		
Solids	3198	3319	1597	3329	1126	0	0	-6.7	-3.4	-100.0		
Oil (including refinery gas)	1683	1793	574	185	454	312	143	-10.2	-2.3	-10.9		
Gas (including derived gases)	1215	2309	2775	1560	1268	1839	114	8.6	-7.5	-21.4		
Biomass & Waste	356	428	662	621	653	1027	851	6.4	-0.1	2.7		
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	13004	13953	12457	15231	14670	13609	12441	-0.4	1.6	-1.6		
Refineries	12555	13953	12148	14807	14243	13213	12062	-0.3	1.6	-1.6		
Biofuels and hydrogen production	0	0	309	422	423	368	343	0.0	3.2	-2.1		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	449	0	0	1	4	28	36	0.0	0.0	24.5		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	105	115	116	121	125	133	142	1.0	0.8	1.3
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.1
Private cars and motorcycles	73	87	86	86	86	90	96	1.7	0.1	1.0
Rail	5	5	5	5	6	7	8	1.4	1.7	2.5
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	1.9
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.6
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.3
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.0
Rail	2	2	2	2	3	3	3	0.6	1.5	2.5
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6640	6200	6005	0.9	-0.8	-1.0
Public road transport	237	135	129	129	128	133	142	-5.9	0.0	1.0
Private cars and motorcycles	4590	5056	5149	4730	4386	3822	3571	1.2	-1.6	-2.0
Heavy goods and light commercial vehicles	891	1026	835	797	844	841	827	-0.6	0.1	-0.2
Rail	89	67	57	50	56	58	63	-4.3	-0.3	1.2
Aviation	784	888	1012	1124	1187	1305	1359	2.6	1.6	1.4
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.2
<i>By transport activity</i>										
Passenger transport	5689	6109	6318	6007	5729	5286	5100	1.1	-1.0	-1.2
Freight transport	947	1079	908	860	911	914	905	-0.4	0.0	-0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.0	2.7			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.5	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21514	20027	18576	14622	-0.2	-1.1	-3.1
Final Energy Demand	17919	19009	18022	16789	16853	15453	12684	0.1	-0.7	-2.8
<i>by sector</i>										
Industry	6323	5796	5453	5066	5183	5026	3946	-1.5	-0.5	-2.7
Energy intensive industries	4179	3889	3634	3613	3667	3574	2795	-1.4	0.1	-2.7
Other industrial sectors	2144	1907	1819	1452	1516	1453	1151	-1.6	-1.8	-2.7
Residential	2804	3224	2976	2632	2758	2144	1383	0.6	-0.8	-6.7
Tertiary	2157	2801	2368	2224	2272	2083	1350	0.9	-0.4	-5.1
Transport ⁽⁵⁾	6636	7188	7226	6867	6640	6200	6005	0.9	-0.8	-1.0
<i>by fuel</i>										
Solids	466	17	50	17	15	11	5	-20.0	-11.4	-11.1
Oil	10713	10812	9199	8142	7695	6838	6041	-1.5	-1.8	-2.4
Gas	873	1307	1564	1691	1830	1613	1117	6.0	1.6	-4.8
Electricity	3300	3983	4290	3865	4080	4390	3567	2.7	-0.5	-1.3
Heat (from CHP and District Heating)	134	328	338	325	363	294	261	9.7	0.7	-3.2
Renewable energy forms	2434	2563	2581	2748	2865	2278	1647	0.6	1.0	-5.4
Other	0	0	0	1	4	30	46	0.0	0.0	27.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	156	134	132	115	98	74	-1.1	-1.5	-4.3
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	75	57	-1.2	-0.8	-3.6
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	85	61	37	-0.6	-0.9	-8.1
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	72	44	-0.6	-0.9	-6.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	32	28	-0.3	-2.2	-2.6
Freight transport (toe/Mtkm)	36	33	33	31	30	29	27	-0.9	-0.8	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.9	90.7	73.4	73.2	60.7	53.6	43.6	-1.7	-1.9	-3.2
of which ETS sectors (2013 scope) GHG emissions	40.6	27.7	32.3	32.3	22.9	19.6	14.0		-1.9	-4.8
of which ESD sectors (2013 scope) GHG emissions	50.1	45.7	40.9	40.9	37.7	33.9	29.6		-1.9	-2.4
CO₂ Emissions (energy related)	61.0	64.6	49.6	50.1	39.7	33.0	24.5	-2.1	-2.2	-4.7
Power generation/District heating	21.7	24.9	14.9	18.0	9.1	5.3	0.7	-3.6	-4.9	-22.3
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.7	2.5	-0.2	0.6	-0.4
Industry	11.6	8.2	6.3	5.7	5.5	5.3	3.6	-5.9	-1.3	-4.1
Residential	2.0	2.3	2.6	2.0	2.0	0.9	0.2	2.5	-2.4	-19.8
Tertiary	3.4	4.4	2.4	2.0	1.7	1.4	0.9	-3.2	-3.3	-6.8
Transport	19.9	21.7	20.9	19.5	18.8	17.4	16.6	0.5	-1.1	-1.2
CO₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.1	6.2	6.3	-2.0	1.2	0.3
Non-CO₂ GHG emissions	19.3	19.1	18.4	16.9	14.8	14.3	12.8	-0.4	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	97.5	86.1	70.2	-1.7	-1.9	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.16	0.09	0.02	-6.3	-4.1	-21.0
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.61	1.68	-1.4	-0.7	0.1
Industry	1.83	1.42	1.15	1.12	1.07	1.05	0.92	-4.5	-0.8	-1.5
Residential	0.71	0.72	0.86	0.75	0.72	0.41	0.16	1.9	-1.7	-14.1
Tertiary	1.55	1.56	1.02	0.88	0.76	0.68	0.63	-4.1	-2.9	-1.8
Transport	3.00	3.01	2.89	2.84	2.83	2.80	2.76	-0.4	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.3	36.7	41.5			
RES-H&C share	30.4	32.1	33.9	36.8	38.4	38.3	40.4			
RES-E share	28.3	27.7	40.7	47.4	63.2	69.7	88.4			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	14.9	23.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	110	112	107	1.6	3.4	-0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	137	141	150	-1.3	2.8	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.8	22.3	24.4	23.5	28.6	31.9	37.0	3.8	1.6	2.6
as % of GDP	10.0	12.7	13.5	13.5	15.3	15.6	17.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Romania: EUCCO+40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual %	% Change			
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4		
GDP (in 000 ME13)	87	114	130	145	163	181	195	4.1	2.3	1.8		
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	35063	35262	27496	-0.2	-0.2	-2.4		
Solids	7493	8788	7008	6207	6462	5303	2875	-0.7	-0.8	-7.8		
Oil	9992	10286	9310	8775	8525	8198	7406	-0.7	-0.9	-1.4		
Natural gas	13680	13923	10788	9688	10843	10131	6104	-2.3	0.1	-5.6		
Nuclear	1407	1433	2998	2838	2846	5749	4516	7.9	-0.5	4.7		
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1		
Renewable energy forms	4137	5026	5891	6299	6966	6774	7544	3.6	1.7	0.8		
Energy Branch Consumption	3675	4105	2839	2480	2448	2332	1978	-2.5	-1.5	-2.1		
Non-Energy Uses	1883	2467	1473	1754	2001	2202	2338	-2.4	3.1	1.6		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	28465	28224	27824	26642	28419	30009	27196	-0.2	0.2	-0.4		
Solids	5604	5795	5904	5042	5111	3994	2162	0.5	-1.4	-8.2		
Oil	6355	6226	4565	3643	3646	3647	3628	-3.3	-2.2	0.0		
Natural gas	10968	9701	8619	8848	10035	10007	9528	-2.4	1.5	-0.5		
Nuclear	1407	1433	2998	2838	2846	5749	4516	7.9	-0.5	4.7		
Renewable energy sources	4131	5070	5739	6271	6781	6612	7362	3.3	1.7	0.8		
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0		
Biomass & Waste	2854	3314	3980	4135	4555	4297	3577	3.4	1.4	-2.4		
Wind	0	0	26	557	560	560	1660	0.0	35.8	11.5		
Solar and others	0	0	0	163	183	246	555	0.0	111.9	11.8		
Geothermal	7	18	23	30	46	66	127	13.1	7.1	10.8		
Net Imports (ktoe)	8009	10867	7827	6473	6675	5290	341	-0.2	-1.6	-25.7		
Solids	1920	2939	1234	1165	1350	1309	713	-4.3	0.9	-6.2		
Oil	3437	3988	4838	5156	4910	4587	3817	3.5	0.1	-2.5		
Crude oil and Feedstocks	4801	8857	6233	5504	4991	4502	3749	2.6	-2.2	-2.8		
Oil products	-1364	-4870	-1395	-348	-81	85	69	0.2	-24.8	0.0		
Natural gas	2712	4190	1816	839	808	124	-3422	-3.9	-7.8	0.0		
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1		
Import Dependency (%)	21.8	27.7	21.9	19.5	19.0	15.0	1.2					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67527	71145	76996	70687	1.6	1.6	-0.1		
Nuclear energy	5456	5555	11623	11890	11922	23792	18566	7.9	0.3	4.5		
Solids	18926	21916	20681	21982	22416	17142	8019	0.9	0.8	-9.8		
Oil (including refinery gas)	3399	1894	692	625	406	225	195	-14.7	-5.2	-7.1		
Gas (including derived gases)	9001	9834	7323	8032	10453	9164	155	-2.0	3.6	-34.4		
Biomass-waste	0	7	111	522	763	968	2160	0.0	21.3	11.0		
Hydro (pumping excluded)	14778	20207	19883	16111	16723	16778	16779	3.0	-1.7	0.0		
Wind	0	0	306	6473	6512	6512	19304	0.0	35.8	11.5		
Solar	0	0	0	1891	1950	2415	5509	0.0	0.0	10.9		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	20197	19153	20120	24896	23930	22658	27333	0.0	1.7	1.3		
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2		
Renewable energy	6242	6289	6863	11413	11457	11689	17764	1.0	5.3	4.5		
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0		
Wind	0	0	389	2976	2989	2989	6985	0.0	22.6	8.9		
Solar	0	0	0	1792	1824	2055	4133	0.0	0.0	8.5		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	13283	12192	11913	12070	11058	8141	6742	-1.1	-0.7	-4.8		
of which cogeneration units	3431	5246	4582	4234	4066	2125	1654	2.9	-1.2	-8.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2		
Gas fired	3728	3439	3488	4173	4161	4108	3897	-0.7	1.8	-0.7		
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0		
Biomass-waste fired	147	5	23	96	139	168	259	-16.9	19.7	6.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.4	36.2	28.3					
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	39.0	39.6	34.5					
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.2	7.5	5.4					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.2	65.5	88.2					
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7497	5979	2627	-2.2	-1.4	-10.0		
Solids	5462	6085	5929	5216	5337	4235	2092	0.8	-1.0	-8.9		
Oil (including refinery gas)	1736	799	327	176	130	72	62	-15.4	-8.8	-7.1		
Gas (including derived gases)	3579	3437	2399	1331	1864	1459	41	-3.9	-2.5	-31.7		
Biomass & Waste	12	9	21	113	167	214	432	6.1	23.2	10.0		
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	16275	19666	15568	13664	13409	15686	13293	-0.4	-1.5	-0.1		
Refineries	11250	15219	11480	9680	9153	8637	7831	0.2	-2.2	-1.5		
Biofuels and hydrogen production	0	0	115	273	558	503	473	0.0	17.1	-1.6		
District heating	1738	825	749	702	681	606	379	-8.1	-1.0	-5.7		
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5941	4610	-0.2	-0.7	4.3		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	85	93	110	118	130	143	157	2.6	1.7	2.0
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.6
Private cars and motorcycles	54	63	78	85	92	101	111	3.9	1.7	1.9
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.8
Freight transport activity (Gtkm)	27	56	43	51	61	69	77	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.5
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5727	5693	5694	4.3	1.2	-0.1
Public road transport	293	260	359	373	378	375	372	2.0	0.5	-0.2
Private cars and motorcycles	2082	2416	3214	3381	3372	3148	3016	4.4	0.5	-1.1
Heavy goods and light commercial vehicles	363	1182	946	1142	1356	1450	1500	10.1	3.7	1.0
Rail	357	159	222	245	274	303	321	-4.6	2.1	1.6
Aviation	128	128	272	265	299	365	430	7.8	1.0	3.7
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.7
By transport activity										
Passenger transport	2648	2855	3921	4091	4132	3980	3914	4.0	0.5	-0.5
Freight transport	689	1331	1152	1356	1595	1713	1781	5.3	3.3	1.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.7	1.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	33062	33060	25158	-0.1	-0.4	-2.7
Final Energy Demand	22772	24714	22591	23117	24611	23939	18909	-0.1	0.9	-2.6
by sector										
Industry	9296	10007	6876	7316	8163	8389	6595	-3.0	1.7	-2.1
Energy intensive industries	6510	7208	4759	4794	5400	5404	4135	-3.1	1.3	-2.6
Other industrial sectors	2787	2799	2117	2522	2762	2984	2460	-2.7	2.7	-1.2
Residential	8409	7990	8102	7825	8128	7421	4949	-0.4	0.0	-4.8
Tertiary	1606	2441	2489	2468	2530	2370	1606	4.5	0.2	-4.4
Transport ⁽⁵⁾	3460	4276	5124	5507	5790	5760	5759	4.0	1.2	-0.1
by fuel										
Solids	1046	1611	939	815	938	862	674	-1.1	0.0	-3.3
Oil	5526	6628	6184	6765	6590	6315	5645	1.1	0.6	-1.5
Gas	6910	7754	6189	6337	6814	6579	4137	-1.1	1.0	-4.9
Electricity	2918	3341	3553	3683	4114	4373	4049	2.0	1.5	-0.2
Heat (from CHP and District Heating)	3570	2136	1650	1493	1623	1638	1123	-7.4	-0.2	-3.6
Renewable energy forms	2802	3244	4077	4023	4530	4166	3269	3.8	1.1	-3.2
Other	0	0	0	0	1	5	12	-100.0	0.0	29.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	423	343	275	229	215	195	141	-4.2	-2.4	-4.2
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	27	-7.8	-1.0	-3.9
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	32	20	-6.9	-2.1	-6.6
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	78	48	1.4	-2.1	-6.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	25	1.3	-1.2	-2.5
Freight transport (toe/Mtkm)	25	24	27	27	26	25	23	0.5	-0.2	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.7	110.4	85.8	-1.5	-0.6	-3.2
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	49.0	42.5	25.6		-1.3	-6.3	
of which ESD sectors (2013 scope) GHG emissions		76.5	69.6	71.8	69.7	67.9	60.2		0.0	-1.5
CO ₂ Emissions (energy related)	88.8	95.8	77.4	71.5	74.0	66.1	43.1	-1.4	-0.4	-5.2
Power generation/District heating	42.0	39.0	33.6	27.2	28.8	22.7	9.5	-2.2	-1.5	-10.5
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.3	-2.8	-2.9	-1.5
Industry	21.6	25.2	14.4	14.7	15.6	15.1	9.6	-4.0	0.8	-4.7
Residential	6.6	7.3	5.8	6.5	6.9	6.5	4.0	-1.2	1.7	-5.4
Tertiary	1.9	4.2	3.6	3.5	3.4	2.9	1.7	6.7	-0.4	-7.0
Transport	9.9	12.4	14.8	15.5	15.4	15.3	15.1	4.1	0.4	-0.2
CO ₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.8	7.7	-6.1	0.9	-0.2
Non-CO ₂ GHG emissions	43.8	46.7	40.9	39.8	36.9	36.5	34.9	-0.7	-1.0	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.7	43.4	33.7	-1.5	-0.6	-3.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.23	0.11	-0.6	-2.5	-9.8
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.66	1.61	-0.3	-0.2	-0.4
Industry	2.33	2.52	2.09	2.01	1.91	1.80	1.46	-1.1	-0.9	-2.6
Residential	0.79	0.92	0.72	0.83	0.85	0.87	0.80	-0.8	1.6	-0.6
Tertiary	1.17	1.70	1.44	1.42	1.36	1.23	1.04	2.2	-0.6	-2.7
Transport	2.86	2.90	2.89	2.81	2.67	2.66	2.62	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.1	26.2	36.4			
RES-H&C share	16.1	17.9	27.4	25.9	26.3	26.7	31.1			
RES-E share	30.2	28.8	30.4	42.3	40.3	40.1	73.5			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.3	18.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	72	70	75	5.0	0.3	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	104	110	132	5.7	1.5	2.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.7	38.0	50.6	8.8	3.6	4.5
as % of GDP	11.5	16.8	17.7	18.4	20.0	21.1	25.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EU2040		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	5	5	5	5	5	0.0	0.0	-0.2
GDP (in 000 ME13)	43	55	69	76	89	102	117	4.8	2.6	2.7
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18389	18447	15631	-0.2	0.3	-1.6
Solids	4278	4231	3897	3247	3150	2927	1791	-0.9	-2.1	-5.5
Oil	3415	3711	3692	3346	3438	3327	3301	0.8	-0.7	-0.4
Natural gas	5777	5884	5007	4939	5017	4886	3285	-1.4	0.0	-4.1
Nuclear	4255	4626	3819	3569	4953	5375	5404	-1.1	2.6	0.9
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Renewable energy forms	810	859	1360	1551	2035	2162	2088	5.3	4.1	0.3
Energy Branch Consumption	623	1297	963	942	938	870	767	4.5	-0.3	-2.0
Non-Energy Uses	1365	1279	1053	1597	1738	1883	2003	-2.6	5.1	1.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	6389	6684	6345	6192	7979	8131	7788	-0.1	2.3	-0.2
Solids	1018	637	613	593	536	449	149	-4.9	-1.3	-12.0
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0
Natural gas	133	126	88	120	107	71	71	-4.0	2.0	-4.1
Nuclear	4255	4626	3819	3569	4953	5375	5404	-1.1	2.6	0.9
Renewable energy sources	818	912	1438	1613	2119	2235	2164	5.8	4.0	0.2
Hydro	397	399	452	407	468	431	431	1.3	0.4	-0.8
Biomass & Waste	421	505	972	1148	1572	1611	1502	8.7	4.9	-0.5
Wind	0	1	1	1	2	95	95	0.0	16.2	45.5
Solar and others	0	0	6	51	63	69	83	0.0	26.9	2.9
Geothermal	0	8	8	6	14	28	52	0.0	5.4	13.9
Net Imports (ktoe)	11997	12428	11230	10675	10411	10316	7844	-0.7	-0.8	-2.8
Solids	3432	3739	2951	2654	2614	2478	1642	-1.5	-1.2	-4.5
Oil	3090	3274	3266	3048	3174	3327	3301	0.6	-0.3	0.4
Crude oil and Feedstocks	5720	5429	5282	5716	5602	5555	5326	-0.8	0.6	-0.5
Oil products	-2630	-2155	-2015	-2667	-2428	-2228	-2025	-2.6	1.9	-1.8
Natural gas	5707	5735	5003	4819	4910	4815	3214	-1.3	-0.2	-4.1
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6
Import Dependency (%)	65.5	65.3	62.9	63.3	56.6	55.9	50.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34350	37664	34807	-1.1	2.3	0.1
Nuclear energy	16494	17727	14574	14662	20320	22049	23134	-1.2	3.4	1.3
Solids	5584	5535	3570	4121	4751	3886	2080	-4.4	2.9	-7.9
Oil (including refinery gas)	202	741	600	163	8	90	90	11.5	-34.7	26.7
Gas (including derived gases)	3871	2629	2716	1730	1339	3242	222	-3.5	-6.8	-16.5
Biomass-waste	32	76	726	1129	1931	1741	2457	36.6	10.3	2.4
Hydro (pumping excluded)	4615	4638	5255	4738	5442	5016	5012	1.3	0.4	-0.8
Wind	0	6	6	6	26	1107	1107	0.0	15.8	45.5
Solar	0	0	17	520	532	532	706	0.0	40.8	2.9
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7698	8364	9210	-0.3	1.4	1.8
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6
Renewable energy	1685	1601	1624	2220	2356	3096	3216	-0.4	3.8	3.2
Hydro (pumping excluded)	1685	1596	1600	1607	1717	1717	1717	-0.5	0.7	0.0
Wind	0	5	5	5	19	760	760	0.0	14.3	44.5
Solar	0	0	19	608	620	620	740	0.0	41.7	1.8
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2526	2795	3246	3337	2523	2447	1973	2.5	-2.5	-2.4
of which cogeneration units	618	5411	2821	1020	805	841	603	16.4	-11.8	-2.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4
Gas fired	821	1067	1674	1738	1325	1325	1101	7.4	-2.3	-1.8
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0
Biomass-waste fired	7	30	177	241	322	326	335	38.2	6.1	0.4
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	48.0	48.7	41.0			
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	37.5	37.6	33.7			
% of gross electricity from CHP	18.4	15.3	15.9	25.6	22.2	17.4	9.1			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	82.2	80.8	83.1			
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1843	2049	1236	-0.4	-3.2	-3.9
Solids	1619	1677	1205	1089	1165	1043	547	-2.9	-0.3	-7.3
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.7
Gas (including derived gases)	1002	847	793	314	239	575	103	-2.3	-11.3	-8.1
Biomass & Waste	4	40	264	255	436	401	556	51.0	5.1	2.4
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	12901	13989	12558	12416	13528	13528	12577	-0.3	0.7	-0.7
Refineries	5959	6398	6011	6450	6334	6050	5839	0.1	0.5	-0.8
Biofuels and hydrogen production	0	11	98	118	176	163	165	0.0	6.0	-0.6
District heating	674	718	497	367	377	348	174	-3.0	-2.7	-7.4
Derived gases, cokeries etc.	6268	6862	5952	5481	6642	6967	6399	-0.5	1.1	-0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovakia: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	37	39	36	38	45	50	57	-0.2	2.2	2.3
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	1.9
Private cars and motorcycles	24	26	27	28	34	38	42	1.2	2.1	2.2
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.3
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	17	6.0	1.9	1.4
Rail	11	9	8	8	10	11	13	-3.2	1.8	3.0
Inland navigation	1	1	1	1	1	1	2	-1.5	1.1	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2346	2241	2273	4.4	0.5	-0.3
Public road transport	193	185	132	141	154	160	170	-3.7	1.5	1.0
Private cars and motorcycles	830	992	1194	1155	1208	1103	1100	3.7	0.1	-0.9
Heavy goods and light commercial vehicles	308	527	821	814	872	849	857	10.3	0.6	-0.2
Rail	83	42	40	41	48	55	62	-7.1	1.8	2.6
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.5
<i>By transport activity</i>										
Passenger transport	1064	1223	1374	1346	1423	1333	1350	2.6	0.4	-0.5
Freight transport	390	570	867	859	924	908	923	8.3	0.6	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	1.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	8.0	8.1			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16651	16564	13629	-0.1	-0.1	-2.0
Final Energy Demand	10980	11561	11546	11225	11718	11245	8792	0.5	0.1	-2.8
<i>by sector</i>										
Industry	4532	4713	4361	4420	4607	4664	3628	-0.4	0.6	-2.4
Energy intensive industries	3678	3887	3637	3655	3770	3768	2855	-0.1	0.4	-2.7
Other industrial sectors	854	826	723	765	837	895	773	-1.7	1.5	-0.8
Residential	2586	2540	2312	2176	2212	2029	1300	-1.1	-0.4	-5.2
Tertiary	2407	1916	2240	2038	2167	1938	1281	-0.7	-0.3	-5.1
Transport ⁽⁵⁾	1455	2392	2633	2591	2732	2614	2583	6.1	0.4	-0.6
<i>by fuel</i>										
Solids	1747	1572	1637	1294	1247	1192	803	-0.6	-2.7	-4.3
Oil	1703	2184	2301	2230	2287	2120	2046	3.1	-0.1	-1.1
Gas	4698	4540	4119	4011	4056	3576	2300	-1.3	-0.2	-5.5
Electricity	1893	1965	2075	2219	2372	2630	2414	0.9	1.3	0.2
Heat (from CHP and District Heating)	619	951	851	726	814	732	397	3.2	-0.4	-6.9
Renewable energy forms	320	349	562	745	940	984	814	5.8	5.3	-1.4
Other	0	0	0	0	2	11	17	0.0	0.0	27.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	424	347	259	221	207	181	134	-4.8	-2.3	-4.2
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	31	21	-8.9	-1.4	-4.6
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	35	19	-5.1	-2.9	-8.0
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	38	22	-3.8	-3.2	-7.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	26	23	2.7	-1.8	-2.8
Freight transport (toe/Mtkm)	20	27	40	37	35	32	29	7.2	-1.1	-2.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	54.1	54.7	50.8	45.0	42.5	39.9	29.7	-0.6	-1.8	-3.5
of which ETS sectors (2013 scope) GHG emissions	29.2	24.7	20.4	19.2	18.6	11.7			-2.5	-4.8
of which ESD sectors (2013 scope) GHG emissions	25.5	26.1	24.6	23.4	21.4	18.0			-1.1	-2.6
CO₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.5	30.1	20.2	0.0	-1.7	-4.7
Power generation/District heating	11.1	11.2	9.2	6.3	6.1	6.6	3.1	-1.8	-4.0	-6.4
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.8	1.5	4.4	-2.0	-3.3
Industry	13.3	14.1	12.8	12.0	11.3	10.3	6.5	-0.4	-1.3	-5.3
Residential	4.1	3.6	3.4	2.8	2.7	2.2	1.0	-2.0	-2.3	-9.1
Tertiary	4.5	2.7	3.5	3.1	3.1	2.3	1.2	-2.5	-1.1	-8.8
Transport	4.1	6.6	7.3	7.1	7.3	6.9	6.8	5.9	0.1	-0.8
CO₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.5	-7.0	0.9	-0.1
Non-CO₂ GHG emissions	8.7	9.1	8.9	7.8	6.4	6.3	6.0	0.2	-3.2	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	56.3	52.8	39.3	-0.6	-1.8	-3.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.14	0.08	-1.4	-5.5	-5.3
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.08	1.94	1.77	-0.2	-1.1	-1.6
Industry	2.94	2.99	2.94	2.72	2.45	2.21	1.80	0.0	-1.8	-3.0
Residential	1.60	1.40	1.47	1.30	1.22	1.10	0.80	-0.9	-1.8	-4.1
Tertiary	1.85	1.43	1.55	1.54	1.44	1.18	0.97	-1.8	-0.8	-3.9
Transport	2.82	2.77	2.77	2.74	2.69	2.65	2.62	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.7	14.4	16.0	18.5			
RES-H&C share	1.2	4.9	7.8	10.3	13.0	15.6	17.9			
RES-E share	11.9	13.5	17.8	21.7	24.9	24.1	29.1			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	11.1	13.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	80	72	92	1.2	1.3	1.4
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	130	135	159	4.3	-1.0	2.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.8	16.1	21.2	4.9	1.9	4.4
as % of GDP	16.4	15.6	16.6	14.7	15.5	15.8	18.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EUCC-40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 M€13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6777	7015	6816	5616	1.1	-0.3	-2.2
Solids	1305	1539	1451	1268	1357	1305	850	1.1	-0.7	-4.6
Oil	2419	2580	2579	2360	2275	1987	1678	0.6	-1.2	-3.0
Natural gas	826	929	863	681	699	758	453	0.4	-2.1	-4.2
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Renewable energy forms	788	787	1054	1182	1393	1387	1349	3.0	2.8	-0.3
Energy Branch Consumption	107	100	112	99	105	96	81	0.5	-0.6	-2.6
Non-Energy Uses	238	310	209	114	120	126	126	-1.3	-5.4	0.5
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3085	3492	3687	3441	3762	3738	3358	1.8	0.2	-1.1
Solids	1062	1184	1196	1023	1127	1048	708	1.2	-0.6	-4.5
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	11	15	0.0	-3.8	13.6
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1258	1251	1206	2.7	2.1	-0.4
Hydro	330	298	388	381	391	407	436	1.6	0.1	1.1
Biomass & Waste	458	489	601	632	722	634	464	2.7	1.9	-4.3
Wind	0	0	0	0	24	27	58	0.0	0.0	8.9
Solar and others	0	0	9	36	55	134	219	0.0	19.2	14.9
Geothermal	0	0	27	45	86	48	29	0.0	9.5	-8.0
Net Imports (ktoe)	3415	3855	3581	3356	3274	3099	2279	0.5	-0.9	-3.6
Solids	244	323	279	245	231	257	143	1.4	-1.9	-4.7
Oil	2466	2634	2596	2380	2296	2007	1697	0.5	-1.2	-3.0
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2296	2007	1697	1.2	-1.2	-3.0
Natural gas	820	925	857	678	695	747	439	0.4	-2.1	-4.5
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Import Dependency (%)	52.9	52.5	49.4	49.4	46.5	45.3	40.4			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15128	16550	17938	17653	1.8	0.2	0.6
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5203	4806	3123	1.4	-0.2	-5.0
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	202	581	62	6.5	-9.5	-11.2
Biomass-waste	70	120	222	111	300	432	561	12.2	3.0	6.5
Hydro (pumping excluded)	3834	3461	4512	4425	4542	4735	5075	1.6	0.1	1.1
Wind	0	0	0	5	284	313	669	0.0	0.0	8.9
Solar	0	0	13	295	391	1271	2362	0.0	40.8	19.7
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3885	4523	5577	0.8	2.0	3.7
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2616	3945	2.6	5.0	8.3
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1300	2.5	1.3	0.6
Wind	0	0	0	4	200	220	457	0.0	0.0	8.6
Solar	0	0	12	262	352	1176	2188	0.0	40.2	20.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1413	1207	932	-0.1	0.1	-4.1
of which cogeneration units	648	336	333	228	213	230	168	-6.4	-4.4	-2.3
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	467	387	164	3.0	2.3	-10.0
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	126	120	3.9	9.3	-0.3
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.7	43.2	34.8			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.7	33.5	32.8			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.4	5.7	3.3			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.3	70.0	82.0			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1415	1494	981	1.8	-1.0	-3.6
Solids	1215	1412	1381	1217	1306	1263	830	1.3	-0.6	-4.4
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	36	128	21	6.7	-10.8	-5.4
Biomass & Waste	15	30	65	27	73	102	130	15.5	1.2	5.9
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1618	1599	0.6	0.1	0.1
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	137	143	0.0	12.3	-0.1
District heating	80	89	57	61	62	50	24	-3.2	0.9	-9.1
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1431	1432	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Slovenia: EUO+40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	25	27	30	31	34	35	36	2.0	1.0	0.8	
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.3	
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.7	
Rail	1	1	1	1	1	2	2	1.4	4.1	3.9	
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.7	
Heavy goods and light commercial vehicles	4	8	8	8	10	11	12	7.9	3.1	1.9	
Rail	3	3	3	4	5	6	7	1.8	3.6	4.4	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1906	1797	1706	3.8	0.5	-1.1	
Public road transport	78	71	92	94	96	94	91	1.8	0.3	-0.5	
Private cars and motorcycles	1025	1047	1304	1319	1300	1151	1038	2.4	0.0	-2.2	
Heavy goods and light commercial vehicles	98	323	355	370	444	476	493	13.8	2.2	1.1	
Rail	24	28	26	27	33	38	43	1.0	2.2	2.8	
Aviation	25	23	28	28	34	38	41	1.3	2.1	1.7	
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0	
By transport activity											
Passenger transport	1132	1146	1430	1447	1436	1291	1180	2.4	0.0	-2.0	
Freight transport	117	346	376	391	469	506	527	12.4	2.2	1.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.6	3.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.9	8.6				
ENERGY EFFICIENCY											
Primary energy consumption	6214	7016	7017	6662	6895	6691	5490	1.2	-0.2	-2.3	
Final Energy Demand	4457	4897	4927	4954	5047	4730	3836	1.0	0.2	-2.7	
by sector											
Industry	1424	1644	1273	1332	1414	1449	1155	-1.1	1.1	-2.0	
Energy intensive industries	836	1028	788	890	945	953	745	-0.6	1.8	-2.3	
Other industrial sectors	588	616	485	442	469	496	410	-1.9	-0.3	-1.3	
Residential	1077	1140	1191	1145	1098	944	608	1.0	-0.8	-5.7	
Tertiary	697	620	657	638	628	538	366	-0.6	-0.4	-5.3	
Transport ⁽⁵⁾	1259	1493	1806	1839	1907	1798	1708	3.7	0.5	-1.1	
by fuel											
Solids	90	80	47	51	52	42	21	-6.3	1.1	-8.8	
Oil	2264	2409	2447	2239	2153	1862	1553	0.8	-1.3	-3.2	
Gas	569	665	620	635	641	599	417	0.9	0.3	-4.2	
Electricity	905	1096	1029	1098	1166	1326	1225	1.3	1.3	0.5	
Heat (from CHP and District Heating)	195	196	192	197	205	190	118	-0.2	0.7	-5.3	
Renewable energy forms	435	452	592	735	830	709	495	3.1	3.4	-5.0	
Other	0	0	0	0	0	2	7	0.0	0.0	35.4	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	227	215	195	181	172	152	117	-1.5	-1.3	-3.8	
Industry (Energy on Value added, index 2000=100)	100	93	70	74	72	66	49	-3.6	0.3	-3.7	
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	60	35	-1.6	-1.1	-7.5	
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	46	29	-3.5	-1.6	-6.8	
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	36	31	0.3	-1.0	-2.8	
Freight transport (toe/Mtkm)	18	32	34	33	31	29	26	6.4	-1.0	-1.5	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	19.0	20.2	19.2	17.5	17.4	16.3	12.6	0.1	-1.0	-3.2	
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.6	7.5	5.0		-0.7	-4.2	
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	8.8	7.7		-1.1	-2.4	
CO2 Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	13.0	9.4	0.9	-0.9	-3.9	
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	5.7	3.6	1.3	-0.9	-4.5	
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.8	13.6	
Industry	2.4	2.3	1.7	1.7	1.7	1.5	0.9	-3.0	-0.5	-5.7	
Residential	1.3	1.5	1.2	0.9	0.8	0.5	0.2	-1.0	-4.0	-12.7	
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.2	-3.0	-4.1	-9.5	
Transport	3.7	4.4	5.3	5.2	5.3	4.9	4.5	3.8	0.0	-1.6	
CO2 Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.8	-1.7	-1.1	0.5	
Non-CO2 GHG emissions	3.9	3.5	3.0	3.0	2.7	2.6	2.5	-2.6	-1.0	-1.0	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.6	87.7	67.9	0.1	-1.0	-3.2	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.34	0.35	0.33	0.30	0.29	0.28	0.19	-0.3	-1.1	-4.5	
Final energy demand (t of CO2/toe)	1.91	1.88	1.85	1.72	1.64	1.54	1.51	-0.4	-1.2	-0.8	
Industry	1.66	1.41	1.37	1.29	1.17	1.02	0.80	-1.9	-1.6	-3.7	
Residential	1.24	1.28	1.01	0.79	0.73	0.57	0.34	-2.0	-3.2	-7.4	
Tertiary	1.68	1.63	1.32	1.03	0.90	0.72	0.57	-2.4	-3.7	-4.4	
Transport	2.90	2.97	2.93	2.85	2.76	2.70	2.62	0.1	-0.6	-0.5	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	26.4	31.6				
RES-H&C share	18.9	19.0	25.5	29.8	34.5	34.3	37.4				
RES-E share	30.9	28.7	32.2	33.0	35.5	39.0	54.4				
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.7	20.4				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	67	55	59	-0.7	4.0	-1.3	
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	104	108	113	0.2	-0.6	0.8	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.2	9.4	5.0	2.1	2.3	
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.2	19.6				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Spain: EU _{CO} +40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change		
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3			
GDP (in 000 M€13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8			
Gross Inland Consumption (ktoe)	123642	144223	129868	124583	125594	114651	90390	0.5	-0.3	-3.2			
Solids	20938	20566	7906	15768	16135	10464	1221	-9.3	7.4	-22.7			
Oil	63967	70457	60436	53990	50073	45394	40948	-0.8	-1.9	-2.0			
Natural gas	15305	29886	31162	25155	25461	22487	10737	7.4	-2.0	-8.3			
Nuclear	16046	14842	15991	14173	14173	14173	12213	0.0	-1.2	-1.5			
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4			
Renewable energy forms	7005	8587	15090	15611	19372	21587	24906	8.0	2.5	2.5			
Energy Branch Consumption	6259	6666	7878	7994	7452	6552	5751	2.3	-0.6	-2.6			
Non-Energy Uses	9407	8362	7046	5744	6094	6369	6363	-2.8	-1.4	0.4			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33100	36782	37089	37551	0.8	0.7	0.2			
Solids	7966	6265	3296	2973	2960	1086	107	-8.4	-1.1	-28.3			
Oil	228	167	124	377	365	344	358	-5.9	11.4	-0.2			
Natural gas	234	185	78	42	47	54	55	-10.4	-4.9	1.6			
Nuclear	16046	14842	15991	14173	14173	14173	12213	0.0	-1.2	-1.5			
Renewable energy sources	7005	8587	14677	15536	19237	21432	24817	7.7	2.7	2.6			
Hydro	2430	1582	3638	2853	2862	2876	2882	4.1	-2.4	0.1			
Biomass & Waste	4131	5113	6183	6934	9586	8635	7563	4.1	4.5	-2.3			
Wind	406	1821	3807	4443	4844	4948	8434	25.1	2.4	5.7			
Solar and others	33	65	1035	1288	1921	4924	5901	41.3	6.4	11.9			
Geothermal	5	7	16	18	24	48	37	11.5	4.3	4.2			
Net Imports (ktoe)	99342	123832	106084	100729	98162	86894	62268	0.7	-0.8	-4.4			
Solids	12840	14418	6726	12726	13174	9378	1115	-6.3	7.0	-21.9			
Oil	70653	79281	68704	62860	58976	54202	49528	-0.3	-1.5	-1.7			
Crude oil and Feedstocks	59023	60650	56496	66666	63022	58243	53716	-0.4	1.1	-1.6			
Oil products	11631	18630	12208	-3806	-4046	-4041	-4188	0.5	0.0	0.3			
Natural gas	15467	30248	30950	25113	25497	22614	11172	7.2	-1.9	-7.9			
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4			
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	70.1	62.4						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275294	286591	295285	258852	3.0	-0.4	-1.0			
Nuclear energy	62206	57539	61990	58066	58066	57757	49567	0.0	-0.7	-1.6			
Solids	79094	84047	25493	57621	59439	35074	0	-10.7	8.8	-100.0			
Oil (including refinery gas)	22578	24420	16562	4988	570	1699	1595	-3.1	-28.6	10.8			
Gas (including derived gases)	21942	80725	95840	53218	56673	51754	2843	15.9	-5.1	-25.9			
Biomass-waste	2100	3104	4674	4514	5972	7328	10455	8.3	2.5	5.8			
Hydro (pumping excluded)	28256	18393	42304	33176	33273	33447	33516	4.1	-2.4	0.1			
Wind	4727	21176	44271	51665	56322	57540	98065	25.1	2.4	5.7			
Solar	17	41	6423	12046	16276	50686	62811	80.6	9.7	14.5			
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	-100.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104708	118454	130982	6.6	0.5	2.3			
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0			
Renewable energy	17760	25774	41432	46783	51188	68662	86769	8.8	2.1	5.4			
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0			
Wind	2206	9918	20693	23025	24977	25342	38005	25.1	1.9	4.3			
Solar	12	60	4653	7126	9416	26525	31968	81.5	7.3	13.0			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	26776	39924	49994	50333	46122	42394	36815	6.4	-0.8	-2.2			
of which cogeneration units	4570	6597	3382	3505	4994	5348	5398	-3.0	4.0	0.8			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	11556	11359	10389	10316	9333	7378	3968	-1.1	-1.1	-8.2			
Gas fired	4713	17647	29569	31333	30272	29750	28054	20.2	0.2	-0.8			
Oil fired	10028	10043	8964	7496	4752	3422	2950	-1.1	-6.1	-4.7			
Biomass-waste fired	478	876	1072	1188	1764	1844	1843	8.4	5.1	0.4			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	30.1	27.7	22.2						
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.5	42.7	34.7						
% of gross electricity from CHP	9.2	4.0	7.4	9.7	11.3	14.4	5.5						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.3	70.0	98.3						
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24844	19306	3688	-0.5	-0.2	-17.4			
Solids	18245	17623	5551	13703	14046	8363	0	-11.2	9.7	-100.0			
Oil (including refinery gas)	4455	5249	3391	948	134	402	378	-2.7	-27.6	10.9			
Gas (including derived gases)	3075	11140	14839	8684	9364	8760	934	17.0	-4.5	-20.6			
Biomass & Waste	697	1391	1435	994	1300	1781	2377	7.5	-1.0	6.2			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	79871	79435	78129	80766	79102	74664	68332	-0.2	0.1	-1.5			
Refineries	60685	61323	58480	63161	60998	56820	52806	-0.4	0.4	-1.4			
Biofuels and hydrogen production	70	256	1412	1419	2061	1840	1888	35.0	3.9	-0.9			
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0			
Derived gases, cokeries etc.	19115	17857	18237	16187	16042	16004	13637	-0.5	-1.3	-1.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUO+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	476	535	542	561	609	655	710	1.3	1.2	1.5
Public road transport	50	53	51	52	53	54	55	0.1	0.4	0.4
Private cars and motorcycles	310	346	352	354	372	390	420	1.3	0.5	1.2
Rail	25	28	29	29	37	44	51	1.2	2.5	3.4
Aviation ⁽³⁾	89	106	109	124	146	165	181	2.1	3.0	2.2
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.5
Freight transport activity (Gtkm)	180	265	227	228	247	261	278	2.3	0.9	1.2
Heavy goods and light commercial vehicles	138	217	190	191	206	215	229	3.2	0.8	1.1
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.5
Inland navigation	31	36	28	28	30	32	34	-1.1	0.7	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34486	32462	31872	1.2	-0.7	-0.8
Public road transport	1354	1408	1319	1329	1324	1297	1266	-0.3	0.0	-0.5
Private cars and motorcycles	18655	20608	19876	18098	16537	14185	13407	0.6	-1.8	-2.1
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8353	8098	8258	2.9	-0.3	-0.1
Rail	708	1029	899	772	874	979	1049	2.4	-0.3	1.8
Aviation	4486	5323	5389	6005	6639	7083	7029	1.9	2.1	0.6
Inland navigation	1395	1555	1057	707	757	820	863	-2.7	-3.3	1.3
By transport activity										
Passenger transport	25151	27727	26960	25730	24857	22975	22152	0.7	-0.8	-1.1
Freight transport	7933	12069	10220	9303	9629	9486	9721	2.6	-0.6	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	1.6	3.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	6.0	6.3			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119500	108282	84027	0.7	-0.3	-3.5
Final Energy Demand	79885	97754	89072	85314	86380	79488	66535	1.1	-0.3	-2.6
by sector										
Industry	25368	30967	21435	21275	22301	21797	17562	-1.7	0.4	-2.4
Energy intensive industries	17349	20338	13379	13268	13999	13415	10783	-2.6	0.5	-2.6
Other industrial sectors	8020	10628	8056	8007	8302	8382	6779	0.0	0.3	-2.0
Residential	12000	15132	16920	15550	15498	13049	8906	3.5	-0.9	-5.4
Tertiary	9287	11712	13526	13441	14079	12163	8177	3.8	0.4	-5.3
Transport ⁽⁵⁾	33230	39944	37192	35048	34502	32479	31890	1.1	-0.7	-0.8
by fuel										
Solids	1775	1712	1261	1123	1313	1324	554	-3.4	0.4	-8.3
Oil	46297	53449	46775	43129	40269	35574	31463	0.1	-1.5	-2.4
Gas	12141	17978	14645	14743	14280	12123	8402	1.9	-0.3	-5.2
Electricity	16205	20827	21049	20057	21462	22560	19845	2.7	0.2	-0.8
Heat (from CHP and District Heating)	0	0	0	8	118	298	406	0.0	0.0	13.2
Renewable energy forms	3469	3788	5343	6252	8928	7510	5667	4.4	5.3	-4.4
Other	0	0	0	3	10	99	198	0.0	1431.2	34.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	139	138	119	114	104	86	62	-1.5	-1.3	-5.0
Industry (Energy on Value added, index 2000=100)	100	114	87	87	84	76	57	-1.4	-0.4	-3.8
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	93	71	45	1.4	-2.1	-7.1
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	79	49	1.0	-0.9	-7.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	29	25	-1.1	-2.2	-2.8
Freight transport (toe/Mtkm)	44	46	45	41	39	36	35	0.3	-1.5	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	398.8	447.7	364.3	356.5	343.5	295.7	213.1	-0.9	-0.6	-4.7
of which ETS sectors (2013 scope) GHG emissions		216.2	146.4	157.9	159.3	133.0	71.4		0.9	-7.7
of which ESD sectors (2013 scope) GHG emissions		231.5	218.0	198.6	184.2	162.7	141.7		-1.7	-2.6
CO2 Emissions (energy related)	291.6	347.3	272.6	271.0	260.6	215.6	136.1	-0.7	-0.5	-6.3
Power generation/District heating	98.8	117.7	70.3	81.2	81.6	58.0	5.2	-3.4	1.5	-24.1
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.5	11.3	1.9	-1.2	-2.4
Industry	50.4	59.2	42.3	39.8	39.5	36.2	24.7	-1.7	-0.7	-4.6
Residential	17.1	20.9	20.5	16.5	13.6	8.3	1.8	1.9	-4.0	-18.2
Tertiary	13.2	16.5	15.0	15.5	13.9	9.9	6.0	1.3	-0.8	-8.1
Transport	98.7	119.5	108.3	101.9	97.7	90.6	87.2	0.9	-1.0	-1.1
CO2 Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	19.0	19.6	19.9	-1.8	-1.4	0.5
Non-CO2 GHG emissions	81.1	71.0	69.9	67.7	64.0	60.5	57.1	-1.5	-0.9	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.9	99.8	71.9	-0.9	-0.6	-4.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.45	0.41	0.24	0.29	0.28	0.19	0.02	-6.2	1.9	-23.4
Final energy demand (t of CO2/toe)	2.25	2.21	2.09	2.04	1.91	1.83	1.80	-0.7	-0.9	-0.6
Industry	1.99	1.91	1.97	1.87	1.77	1.66	1.41	-0.1	-1.1	-2.3
Residential	1.42	1.38	1.21	1.06	0.88	0.63	0.20	-1.6	-3.2	-13.6
Tertiary	1.43	1.41	1.11	1.15	0.99	0.82	0.73	-2.5	-1.2	-3.0
Transport	2.97	2.99	2.91	2.91	2.83	2.79	2.73	-0.2	-0.3	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	25.6	36.0			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	23.7	27.8			
RES-E share	16.6	19.1	29.8	36.9	38.3	49.4	78.2			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.1	14.4	24.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	95	87	83	2.5	2.4	-1.4
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	169	161	169	3.5	1.3	0.0
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.2	145.2	155.1	180.3	4.9	1.9	2.2
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.7	12.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EU _{CO} +40			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	9	9	9	10	10	11	11	0.5	0.9	0.8	
GDP (in 000 ME13)	296	337	366	404	448	497	552	2.2	2.1	2.1	
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45967	44852	38823	0.4	-1.0	-1.7	
Solids	2452	2629	2492	2263	1979	1937	1230	0.2	-2.3	-4.6	
Oil	15377	14136	14199	11663	10826	9502	8360	-0.8	-2.7	-2.6	
Natural gas	816	886	1484	679	3074	2770	814	6.2	7.6	-12.4	
Nuclear	14785	18670	14917	14362	12192	12192	10871	0.1	-2.0	-1.1	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Renewable energy forms	15066	15308	17512	19146	19652	20165	19476	1.5	1.2	-0.1	
Energy Branch Consumption	1141	1326	1469	1414	1365	1346	1305	2.6	-0.7	-0.4	
Non-Energy Uses	3143	2460	2113	2183	2281	2398	2430	-3.9	0.8	0.6	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	30052	34233	32685	33372	31546	32021	29880	0.8	-0.4	-0.5	
Solids	162	211	238	210	93	88	0	4.0	-8.9	-100.0	
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0	
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0	
Nuclear	14785	18670	14917	14362	12192	12192	10871	0.1	-2.0	-1.1	
Renewable energy sources	15066	15308	17512	18801	19261	19741	19009	1.5	1.0	-0.1	
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1	
Biomass & Waste	8264	8961	11490	11434	11823	10782	9702	3.4	0.3	-2.0	
Wind	39	81	301	1147	1249	2821	2821	22.6	15.3	8.5	
Solar and others	5	6	11	17	31	53	76	7.4	11.0	9.4	
Geothermal	0	0	0	0	0	2	331	0.0	0.0	100.4	
Net Imports (ktoe)	20436	19460	19294	15820	16739	15260	11492	-0.6	-1.4	-3.7	
Solids	2409	2556	2548	2054	1885	1849	1230	0.6	-3.0	-4.2	
Oil	16849	16698	15102	13853	13096	11824	10530	-1.1	-1.4	-2.2	
Crude oil and Feedstocks	21606	19369	19139	15905	15006	13689	12476	-1.2	-2.4	-1.8	
Oil products	-4757	-2671	-4038	-2052	-1910	-1865	-1946	-1.6	-7.2	0.2	
Natural gas	776	843	1466	679	3122	2877	1193	6.6	7.9	-9.2	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	32.3	27.8				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	173092	187436	171530	0.2	1.5	-0.1	
Nuclear energy	57316	72377	57828	57851	49379	49379	44156	0.1	-1.6	-1.1	
Solids	1706	1169	1770	1540	1118	1116	114	0.4	-4.5	-20.4	
Oil (including refinery gas)	1533	1379	1774	249	403	199	0	1.5	-13.8	-100.0	
Gas (including derived gases)	1292	1342	3782	471	15532	12988	490	11.3	15.2	-29.2	
Biomass-waste	4342	8357	13397	14846	20457	20138	23202	11.9	4.3	1.3	
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1	
Wind	457	936	3502	13335	14526	32805	32805	22.6	15.3	8.5	
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37529	43878	43774	0.7	0.2	1.6	
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0	
Renewable energy	16718	16799	18654	22501	23533	29492	29492	1.1	2.4	2.3	
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0	
Wind	209	493	2019	6025	6507	12467	12467	25.5	12.4	6.7	
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7754	7256	8761	7643	7046	7436	7332	1.2	-2.2	0.4	
of which cogeneration units	4940	3488	5100	4504	6312	5204	3064	0.3	2.2	-7.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6	
Gas fired	547	469	1168	1168	3223	3359	3231	7.9	10.7	0.0	
Oil fired	4472	3974	3963	2958	888	888	888	-1.2	-13.9	0.0	
Biomass-waste fired	2398	2465	3274	3161	2801	3054	3085	3.2	-1.6	1.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.3	47.7	43.6				
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	40.3	35.5				
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.3	14.0	6.2				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.1	92.4	99.6				
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7872	7341	5770	6.2	1.9	-3.1	
Solids	462	508	597	566	275	265	40	2.6	-7.5	-17.5	
Oil (including refinery gas)	530	317	431	70	115	57	0	-2.0	-12.3	-100.0	
Gas (including derived gases)	508	591	998	225	2492	2136	215	7.0	9.6	-21.7	
Biomass & Waste	2084	3158	4491	4886	4990	4883	5515	8.0	1.1	1.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	40980	42243	39786	34628	31714	30258	27587	-0.3	-2.2	-1.4	
Refineries	22901	20082	21039	16927	16154	15070	13920	-0.8	-2.6	-1.5	
Biofuels and hydrogen production	0	134	376	733	817	851	1064	0.0	8.1	2.7	
District heating	1564	1525	1735	1424	1382	894	635	1.0	-2.3	-7.5	
Derived gases, cokeries etc.	16516	20501	16636	15543	13362	13444	11968	0.1	-2.2	-1.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUOQ+40		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	142	148	151	160	167	174	185	0.7	0.9	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.2
Private cars and motorcycles	102	108	109	114	116	119	124	0.7	0.7	0.7
Rail	10	11	13	15	16	18	20	2.8	2.1	2.0
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.3	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.5
Freight transport activity (Gtkm)	70	78	81	81	90	97	104	1.5	1.1	1.5
Heavy goods and light commercial vehicles	43	47	45	46	49	51	53	0.4	1.1	0.7
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.2
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7893	7079	6656	0.5	-0.9	-1.7
Public road transport	189	179	184	187	193	203	211	-0.3	0.5	0.9
Private cars and motorcycles	4879	5236	5250	4890	4394	3568	3119	0.7	-1.8	-3.4
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1939	1833	1815	1.2	-0.1	-0.7
Rail	299	246	208	232	264	287	310	-3.6	2.4	1.6
Aviation	928	846	840	945	1004	1079	1085	-1.0	1.8	0.8
Inland navigation	156	142	188	85	98	107	116	1.8	-6.3	1.7
By transport activity										
Passenger transport	6165	6361	6387	6089	5668	4934	4503	0.4	-1.2	-2.3
Freight transport	2027	2248	2234	2171	2225	2145	2153	1.0	0.0	-0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.7	2.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.7	12.4	15.3			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43686	42454	36394	0.6	-1.1	-1.8
Final Energy Demand	33561	33492	34077	31885	31961	29995	24349	0.2	-0.6	-2.7
by sector										
Industry	12854	12464	12205	11531	12111	12282	10060	-0.5	-0.1	-1.8
Energy intensive industries	9198	9252	9141	8370	8742	8712	7040	-0.1	-0.4	-2.1
Other industrial sectors	3656	3212	3064	3161	3370	3570	3021	-1.8	1.0	-1.1
Residential	7300	7305	7557	7197	7046	6000	4296	0.3	-0.7	-4.8
Tertiary	5214	5114	5720	4897	4911	4635	3337	0.9	-1.5	-3.8
Transport ⁽⁵⁾	8192	8609	8595	8260	7893	7079	6656	0.5	-0.8	-1.7
by fuel										
Solids	1114	1346	1202	1122	1123	1035	621	0.8	-0.7	-5.8
Oil	11861	11256	10038	8856	7973	6626	5535	-1.7	-2.3	-3.6
Gas	673	765	728	677	801	899	868	0.8	1.0	0.8
Electricity	11068	11238	11283	11102	11611	12779	11199	0.2	0.3	-0.4
Heat (from CHP and District Heating)	3550	4174	5141	4420	4484	3104	1581	3.8	-1.4	-9.9
Renewable energy forms	5294	4714	5685	5705	5966	5536	4439	0.7	0.5	-2.9
Other	0	0	0	3	3	16	106	0.0	0.0	41.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	165	151	139	116	103	90	70	-1.7	-3.0	-3.7
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	55	41	-3.5	-1.7	-3.5
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	47	30	-1.7	-3.0	-7.1
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	53	34	-0.9	-3.6	-5.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	26	22	-0.5	-2.2	-3.4
Freight transport (toe/Mtkm)	29	29	28	27	25	22	21	-0.5	-1.2	-1.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.7	50.8	38.9	-0.9	-1.4	-3.7
of which ETS sectors (2013 scope) GHG emissions	25.9	25.6	19.9	19.9	23.7	22.2	14.3		-0.8	-4.9
of which ESD sectors (2013 scope) GHG emissions	43.0	39.5	35.8	35.8	33.0	28.6	24.6		-1.8	-2.9
CO2 Emissions (energy related)	52.2	52.1	49.0	40.6	42.2	37.0	25.6	-0.6	-1.5	-4.9
Power generation/District heating	7.7	7.7	9.1	4.4	8.8	8.0	2.1	1.7	-0.4	-13.1
Energy Branch	2.0	1.9	2.0	2.2	1.8	1.8	1.7	0.4	-1.0	-0.6
Industry	11.9	13.3	10.5	10.0	9.4	8.4	5.6	-1.2	-1.1	-5.1
Residential	3.0	1.5	0.4	0.2	0.2	0.1	0.0	-17.9	-6.6	-22.2
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.5	-4.2	-6.8	-10.6
Transport	23.2	24.6	24.1	22.0	20.5	17.9	15.6	0.4	-1.6	-2.7
CO2 Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.5	3.4	3.3	1.5	-0.7	-0.4
Non-CO2 GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	10.1	-2.7	-1.1	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.5	69.5	53.2	-0.9	-1.4	-3.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.04	0.04	0.04	0.02	0.04	0.04	0.01	0.6	-1.1	-11.6
Final energy demand (t of CO2/toe)	1.27	1.27	1.11	1.06	0.99	0.91	0.89	-1.3	-1.2	-1.0
Industry	0.93	1.07	0.86	0.87	0.78	0.69	0.56	-0.7	-1.0	-3.3
Residential	0.41	0.20	0.05	0.03	0.03	0.01	0.00	-18.2	-6.0	-18.2
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.14	-5.1	-5.4	-7.1
Transport	2.83	2.86	2.80	2.66	2.60	2.53	2.35	-0.1	-0.7	-1.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.8	60.6	65.3			
RES-H&C share	48.7	52.4	60.9	72.7	69.1	70.9	70.5			
RES-E share	51.7	51.6	56.6	67.3	69.2	73.3	84.4			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.2	43.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	61	56	59	-0.1	0.8	-0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	140	142	148	5.7	-0.2	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.2	53.6	65.0	3.9	0.6	2.8
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.8	11.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EUCCO+40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 ME13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	189418	172075	142402	-0.8	-1.1	-2.8	
Solids	36516	37737	30761	30896	19261	8307	4214	-1.7	-4.6	-14.1	
Oil	81031	84449	72986	71030	65436	58076	51350	-1.0	-1.1	-2.4	
Natural gas	87399	85473	85050	67578	62217	56962	22966	-0.3	-3.1	-9.5	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	25788	33704	39080	11.3	13.6	4.2	
Energy Branch Consumption	14909	16092	13761	10879	9915	8660	7439	-0.8	-3.2	-2.8	
Non-Energy Uses	11330	11213	7524	8461	8861	8961	8819	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	109918	100582	99932	-5.8	-2.9	-0.9	
Solids	18658	11899	10751	6067	5387	3142	1734	-5.4	-6.7	-10.7	
Oil	127939	87930	63788	48199	40949	32778	26042	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26723	22471	14633	-6.2	-6.3	-5.8	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10758	21485	28330	33749	8.6	14.4	4.6	
Hydro	437	423	307	477	453	458	459	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11798	15367	16389	8.4	10.6	3.3	
Wind	81	250	875	2969	7891	10848	15288	26.8	24.6	6.8	
Solar and others	11	30	101	878	1340	1646	1603	24.5	29.5	1.8	
Geothermal	1	1	1	1	3	11	11	0.0	13.4	14.4	
Net Imports (ktoe)	-39220	31596	61239	87711	82703	74655	45626	0.0	3.1	-5.8	
Solids	14454	27222	16045	24829	13874	5165	2480	1.0	-1.4	-15.8	
Oil	-45582	-2738	11181	25966	27654	28382	28265	0.0	9.5	0.2	
Crude oil and Feedstocks	-39093	4558	13213	20985	23505	25332	26203	0.0	5.9	1.1	
Oil products	-6489	-7296	-2032	4981	4149	3050	2062	-11.0	0.0	-6.8	
Natural gas	-9311	5973	32205	33331	35530	34567	8531	0.0	1.0	-13.3	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.9	42.6	31.3				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357130	375980	406026	402630	0.1	-0.1	0.7	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	53779	12099	3676	-1.1	-6.7	-23.5	
Oil (including refinery gas)	8446	5339	4804	4252	2334	2423	2397	-5.5	-7.0	0.3	
Gas (including derived gases)	150427	154339	176759	117631	99666	122493	25549	1.6	-5.6	-12.7	
Biomass-waste	4455	11658	13373	26283	51006	68361	71614	11.6	14.3	3.5	
Hydro (pumping excluded)	5086	4922	3568	5550	5264	5324	5333	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	91759	126143	177766	26.8	24.6	6.8	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	118880	123185	141931	1.2	3.0	1.8	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	45184	57363	73284	14.1	20.3	5.0	
Hydro (pumping excluded)	1485	1501	1637	1693	1739	1744	1745	1.0	0.6	0.0	
Wind	412	1565	5396	13603	32301	44457	60374	29.3	19.6	6.5	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64812	58010	55539	1.1	-0.9	-1.5	
of which cogeneration units	5794	5440	6102	5052	5345	5626	15092	0.5	-1.3	10.9	
of which CCS units	0	0	0	0	833	833	833	0.0	0.0	0.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35273	37295	36736	3.1	0.6	0.4	
Oil fired	9696	9323	9064	2227	1151	1144	1099	-0.7	-18.6	-0.5	
Biomass-waste fired	2403	2961	3335	3634	17238	17249	17203	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.6	36.3	31.3				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	42.8	46.2	40.2				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	4.7	3.9	3.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.4	1.6				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	58.6	66.3	82.1				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	41561	38246	22098	0.1	-3.6	-6.1	
Solids	28425	29812	23816	23961	13402	2974	779	-1.8	-5.6	-24.8	
Oil (including refinery gas)	1453	1060	789	920	522	542	536	-5.9	-4.1	0.3	
Gas (including derived gases)	28139	28415	31452	20339	16685	19919	4872	1.1	-6.1	-11.6	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15910	10.9	11.5	3.8	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83204	76305	79886	-1.9	-1.6	-0.4	
Refineries	88821	88399	75162	65526	61108	55226	49791	-1.7	-2.0	-2.0	
Biofuels and hydrogen production	0	80	1130	1361	2136	1892	1870	0.0	6.6	-1.3	
District heating	15	14	13	13	11	14	6	-0.9	-2.2	-5.1	
Derived gases, cokeries etc.	29623	26714	21187	21212	19949	19173	28218	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUOQ+40				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
Annual % Change											
TRANSPORT											
Passenger transport activity (Gpkm)	822	872	849	878	935	959	1012	0.3	1.0	0.8	
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.4	
Private cars and motorcycles	644	673	649	659	702	711	748	0.1	0.8	0.6	
Rail	47	53	66	76	80	87	93	3.5	2.0	1.6	
Aviation ⁽³⁾	77	97	83	90	100	106	116	0.7	1.8	1.5	
Inland navigation	6	6	5	5	6	6	7	-0.3	0.8	1.2	
Freight transport activity (Gtkm)	237	248	216	242	253	260	273	-0.9	1.6	0.8	
Heavy goods and light commercial vehicles	183	183	164	187	195	198	207	-1.1	1.8	0.6	
Rail	18	21	19	22	23	25	26	0.3	2.1	1.5	
Inland navigation	36	43	33	34	35	37	39	-0.9	0.5	1.1	
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49630	45057	42596	-0.2	-0.4	-1.5	
Public road transport	559	499	515	511	504	494	477	-0.8	-0.2	-0.6	
Private cars and motorcycles	29150	30049	29058	27657	25102	21170	19451	0.0	-1.5	-2.5	
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9043	8650	8358	-1.5	0.7	-0.8	
Rail	821	988	966	1108	1155	1224	1275	1.6	1.8	1.0	
Aviation	11115	13069	11650	12400	12912	12557	12036	0.5	1.0	-0.7	
Inland navigation	933	1282	884	881	913	962	999	-0.5	0.3	0.9	
By transport activity											
Passenger transport	41504	44033	41640	40984	38960	34677	32436	0.0	-0.7	-1.8	
Freight transport	10882	11467	9830	11030	10670	10380	10160	-1.0	0.8	-0.5	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	2.2	4.6				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.7	6.1				
ENERGY EFFICIENCY											
Primary energy consumption	219230	222779	204710	191181	180557	163113	133583	-0.7	-1.2	-3.0	
Final Energy Demand	153236	152728	142723	138484	135462	123664	96913	-0.7	-0.5	-3.3	
by sector											
Industry	36930	33388	26923	25432	25598	23732	18448	-3.1	-0.5	-3.2	
Energy intensive industries	19392	16472	12350	11464	11299	9841	7135	-4.4	-0.9	-4.5	
Other industrial sectors	17537	16916	14573	13968	14300	13892	11313	-1.8	-0.2	-2.3	
Residential	43034	44151	44715	40936	39845	36416	23157	0.4	-1.1	-5.3	
Tertiary	20377	19686	19633	20101	20389	18459	12712	-0.4	0.4	-4.6	
Transport ⁽⁵⁾	52895	55503	51452	52014	49630	45057	42596	-0.3	-0.4	-1.5	
by fuel											
Solids	5954	4530	4133	4583	3837	3117	1483	-3.6	-0.7	-9.1	
Oil	63674	65851	59524	58175	53039	46037	39851	-0.7	-1.1	-2.8	
Gas	52180	50380	47246	43853	42386	34826	16855	-1.0	-1.1	-8.8	
Electricity	28360	29998	28286	27707	29168	31448	30859	0.0	0.3	0.6	
Heat (from CHP and District Heating)	2439	1268	1266	1255	1341	1424	1097	-6.3	0.6	-2.0	
Renewable energy forms	630	702	2268	2885	5594	6141	5849	13.7	9.4	0.4	
Other	0	0	0	26	97	671	920	-100.0	0.0	25.2	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	150	131	117	101	89	77	59	-2.4	-2.7	-4.1	
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	61	46	-2.3	-1.5	-4.0	
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	59	34	-1.4	-2.4	-6.7	
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	57	36	-2.6	-1.4	-6.0	
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.9	
Freight transport (toe/Mtkm)	46	46	46	46	42	40	37	-0.1	-0.8	-1.2	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	495.4	409.4	282.4	-1.2	-2.5	-5.5	
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	245.0	184.2	142.1	84.1		-3.9	-7.5	
of which ESD sectors (2013 scope) GHG emissions		413.6	362.5	340.9	311.2	267.2	198.3		-1.5	-4.4	
CO ₂ Emissions (energy related)	568.2	573.4	518.3	477.6	395.6	316.7	200.0	-0.9	-2.7	-6.6	
Power generation/District heating	194.2	199.6	178.4	155.5	97.7	63.5	18.9	-0.8	-5.8	-15.1	
Energy Branch	31.3	35.2	29.4	20.9	18.9	16.1	13.1	-0.6	-4.3	-3.6	
Industry	77.4	67.5	52.1	49.5	46.1	38.7	21.2	-3.9	-1.2	-7.5	
Residential	82.6	80.4	83.1	74.7	68.7	55.4	20.5	0.1	-1.9	-11.4	
Tertiary	27.0	25.3	24.8	25.3	22.6	17.5	10.6	-0.9	-0.9	-7.3	
Transport	155.6	165.4	150.6	151.7	141.7	125.5	115.7	-0.3	-0.6	-2.0	
CO ₂ Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	19.0	18.3	16.7	-2.8	2.0	-1.3	
Non-CO2 GHG emissions	131.6	133.2	102.5	90.5	80.9	74.3	65.6	-2.5	-2.3	-2.1	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	60.5	50.0	34.5	-1.2	-2.5	-5.5	
Carbon Intensity indicators											
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.49	0.45	0.42	0.25	0.15	0.05	-0.6	-5.9	-15.7	
Final energy demand (t of CO ₂ /toe)	2.24	2.22	2.18	2.18	2.06	1.92	1.73	-0.3	-0.5	-1.7	
Industry	2.10	2.02	1.93	1.95	1.80	1.63	1.15	-0.8	-0.7	-4.4	
Residential	1.92	1.82	1.86	1.82	1.72	1.52	0.89	-0.3	-0.7	-6.4	
Tertiary	1.32	1.29	1.26	1.26	1.11	0.95	0.83	-0.5	-1.3	-2.8	
Transport	2.94	2.98	2.93	2.92	2.86	2.78	2.72	-0.1	-0.2	-0.5	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.5	20.2	31.2				
RES-H&C share	0.8	0.8	1.8	3.4	7.0	9.5	19.2				
RES-E share	2.6	4.1	7.4	19.3	39.7	49.5	63.4				
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	20.2	30.6				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	111	113	115	3.4	6.7	0.3	
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	166	176	183	0.3	2.6	1.0	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	231.9	258.5	317.8	1.5	2.6	3.2	
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.5	13.1				

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively. For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^6 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix I.f: EUCO3030 sensitivity - Summary energy balances, emissions and indicators

SUMMARY ENERGY BALANCE AND INDICATORS (A)								EU28: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	484	492	500	505	510	513	516	0.3	0.2	0.1
GDP (in 000 ME13)	11231	12351	12895	13427	14550	15585	16682	1.4	1.2	1.4
Gross Inland Consumption (ktoe)	1726888	1824722	1760315	1666600	1641588	1559467	1423229	0.2	-0.7	-1.4
Solids	321292	318127	282994	277891	252134	215635	151542	-1.3	-1.1	-5.0
Oil	660025	677021	612954	579805	545081	505700	460077	-0.7	-1.2	-1.7
Natural gas	396144	445263	447394	387731	385548	368192	295689	1.2	-1.5	-2.6
Nuclear	243841	257516	236562	213043	188974	174739	174410	-0.3	-2.2	-0.8
Electricity	2030	1412	712	1761	1246	523	43	-9.9	5.8	0.0
Renewable energy forms	103557	125383	179699	206369	268603	294679	341554	5.7	4.1	2.4
Energy Branch Consumption	86261	91922	86455	81623	75824	69095	63140	0.0	-1.3	-1.8
Non-Energy Uses	113106	116080	110230	106709	112514	116557	117073	-0.3	0.2	0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	944996	903986	835772	758583	758674	727192	712804	-1.2	-1.0	-0.6
Solids	214596	196030	164837	148196	135592	119821	85693	-2.6	-1.9	-4.5
Oil	173901	135553	100408	78529	69707	57630	47433	-5.3	-3.6	-3.8
Natural gas	209436	190771	159948	118438	106359	91899	75417	-2.7	-4.0	-3.4
Nuclear	243841	257516	236562	213043	188974	174739	174410	-0.3	-2.2	-0.8
Renewable energy sources	103222	124116	174017	200378	258041	283104	329851	5.4	4.0	2.5
Hydro	30703	26859	32312	31166	32356	32381	32884	0.5	0.0	0.2
Biomass & Waste	65583	85060	119573	132613	164920	170429	184646	6.2	3.3	1.1
Wind	1913	6058	12836	23588	39813	48315	69759	21.0	12.0	5.8
Solar and others	436	827	3775	11001	17738	28208	36025	24.1	16.7	7.3
Geothermal	4587	5312	5521	2009	3214	3771	6537	1.9	-5.3	7.4
Net imports (ktoe)	826349	979676	955004	962880	939115	889987	770354	1.5	-0.2	-2.0
Solids	98320	125363	111814	129695	116542	95814	65848	1.3	0.4	-5.5
Oil	532226	597491	558847	556140	530826	503792	467349	0.5	-0.5	-1.3
Crude oil and Feedstocks	514686	578712	537586	515210	492862	468242	438197	0.4	-0.9	-1.2
Oil products	17540	18779	21261	40930	37963	35550	29152	1.9	6.0	-2.6
Natural gas	193432	254054	278015	269292	279939	278283	225496	3.7	0.1	-2.1
Electricity	2030	1412	712	1761	1246	523	43	-9.9	5.8	0.0
Import Dependency (%)	46.7	52.3	52.8	55.9	55.3	55.0	51.9			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3005548	3289991	3332773	3251300	3373990	3444306	3364853	1.0	0.1	0.0
Nuclear energy	944993	997699	916610	867402	772986	717746	723649	-0.3	-1.7	-0.7
Solids	933855	965565	830393	846882	772849	652941	438603	-1.2	-0.7	-5.5
Oil (including refinery gas)	181296	142772	86899	34612	21899	19702	10441	-7.1	-12.9	-7.1
Gas (including derived gases)	514267	705961	798645	566035	589284	585343	358020	4.5	-3.0	-4.9
Biomass-waste	46401	87831	145814	188810	214611	266614	308466	12.1	3.9	3.7
Hydro (pumping excluded)	357072	312372	375785	362397	376237	376521	382372	0.5	0.0	0.2
Wind	22254	70455	149278	274278	462942	561808	811151	21.0	12.0	5.8
Solar	117	1458	22502	103798	154722	254715	322418	69.1	21.3	7.6
Geothermal and other renewables	5293	5878	6847	7086	8461	8916	9732	2.6	2.1	1.4
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	683507	739589	858628	965588	1031387	1072037	1178330	2.3	1.9	1.3
Nuclear energy	139595	136829	132606	120798	114204	105051	109905	-0.5	-1.5	-0.4
Renewable energy	128990	162194	238638	366738	475366	571574	711924	6.3	7.1	4.1
Hydro (pumping excluded)	115841	119177	122922	127470	131613	132242	133896	0.6	0.7	0.2
Wind	12730	40485	85701	141580	207269	238190	324368	21.0	9.2	4.6
Solar	178	2292	29774	97443	135999	200453	252624	66.9	16.4	6.4
Other renewables (tidal etc.)	241	240	241	244	486	690	1036	0.0	7.3	7.9
Thermal power	414922	440565	487384	478053	441817	395412	356501	1.6	-1.0	-2.1
of which cogeneration units	92439	107819	107430	112105	85430	90229	71238	1.5	-2.3	-1.8
of which CCS units	0	0	0	0	833	1083	1483	0.0	0.0	5.9
Solids fired	194525	185353	180110	176559	146211	117698	99370	-0.8	-2.1	-3.8
Gas fired	123821	163333	215485	219628	211330	203151	181461	5.7	-0.2	-1.5
Oil fired	83315	74582	69295	53085	31444	20710	15306	-1.8	-7.6	-6.9
Biomass-waste fired	12657	16610	21719	27908	51789	52810	59321	5.5	9.1	1.4
Hydrogen plants	0	0	13	13	13	13	13	0.0	0.3	0.0
Geothermal heat	604	687	762	860	1030	1030	1030	2.4	3.1	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.5	48.1	42.1	36.5	35.6	35.2	31.5			
Efficiency of gross thermal power generation (%)	37.2	38.1	38.6	40.2	40.5	40.5	38.7			
% of gross electricity from CHP	11.3	12.5	12.6	12.2	10.4	10.2	8.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.2	0.2	0.4			
% of carbon free (RES, nuclear) gross electricity generation	45.8	44.9	48.5	55.5	59.0	63.5	76.0			
Fuel Inputs to Thermal Power Generation (ktoe)	388346	430899	416477	351894	340737	325281	249264	0.7	-2.0	-3.1
Solids	223608	229335	197694	200223	178340	149730	98835	-1.2	-1.0	-5.7
Oil (including refinery gas)	40868	32485	20566	7340	5031	4844	2817	-6.6	-13.1	-5.6
Gas (including derived gases)	105105	137667	151968	100069	99825	101227	62570	3.8	-4.1	-4.6
Biomass & Waste	14651	26766	41420	43077	55609	67549	83111	11.0	3.0	4.1
Geothermal heat	4114	4645	4828	1184	1932	1932	1932	1.6	-8.8	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1067893	1101207	997991	908897	859379	805600	760106	-0.7	-1.5	-1.2
Refineries	735106	756042	667606	609584	582752	548993	509190	-1.0	-1.4	-1.3
Biofuels and hydrogen production	709	3279	13086	16149	20765	19474	20426	33.8	4.7	-0.2
District heating	15899	17445	19101	16261	16211	14834	14348	1.9	-1.6	-1.2
Derived gases, cokeries etc.	316179	324441	298197	266904	239650	222298	216142	-0.6	-2.2	-1.0

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								EU28: EUOQ3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	5964	6295	6449	6735	7157	7491	7863	0.8	1.0	0.9
Public road transport	549	541	528	546	569	585	599	-0.4	0.8	0.5
Private cars and motorcycles	4466	4721	4843	5001	5254	5418	5624	0.8	0.8	0.7
Rail	450	464	499	540	599	669	734	1.0	1.8	2.1
Aviation ⁽³⁾	458	528	539	608	692	773	858	1.7	2.5	2.2
Inland navigation	42	42	40	40	43	46	48	-0.3	0.6	1.1
Freight transport activity (Gtkm)	2295	2612	2556	2704	2981	3216	3457	1.1	1.5	1.5
Heavy goods and light commercial vehicles	1589	1853	1809	1915	2109	2258	2414	1.3	1.5	1.4
Rail	405	416	394	428	482	538	595	-0.3	2.0	2.1
Inland navigation	300	343	354	361	390	419	448	1.7	1.0	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	341525	364526	359402	358062	350304	332765	321619	0.5	-0.3	-0.9
Public road transport	8775	8725	8834	9040	9257	9251	9133	0.1	0.5	-0.1
Private cars and motorcycles	206270	212102	211618	204765	189781	169045	157399	0.3	-1.1	-1.9
Heavy goods and light commercial vehicles	67279	79273	76918	78507	81587	82259	82938	1.3	0.6	0.2
Rail	8168	7668	7129	7395	7897	8457	8890	-1.4	1.0	1.2
Aviation	44876	49959	49230	53303	56437	58109	57348	0.9	1.4	0.2
Inland navigation	6156	6798	5673	5051	5346	5643	5912	-0.8	-0.6	1.0
<i>By transport activity</i>										
Passenger transport	266294	275041	273897	271237	259782	240967	228589	0.3	-0.5	-1.3
Freight transport	75231	89484	85505	86825	90522	91798	93031	1.3	0.6	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.9	3.7	4.6	6.1	6.5	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	1613782	1708642	1650085	1559890	1529074	1442910	1306157	0.2	-0.8	-1.6
Final Energy Demand	1129427	1186370	1155879	1133457	1134858	1075745	986214	0.2	-0.2	-1.4
<i>by sector</i>										
Industry	330627	327576	283437	284538	294533	283823	265526	-1.5	0.4	-1.0
Energy intensive industries	215899	215115	182721	182407	188508	179296	163400	-1.7	0.3	-1.4
Other industrial sectors	114728	112461	100716	102132	106026	104527	102126	-1.3	0.5	-0.4
Residential	288564	307594	313829	299747	299089	281571	244683	0.8	-0.5	-2.0
Tertiary	166677	183368	196770	188333	188042	174674	151562	1.7	-0.5	-2.1
Transport ⁽⁵⁾	343558	367831	361842	360838	353194	335677	324443	0.5	-0.2	-0.8
<i>by fuel</i>										
Solids	61977	53988	50512	47694	45556	40605	29707	-2.0	-1.0	-4.2
Oil	487065	502509	455207	437598	404662	365764	325504	-0.7	-1.2	-2.2
Gas	267588	281191	273366	265878	264003	246931	216580	0.2	-0.3	-2.0
Electricity	217644	239548	244471	241010	251715	258112	253009	1.2	0.3	0.1
Heat (from CHP and District Heating)	48044	52425	52875	49062	50686	49775	46328	1.4	-0.4	-0.9
Renewable energy forms	49109	56708	79448	92104	117862	112923	112238	4.9	4.0	-0.5
Other	0	0	0	111	375	1636	2848	0.0	0.0	22.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	154	148	137	124	113	100	85	-1.2	-1.9	-2.8
Industry (Energy on Value added, index 2000=100)	100	93	80	77	75	68	61	-2.2	-0.6	-2.1
Residential (Energy on Private Income, index 2000=100)	100	97	94	87	79	69	56	-0.6	-1.7	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	99	100	91	83	72	58	0.0	-1.8	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	39	37	36	33	30	26	23	-0.8	-1.8	-2.4
Freight transport (toe/Mtkm)	33	34	33	32	30	29	27	0.2	-1.0	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	5326.4	5349.2	4875.0	4583.4	4277.4	3903.6	3271.8	-0.9	-1.3	-2.6
of which ETS sectors (2013 scope) GHG emissions	2501.2	2175.1	2016.7	1890.1	1708.3	1298.6		-1.4	-3.7	
of which ESD sectors (2013 scope) GHG emissions	2847.9	2699.9	2566.6	2387.3	2195.3	1973.2		-1.2	-1.9	
CO₂ Emissions (energy related)	3992.2	4127.1	3782.3	3524.1	3283.3	2953.4	2372.6	-0.5	-1.4	-3.2
Power generation/District heating	1406.3	1486.8	1344.0	1177.9	1068.7	946.6	620.3	-0.5	-2.3	-5.3
Energy Branch	167.3	170.7	155.2	148.8	132.4	117.6	107.0	-0.7	-1.6	-2.1
Industry	691.0	634.1	511.8	505.4	493.5	432.2	342.8	-3.0	-0.4	-3.6
Residential	468.0	484.2	466.9	422.7	385.1	350.8	287.3	0.0	-1.9	-2.9
Tertiary	257.9	271.6	267.9	245.8	221.8	183.9	144.1	0.4	-1.9	-4.2
Transport	1001.7	1079.8	1036.6	1023.4	981.8	922.3	871.1	0.3	-0.5	-1.2
CO₂ Emissions (non energy and non land use related)	277.3	282.4	237.3	238.8	248.0	243.3	235.7	-1.5	0.4	-0.5
Non-CO₂ GHG emissions	1057.0	939.6	855.4	820.5	746.1	706.9	663.6	-2.1	-1.4	-1.2
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	92.5	92.9	84.7	79.6	74.3	67.8	56.8	-0.9	-1.3	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.39	0.37	0.33	0.30	0.26	0.23	0.16	-1.6	-2.3	-5.1
Final energy demand (t of CO ₂ /toe)	2.14	2.08	1.98	1.94	1.83	1.76	1.67	-0.8	-0.7	-0.9
Industry	2.09	1.94	1.81	1.78	1.68	1.52	1.29	-1.5	-0.7	-2.6
Residential	1.62	1.57	1.49	1.41	1.29	1.25	1.17	-0.9	-1.4	-0.9
Tertiary	1.55	1.48	1.36	1.31	1.18	1.05	0.95	-1.3	-1.4	-2.1
Transport	2.92	2.94	2.86	2.84	2.78	2.75	2.68	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.5	8.7	12.4	16.1	21.1	24.1	30.2			
RES-H&C share	9.0	10.3	14.0	17.4	22.4	24.3	29.9			
RES-E share	13.3	14.8	19.7	28.2	35.5	42.1	54.2			
RES-T share (based on ILUC formula)	0.9	1.7	5.2	6.9	11.2	14.4	20.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	57	65	85	94	92	92	2.1	3.7	-0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	0	117	136	144	153	159	165	0.0	1.2	0.8
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1055.8	1282.5	1467.9	1505.9	1794.4	1926.0	2114.7	3.4	2.0	1.7
as % of GDP	9.4	10.4	11.4	11.2	12.3	12.4	12.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Austria: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change	
Population (in million)	8	8	8	9	9	9	9	0.4	0.5	0.5		
GDP (in 000 M€13)	257	279	298	316	345	373	400	1.5	1.5	1.5		
Gross Inland Consumption (ktoe)	28996	34373	34604	32932	33434	32154	29786	1.8	-0.3	-1.1		
Solids	3597	4000	3365	3333	3405	2918	1942	-0.7	0.1	-5.5		
Oil	12173	14448	12833	12275	11719	10839	9819	0.5	-0.9	-1.8		
Natural gas	6519	8159	8215	6454	7664	7212	4852	2.3	-0.7	-4.5		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Renewable energy forms	6825	7537	9991	9809	10207	10851	12869	3.9	0.2	2.3		
Energy Branch Consumption	1306	1666	1504	1593	1500	1368	1238	1.4	0.0	-1.9		
Non-Energy Uses	1718	1717	1850	2037	2202	2332	2364	0.7	1.8	0.7		
SECURITY OF SUPPLY												
Production (incl. recovery of products) (ktoe)	9776	10012	12114	11276	11473	11328	12756	2.2	-0.5	1.1		
Solids	293	0	0	0	0	0	0	-51.8	-100.0	0.0		
Oil	1092	1003	1036	813	673	343	111	-0.5	-4.2	-16.5		
Natural gas	1533	1404	1486	1270	1141	668	435	-0.3	-2.6	-9.2		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	6859	7605	9592	9194	9659	10318	12210	3.4	0.1	2.4		
Hydro	3597	3154	3299	3526	3698	3812	3857	-0.9	1.1	0.4		
Biomass & Waste	3169	4214	5914	5018	5157	5083	5999	6.4	-1.4	1.5		
Wind	6	114	178	340	382	557	1191	40.8	8.0	12.0		
Solar and others	63	93	168	260	359	781	1033	10.3	7.9	11.2		
Geothermal	25	30	35	49	64	85	129	3.4	6.3	7.4		
Net Imports (ktoe)	18970	24517	21577	21656	21961	20826	17030	1.3	0.2	-2.5		
Solids	3019	3971	3358	3333	3405	2918	1942	1.1	0.1	-5.5		
Oil	10850	13204	11510	11462	11045	10496	9708	0.6	-0.4	-1.3		
Crude oil and Feedstocks	7791	8100	7011	8001	7806	7635	7263	-1.1	1.1	-0.7		
Oil products	3059	5104	4499	3461	3239	2861	2445	3.9	-3.2	-2.8		
Natural gas	5253	7153	6115	5184	6523	6544	4417	1.5	0.6	-3.8		
Electricity	-118	229	200	1061	439	334	304	0.0	8.2	-3.6		
Import Dependency (%)	65.4	71.3	62.4	65.8	65.7	64.8	57.2					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	59874	64066	67933	59609	71877	75914	75559	1.3	0.6	0.5		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	5727	7165	4918	4194	4929	3027	93	-1.5	0.0	-32.7		
Oil (including refinery gas)	1702	1641	1273	208	215	71	67	-2.9	-16.3	-11.1		
Gas (including derived gases)	8864	14347	16137	6774	14547	12194	2421	6.2	-1.0	-16.4		
Biomass-waste	1675	2882	5088	2592	3561	4345	6398	11.8	-3.5	6.0		
Hydro (pumping excluded)	41836	36677	38363	41001	42995	44322	44852	-0.9	1.1	0.4		
Wind	67	1331	2064	3958	4443	6472	13844	40.9	8.0	12.0		
Solar	3	21	88	871	1174	5472	7873	38.2	29.5	21.0		
Geothermal and other renewables	0	2	2	11	11	11	11	0.0	21.5	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	17911	19092	21503	22989	23327	27558	32687	1.8	0.8	3.4		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	11668	12440	13841	16437	17371	22080	27093	1.7	2.3	4.5		
Hydro (pumping excluded)	11613	11632	12706	13149	13699	13702	13829	0.9	0.8	0.1		
Wind	50	778	981	2412	2583	3491	6195	34.7	10.2	9.1		
Solar	5	30	154	876	1090	4887	7070	40.9	21.6	20.6		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6243	6652	7662	6552	5955	5478	5594	2.1	-2.5	-0.6		
of which cogeneration units	2632	3253	3157	3006	3052	2919	2131	1.8	-0.3	-3.5		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1887	1660	1359	873	802	777	777	-3.2	-5.1	-0.3		
Gas fired	2816	3389	4512	4074	3558	3374	3077	4.8	-2.3	-1.4		
Oil fired	1260	1145	1139	971	815	483	423	-1.0	-3.3	-6.4		
Biomass-waste fired	280	456	650	633	778	842	1316	8.8	1.8	5.4		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	2	1	2	2	2	2	0.0	7.2	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	36.8	36.7	35.1	28.4	33.8	30.4	25.7					
Efficiency of gross thermal power generation (%)	39.9	41.3	41.3	39.7	43.9	39.4	28.4					
% of gross electricity from CHP	10.4	15.4	15.4	17.7	22.8	17.4	8.9					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	72.8	63.9	67.1	81.3	72.6	79.9	96.6					
Fuel Inputs to Thermal Power Generation (ktoe)	3877	5421	5713	2988	4557	4285	2718	4.0	-2.2	-5.0		
Solids	1216	1507	1019	908	1069	672	28	-1.8	0.5	-30.5		
Oil (including refinery gas)	278	262	176	60	69	23	22	-4.5	-8.9	-10.8		
Gas (including derived gases)	1961	2836	2868	1406	2577	2417	712	3.9	-1.1	-12.1		
Biomass & Waste	421	814	1649	604	832	1163	1946	14.6	-6.6	8.9		
Geothermal heat	0	2	1	10	10	10	10	0.0	23.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	11349	11946	11472	12554	11799	11028	10102	0.1	0.3	-1.5		
Refineries	8865	9275	8040	9141	8769	8227	7578	-1.0	0.9	-1.4		
Biofuels and hydrogen production	16	50	495	571	443	419	454	41.2	-1.1	0.3		
District heating	558	613	869	678	635	592	489	4.5	-3.1	-2.6		
Derived gases, cokeries etc.	1910	2009	2068	2164	1953	1790	1580	0.8	-0.6	-2.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Austria: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	96	101	107	112	119	126	132	1.1	1.1	1.0
Public road transport	9	9	10	10	10	11	11	0.4	0.7	0.6
Private cars and motorcycles	68	72	75	78	80	84	87	1.0	0.7	0.7
Rail	12	13	15	16	18	20	22	1.9	2.2	1.7
Aviation ⁽³⁾	6	7	8	9	10	11	12	2.0	2.6	2.2
Inland navigation	0	0	0	0	0	0	0	-0.6	0.6	1.2
Freight transport activity (Gtkm)	50	54	61	65	70	75	80	2.0	1.3	1.3
Heavy goods and light commercial vehicles	31	33	39	43	46	48	51	2.3	1.6	1.1
Rail	17	19	20	20	22	24	26	1.8	0.9	1.7
Inland navigation	2	2	2	2	3	3	3	-0.3	0.9	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	6787	8815	8507	8480	8017	7510	7236	2.3	-0.6	-1.0
Public road transport	92	97	101	103	106	107	106	0.9	0.5	0.0
Private cars and motorcycles	4520	5616	5043	4708	4260	3782	3481	1.1	-1.7	-2.0
Heavy goods and light commercial vehicles	1290	2135	2387	2622	2589	2520	2507	6.3	0.8	-0.3
Rail	267	242	247	249	264	274	278	-0.8	0.7	0.5
Aviation	591	679	707	776	773	801	836	1.8	0.9	0.8
Inland navigation	28	45	22	23	24	26	27	-2.1	0.8	1.1
<i>By transport activity</i>										
Passenger transport	5260	6438	5894	5634	5192	4745	4481	1.1	-1.3	-1.5
Freight transport	1527	2377	2613	2846	2825	2764	2755	5.5	0.8	-0.2
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	6.0	6.9	5.8	6.1	6.8			
ENERGY EFFICIENCY										
Primary energy consumption	27277	32657	32754	30896	31232	29822	27422	1.8	-0.5	-1.3
Final Energy Demand	23692	28185	28423	28425	28029	26803	25116	1.8	-0.1	-1.1
<i>by sector</i>										
Industry	7283	8825	9195	9724	9947	9649	9427	2.4	0.8	-0.5
Energy intensive industries	5321	6148	6212	6588	6655	6361	6139	1.6	0.7	-0.8
Other industrial sectors	1962	2676	2983	3136	3292	3288	3288	4.3	1.0	0.0
Residential	6332	6828	6797	6669	6518	6196	5374	0.7	-0.4	-1.9
Tertiary	3070	3449	3686	3285	3263	3165	2821	1.8	-1.2	-1.4
Transport ⁽⁵⁾	7007	9082	8744	8746	8301	7792	7494	2.2	-0.5	-1.0
<i>by fuel</i>										
Solids	1403	1466	1169	1135	1188	1226	960	-1.8	0.2	-2.1
Oil	9818	12084	10539	9934	9319	8420	7466	0.7	-1.2	-2.2
Gas	4464	5125	5259	5142	5133	4747	4149	1.7	-0.2	-2.1
Electricity	4432	5013	5358	5436	5793	6004	6074	1.9	0.8	0.5
Heat (from CHP and District Heating)	1020	1353	1832	2008	1901	1947	1757	6.0	0.4	-0.8
Renewable energy forms	2555	3145	4266	4769	4689	4436	4669	5.3	0.9	0.0
Other	0	0	0	2	5	22	41	0.0	0.0	22.8
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	113	123	116	104	97	86	74	0.3	-1.8	-2.6
Industry (Energy on Value added, index 2000=100)	100	111	108	109	104	95	88	0.8	-0.4	-1.7
Residential (Energy on Private Income, index 2000=100)	100	100	93	85	77	67	54	-0.7	-1.9	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	103	101	85	77	68	56	0.1	-2.7	-3.0
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	54	47	43	37	31	28	0.1	-2.6	-2.7
Freight transport (toe/Mtkm)	30	44	43	44	40	37	35	3.4	-0.5	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.1	96.8	89.0	82.8	82.2	74.6	60.5	0.3	-0.8	-3.0
of which ETS sectors (2013 scope) GHG emissions	38.3	35.2	32.8	34.4	30.5	21.3		-0.3	-4.7	
of which ESD sectors (2013 scope) GHG emissions	58.4	53.7	50.0	47.8	44.2	39.2		-1.2	-2.0	
CO₂ Emissions (energy related)	65.6	78.6	71.5	65.7	65.8	58.9	45.9	0.9	-0.8	-3.5
Power generation/District heating	12.5	17.0	15.1	11.2	14.0	12.1	5.2	1.9	-0.7	-9.4
Energy Branch	3.3	3.7	3.8	4.1	3.6	3.2	2.9	1.3	-0.3	-2.1
Industry	16.8	18.5	17.6	17.7	17.2	15.4	12.4	0.5	-0.2	-3.3
Residential	8.9	8.6	7.7	6.8	6.4	5.5	4.4	-1.5	-1.9	-3.7
Tertiary	3.9	4.4	3.2	2.0	1.8	1.6	1.1	-1.8	-5.8	-4.5
Transport	20.2	26.5	24.1	23.9	22.8	21.1	19.9	1.8	-0.6	-1.4
CO₂ Emissions (non energy and non land use related)	4.6	5.0	5.4	5.3	5.3	5.2	5.2	1.6	-0.3	-0.2
Non-CO₂ GHG emissions	15.8	13.2	12.1	11.7	11.1	10.5	9.5	-2.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	108.2	121.6	111.8	104.0	103.3	93.8	76.1	0.3	-0.8	-3.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.21	0.17	0.13	0.15	0.12	0.05	-0.3	-1.2	-9.5
Final energy demand (t of CO ₂ /toe)	2.10	2.06	1.85	1.77	1.72	1.63	1.50	-1.3	-0.7	-1.3
Industry	2.31	2.10	1.92	1.82	1.73	1.59	1.31	-1.9	-1.0	-2.7
Residential	1.41	1.26	1.13	1.02	0.98	0.89	0.81	-2.2	-1.4	-1.8
Tertiary	1.26	1.27	0.88	0.60	0.54	0.49	0.40	-3.6	-4.7	-3.1
Transport	2.88	2.91	2.76	2.73	2.74	2.71	2.65	-0.4	0.0	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	24.6	23.6	30.5	34.5	35.2	37.7	47.5			
RES-H&C share	20.4	22.0	29.7	37.0	36.4	35.4	46.0			
RES-E share	66.9	62.4	65.7	68.0	68.5	76.9	93.5			
RES-T share (based on ILUC formula)	6.8	4.8	10.9	11.4	12.5	16.1	24.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	68	69	58	65	71	75	0.0	-0.5	1.4
Average Price of Electricity in Final demand sectors (€13/MWh)	130	115	143	131	140	150	153	0.9	-0.2	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	21.8	28.6	32.9	32.2	38.6	42.5	46.8	4.2	1.6	2.0
as % of GDP	8.5	10.2	11.0	10.2	11.2	11.4	11.7			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Belgium: EUCO3030					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual % Change	
Population (in million)	10	10	11	11	12	12	13	0.8	0.9	0.9		
GDP (in 000 M€13)	324	350	372	385	414	443	479	1.4	1.1	1.5		
Gross Inland Consumption (ktoe)	59302	59008	61346	54681	54719	49979	45994	0.3	-1.1	-1.7		
Solids	7922	5081	3673	3205	2007	2012	1697	-7.4	-5.9	-1.7		
Oil	24136	24721	24699	23472	21986	20957	19407	0.2	-1.2	-1.2		
Natural gas	13369	14728	16999	14941	14145	16865	14972	2.4	-1.8	0.6		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Renewable energy forms	1081	1658	3560	4242	6208	6735	7463	12.7	5.7	1.9		
Energy Branch Consumption	2366	2403	2246	2406	2216	2118	2043	-0.5	-0.1	-0.8		
Non-Energy Uses	6739	7516	8541	8464	8523	8620	8538	2.4	0.0	0.0		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	13607	13718	15356	10620	14087	7263	6803	1.2	-0.9	-7.0		
Solids	206	57	0	0	0	0	0	-97.1	-100.0	0.0		
Oil	0	6	-7	-14	-14	-14	-13	1692.2	7.2	-0.4		
Natural gas	2	0	0	0	0	0	0	0.0	-100.0	0.0		
Nuclear	12422	12277	12367	6909	8632	1241	0	0.0	-3.5	-100.0		
Renewable energy sources	977	1377	2996	3725	5469	6036	6816	11.9	6.2	2.2		
Hydro	40	25	27	31	32	45	49	-3.8	1.7	4.5		
Biomass & Waste	931	1327	2793	2944	3958	3930	3992	11.6	3.5	0.1		
Wind	1	20	111	431	1032	1468	1882	54.9	25.0	6.2		
Solar and others	1	3	60	313	441	582	867	50.7	22.0	7.0		
Geothermal	3	3	4	6	7	12	26	3.0	5.7	13.5		
Net Imports (ktoe)	50502	53396	53753	52611	49710	52139	48981	0.6	-0.8	-0.1		
Solids	7220	5150	3591	3205	2007	2012	1697	-6.7	-5.7	-1.7		
Oil	29527	32605	32752	32035	31032	29938	28006	1.0	-0.5	-1.0		
Crude oil and Feedstocks	34177	32251	31004	27409	27190	26837	25995	-1.0	-1.3	-0.4		
Oil products	-4650	354	1749	4626	3842	3101	2011	0.0	8.2	-6.3		
Natural gas	13278	14817	16791	14941	14192	17321	16176	2.4	-1.7	1.3		
Electricity	372	542	47	1913	1741	2170	2455	-18.6	43.4	3.5		
Import Dependency (%)	78.1	80.1	78.0	83.2	77.9	87.8	87.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	82773	85709	93764	69728	73970	70232	68770	1.3	-2.3	-0.7		
Nuclear energy	48157	47595	47944	28180	35207	5071	0	0.0	-3.0	-100.0		
Solids	12916	8199	4190	2975	195	288	32	-10.6	-26.4	-16.6		
Oil (including refinery gas)	797	1740	406	96	674	696	151	-6.5	5.2	-13.9		
Gas (including derived gases)	19091	25143	33178	23812	18278	37110	32996	5.7	-5.8	6.1		
Biomass-waste	1336	2516	5882	5914	3237	4143	5065	16.0	-5.8	4.6		
Hydro (pumping excluded)	460	288	312	365	368	522	571	-3.8	1.7	4.5		
Wind	16	227	1292	5009	11998	17065	21883	55.1	25.0	6.2		
Solar	0	1	560	3376	4013	5336	8073	0.0	21.8	7.2		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	14674	14867	17071	18515	20996	22439	26259	1.5	2.1	2.3		
Nuclear energy	5921	5921	5921	3907	5055	3041	0	0.0	-1.6	-100.0		
Renewable energy	117	274	1934	5560	8494	11355	15723	32.4	15.9	6.4		
Hydro (pumping excluded)	103	105	118	119	119	163	177	1.4	0.1	4.1		
Wind	14	167	912	2229	4558	6136	7956	51.8	17.5	5.7		
Solar	0	2	904	3212	3818	5056	7589	0.0	15.5	7.1		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	8636	8672	9216	9048	7447	8043	10536	0.7	-2.1	3.5		
of which cogeneration units	1112	1893	2575	1552	655	1490	1263	8.8	-12.8	6.8		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	2290	1450	1184	825	43	43	16	-6.4	-28.2	-9.7		
Gas fired	4392	5201	6468	6799	6270	6978	9436	3.9	-0.3	4.2		
Oil fired	1581	1494	836	646	266	246	215	-6.2	-10.8	-2.1		
Biomass-waste fired	373	527	727	777	868	776	869	6.9	1.8	0.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	61.5	63.0	60.3	41.2	38.8	34.9	29.4					
Efficiency of gross thermal power generation (%)	41.4	42.1	44.8	44.7	44.3	47.2	50.4					
% of gross electricity from CHP	6.5	8.5	16.0	17.4	8.0	16.6	17.3					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	60.4	59.1	59.7	61.4	74.1	45.8	51.8					
Fuel Inputs to Thermal Power Generation (ktoe)	7090	7677	8386	6315	4341	7689	6522	1.7	-6.4	4.2		
Solids	2629	1833	936	761	47	66	6	-9.8	-25.8	-18.0		
Oil (including refinery gas)	180	411	57	29	223	230	50	-10.8	14.6	-13.9		
Gas (including derived gases)	3790	4612	5671	4111	2950	6081	4930	4.1	-6.3	5.3		
Biomass & Waste	492	821	1722	1414	1120	1312	1535	13.4	-4.2	3.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	54711	52964	50595	41255	42565	34977	32703	-0.8	-1.7	-2.6		
Refineries	38602	37483	35454	31882	31693	31387	30504	-0.8	-1.1	-0.4		
Biofuels and hydrogen production	0	0	352	341	870	790	769	0.0	9.5	-1.2		
District heating	45	29	6	15	19	17	21	-18.1	11.8	1.4		
Derived gases, cokeries etc.	16064	15452	14782	9016	9984	2783	1408	-0.8	-3.8	-17.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Belgium: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	137	145	154	158	169	176	185	1.2	1.0	0.9
Public road transport	13	18	17	18	18	18	18	1.8	2.7	0.2
Private cars and motorcycles	107	109	115	117	126	129	135	0.8	0.9	0.6
Rail	9	10	12	12	13	15	16	3.1	1.2	2.3
Aviation ⁽³⁾	8	8	9	10	12	13	15	0.9	2.5	2.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.4	1.4
Freight transport activity (Gtkm)	70	65	63	66	76	84	92	-1.1	1.8	2.0
Heavy goods and light commercial vehicles	55	48	46	47	54	60	64	-1.7	1.5	1.8
Rail	8	8	7	8	9	11	13	-0.3	2.1	3.4
Inland navigation	8	9	9	12	13	14	15	2.2	2.9	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	9747	9972	10593	10179	9998	9774	9720	0.8	-0.6	-0.3
Public road transport	158	204	292	290	287	281	271	6.4	-0.2	-0.6
Private cars and motorcycles	4815	4463	5177	4757	4252	3778	3593	0.7	-1.9	-1.7
Heavy goods and light commercial vehicles	2857	3618	3413	3397	3632	3744	3831	1.8	0.6	0.5
Rail	184	186	177	181	210	237	262	-0.4	1.7	2.2
Aviation	1530	1281	1382	1389	1443	1545	1555	-1.0	0.4	0.8
Inland navigation	204	219	152	164	176	189	208	-2.9	1.5	1.7
By transport activity										
Passenger transport	6608	6016	6932	6518	6070	5703	5525	0.5	-1.3	-0.9
Freight transport	3139	3956	3661	3660	3928	4072	4195	1.6	0.7	0.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	3.4	3.4	9.1	9.3	9.3			
ENERGY EFFICIENCY										
Primary energy consumption	52563	51491	52805	46217	46195	41358	37456			
Final Energy Demand	37766	36705	37534	36239	36435	34915	32772	-0.1	-0.3	-1.1
by sector										
Industry	14218	11775	11688	11055	11232	10687	10229	-1.9	-0.4	-0.9
Energy intensive industries	10700	9088	8641	8013	8029	7674	7278	-2.1	-0.7	-1.0
Other industrial sectors	3518	2686	3047	3042	3204	3013	2951	-1.4	0.5	-0.8
Residential	8974	9299	9266	9230	9329	9071	7797	0.3	0.1	-1.8
Tertiary	4827	5658	5982	5722	5825	5330	4976	2.2	-0.3	-1.6
Transport ⁽⁵⁾	9747	9973	10598	10232	10049	9828	9769	0.8	-0.5	-0.3
by fuel										
Solids	3403	2019	1621	1505	1358	1262	1034	-7.2	-1.8	-2.7
Oil	16661	16586	15314	14610	13000	11935	10775	-0.8	-1.6	-1.9
Gas	10010	10009	11147	10465	10564	10194	9364	1.1	-0.5	-1.2
Electricity	6667	6896	7163	7033	7245	7420	7585	0.7	0.1	0.5
Heat (from CHP and District Heating)	492	428	640	567	607	668	719	2.7	-0.5	1.7
Renewable energy forms	533	767	1650	2058	3638	3343	3165	12.0	8.2	-1.4
Other	0	0	0	3	23	94	131	0.0	0.0	19.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	183	168	165	142	132	113	96	-1.0	-2.2	-3.1
Industry (Energy on Value added, index 2000=100)	100	82	88	81	77	69	62	-1.3	-1.3	-2.1
Residential (Energy on Private Income, index 2000=100)	100	98	90	84	78	70	55	-1.1	-1.4	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	107	105	97	91	78	67	0.5	-1.4	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	43	38	39	35	30	27	24	-1.1	-2.5	-2.1
Freight transport (toe/Mtkm)	45	61	58	55	52	48	45	2.6	-1.1	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	154.0	148.3	136.1	127.3	112.0	113.7	101.4	-1.2	-1.9	-1.0
of which ETS sectors (2013 scope) GHG emissions		70.1	58.6	52.1	42.8	49.3	43.1		-3.1	0.1
of which ESD sectors (2013 scope) GHG emissions		78.3	77.6	75.2	69.2	64.4	58.3		-1.1	-1.7
CO2 Emissions (energy related)	122.7	114.2	106.4	97.8	84.6	88.3	78.0	-1.4	-2.3	-0.8
Power generation/District heating	25.1	24.0	20.4	15.8	9.0	18.1	14.6	-2.0	-7.9	4.9
Energy Branch	4.9	4.4	3.9	4.6	4.0	3.8	3.7	-2.3	0.4	-0.9
Industry	34.5	24.8	22.1	19.7	18.4	16.0	13.9	-4.4	-1.8	-2.7
Residential	20.3	20.5	18.9	18.4	16.8	16.1	13.1	-0.7	-1.1	-2.5
Tertiary	8.7	10.6	10.2	9.5	9.0	7.8	6.7	1.6	-1.3	-2.9
Transport	29.2	29.9	30.9	29.7	27.4	26.5	25.9	0.6	-1.2	-0.6
CO2 Emissions (non energy and non land use related)	8.1	13.3	9.5	10.2	9.9	9.1	8.3	1.6	0.4	-1.8
Non-CO2 GHG emissions	23.2	20.9	20.2	19.3	17.5	16.2	15.2	-1.3	-1.4	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.5	98.7	90.6	84.7	74.6	75.7	67.5	-1.2	-1.9	-1.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.28	0.26	0.20	0.20	0.11	0.23	0.18	-3.5	-5.8	5.4
Final energy demand (t of CO2/toe)	2.45	2.34	2.19	2.14	1.96	1.90	1.82	-1.1	-1.1	-0.8
Industry	2.43	2.11	1.89	1.79	1.63	1.50	1.36	-2.5	-1.4	-1.8
Residential	2.26	2.21	2.04	2.00	1.81	1.78	1.68	-1.0	-1.2	-0.7
Tertiary	1.80	1.87	1.71	1.66	1.55	1.46	1.35	-0.5	-1.0	-1.3
Transport	2.99	3.00	2.91	2.91	2.72	2.70	2.65	-0.3	-0.7	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	5.6	8.6	14.0	15.8	18.5			
RES-H&C share	1.9	3.4	6.1	8.5	13.9	13.8	14.7			
RES-E share	1.1	2.4	7.1	15.2	20.0	27.5	35.8			
RES-T share (based on ILUC formula)	0.0	0.1	4.1	4.6	10.1	12.9	17.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	49	59	86	105	116	112	3.2	6.0	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	128	116	139	141	146	157	163	0.9	0.5	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	32.9	35.9	48.6	47.3	58.9	64.3	72.2	4.0	1.9	2.1
as % of GDP	10.2	10.3	13.1	12.3	14.2	14.5	15.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Bulgaria: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	8	8	7	7	7	7	6	-1.0	-0.7	-0.7	
GDP (in 000 M€13)	25	33	38	40	45	50	53	4.1	1.8	1.7	
Gross Inland Consumption (ktoe)	18523	19754	17770	16469	16338	15375	14070	-0.4	-0.8	-1.5	
Solids	6433	6895	6887	5983	5643	4506	2732	0.7	-2.0	-7.0	
Oil	4068	4725	3888	3732	3543	3447	3229	-0.5	-0.9	-0.9	
Natural gas	2931	2804	2300	2118	2120	1853	1467	-2.4	-0.8	-3.6	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7	
Renewable energy forms	788	1156	1465	1870	2169	2709	3718	6.4	4.0	5.5	
Energy Branch Consumption	905	911	1032	907	859	758	639	1.3	-1.8	-2.9	
Non-Energy Uses	980	851	422	427	498	571	605	-8.1	1.7	2.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	9867	10629	10531	9856	10684	10262	10101	0.7	0.1	-0.6	
Solids	4295	4178	4942	4055	4625	3653	2456	1.4	-0.7	-6.1	
Oil	68	58	61	17	20	25	29	-1.2	-10.7	3.9	
Natural gas	12	384	59	125	128	129	136	17.0	8.0	0.6	
Nuclear	4699	4826	3956	3776	3776	3776	3776	-1.7	-0.5	0.0	
Renewable energy sources	792	1182	1512	1883	2135	2678	3705	6.7	3.5	5.7	
Hydro	230	373	435	349	372	364	363	6.6	-1.5	-0.3	
Biomass & Waste	562	776	975	1283	1485	1519	1981	5.7	4.3	2.9	
Wind	0	0	59	98	102	374	728	0.0	5.7	21.8	
Solar and others	0	0	12	118	140	389	535	0.0	28.4	14.4	
Geothermal	0	33	33	34	36	31	98	0.0	0.9	10.6	
Net Imports (ktoe)	8544	9276	7075	6717	5801	5275	4142	-1.9	-2.0	-3.3	
Solids	2258	2553	1700	1928	1018	852	275	-2.8	-5.0	-12.3	
Oil	3944	4943	4025	3820	3669	3580	3361	0.2	-0.9	-0.9	
Crude oil and Feedstocks	5228	6145	5916	6308	5991	5717	5370	1.2	0.1	-1.1	
Oil products	-1284	-1202	-1891	-2489	-2322	-2136	-2009	3.9	2.1	-1.4	
Natural gas	2742	2458	2131	1993	1993	1726	1343	-2.5	-0.7	-3.9	
Electricity	-397	-652	-726	-1011	-914	-916	-852	6.2	2.3	-0.7	
Import Dependency (%)	46.0	46.7	39.6	40.5	35.2	34.0	29.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	40646	43972	46017	48845	48692	48054	45333	1.2	0.6	-0.7	
Nuclear energy	18178	18653	15249	15662	15326	15326	15326	-1.7	0.1	0.0	
Solids	16941	18458	22606	23315	22600	17872	10370	2.9	0.0	-7.5	
Oil (including refinery gas)	661	606	393	442	70	0	0	-5.1	-15.8	-100.0	
Gas (including derived gases)	2178	1896	1967	3035	3865	2335	1324	-1.0	7.0	-10.2	
Biomass-waste	15	17	49	54	164	389	1385	12.6	12.8	23.8	
Hydro (pumping excluded)	2673	4337	5057	4063	4331	4235	4218	6.6	-1.5	-0.3	
Wind	0	5	681	1144	1183	4343	8466	0.0	5.7	21.8	
Solar	0	0	15	1129	1152	3553	4244	0.0	54.2	13.9	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	10471	10635	9943	11968	11801	13437	15202	-0.5	1.7	2.6	
Nuclear energy	3610	2765	1920	1920	1920	1920	1920	-6.1	0.0	0.0	
Renewable energy	1016	1992	2697	4081	4110	7053	8873	10.3	4.3	8.0	
Hydro (pumping excluded)	1016	1984	2184	2338	2338	2338	2338	8.0	0.7	0.0	
Wind	0	8	488	691	703	1971	3263	0.0	3.7	16.6	
Solar	0	0	25	1052	1069	2744	3273	0.0	45.6	11.8	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	5845	5878	5326	5967	5771	4464	4408	-0.9	0.8	-2.7	
of which cogeneration units	1129	1191	1017	1814	1695	1716	1067	-1.0	5.2	-4.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	5100	5100	4703	5313	4809	3491	3381	-0.8	0.2	-3.5	
Gas fired	689	737	607	626	909	877	790	-1.3	4.1	-1.4	
Oil fired	57	42	13	13	2	2	2	-13.6	-18.4	0.0	
Biomass-waste fired	0	0	3	15	51	94	235	0.0	32.3	16.5	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	39.9	42.8	47.7	42.3	43.3	38.1	32.3				
Efficiency of gross thermal power generation (%)	28.4	27.0	28.5	36.8	39.0	38.3	36.6				
% of gross electricity from CHP	7.8	6.1	8.0	12.0	12.6	9.3	7.8				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	51.3	52.3	45.7	45.1	45.5	57.9	74.2				
Fuel Inputs to Thermal Power Generation (ktoe)	5986	6689	7553	6282	5883	4622	3077	2.4	-2.5	-6.3	
Solids	4928	5817	6610	5466	5203	4172	2470	3.0	-2.4	-7.2	
Oil (including refinery gas)	171	174	219	110	17	0	0	2.5	-22.6	-100.0	
Gas (including derived gases)	884	697	720	692	625	359	202	-2.0	-1.4	-10.7	
Biomass & Waste	3	2	4	15	38	91	405	1.4	25.9	26.6	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	12213	13505	11285	10638	10378	10093	9796	-0.8	-0.8	-0.6	
Refineries	5310	6421	6041	6617	6291	6016	5651	1.3	0.4	-1.1	
Biofuels and hydrogen production	0	0	13	106	188	181	189	0.0	30.2	0.0	
District heating	324	368	304	96	98	105	168	-0.6	-10.7	5.5	
Derived gases, cokeries etc.	6579	6717	4927	3819	3801	3791	3788	-2.9	-2.6	0.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Bulgaria: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	48	56	65	72	76	80	84	3.2	1.4	1.1
Public road transport	15	14	11	11	11	11	12	-3.1	0.6	0.4
Private cars and motorcycles	28	36	48	53	54	57	58	5.7	1.3	0.7
Rail	4	3	3	3	4	4	4	-2.5	1.7	1.9
Aviation ⁽³⁾	2	4	4	5	6	8	10	8.8	4.9	4.5
Inland navigation	0	0	0	0	0	0	0	-1.8	0.9	1.3
Freight transport activity (Gtkm)	11	16	18	20	22	25	26	5.7	2.0	1.7
Heavy goods and light commercial vehicles	5	11	9	10	11	12	13	7.0	2.0	1.2
Rail	6	5	3	3	4	4	5	-5.7	1.9	2.4
Inland navigation	0	1	6	6	7	8	9	34.4	2.0	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	1841	2682	2719	2837	2879	2836	2807	4.0	0.6	-0.3
Public road transport	399	362	262	263	270	267	263	-4.1	0.3	-0.3
Private cars and motorcycles	956	1389	1581	1628	1559	1433	1364	5.2	-0.1	-1.3
Heavy goods and light commercial vehicles	305	652	590	646	699	718	707	6.8	1.7	0.1
Rail	78	69	52	44	49	53	56	-4.0	-0.6	1.3
Aviation	101	201	182	207	244	301	349	6.1	3.0	3.7
Inland navigation	3	10	53	49	58	65	68	34.5	0.9	1.7
<i>By transport activity</i>										
Passenger transport	1473	1965	2034	2106	2082	2012	1988	3.3	0.2	-0.5
Freight transport	369	718	685	731	796	824	820	6.4	1.5	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	3.8	6.6	6.5	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	17543	18903	17348	16042	15841	14805	13465	-0.1	-0.9	-1.6
Final Energy Demand	9106	10184	8843	9205	9464	9303	8843	-0.3	0.7	-0.7
<i>by sector</i>										
Industry	3967	4037	2561	2709	2776	2799	2705	-4.3	0.8	-0.3
Energy intensive industries	3124	3161	1789	1929	1920	1893	1815	-5.4	0.7	-0.6
Other industrial sectors	843	876	772	780	856	906	891	-0.9	1.0	0.4
Residential	2155	2117	2246	2307	2374	2307	2102	0.4	0.6	-1.2
Tertiary	972	1128	1174	1179	1268	1204	1088	1.9	0.8	-1.5
Transport ⁽⁵⁾	2013	2903	2862	3011	3046	2993	2948	3.6	0.6	-0.3
<i>by fuel</i>										
Solids	879	979	414	487	416	312	247	-7.3	0.0	-5.1
Oil	3026	3712	3125	3134	3046	2958	2754	0.3	-0.3	-1.0
Gas	1681	1565	1058	1052	1078	1035	835	-4.5	0.2	-2.5
Electricity	2085	2211	2331	2382	2505	2540	2476	1.1	0.7	-0.1
Heat (from CHP and District Heating)	880	939	960	841	864	900	813	0.9	-1.0	-0.6
Renewable energy forms	555	778	956	1309	1556	1555	1713	5.6	5.0	1.0
Other	0	0	0	0	0	2	6	0.0	0.0	32.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	733	599	472	415	362	308	263	-4.3	-2.6	-3.1
Industry (Energy on Value added, index 2000=100)	100	68	37	39	35	32	29	-9.4	-0.6	-2.0
Residential (Energy on Private Income, index 2000=100)	100	72	67	67	58	51	43	-3.9	-1.4	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	91	81	76	71	61	51	-2.1	-1.3	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	34	30	28	26	24	22	0.0	-1.3	-1.7
Freight transport (toe/Mtkm)	35	44	37	37	36	34	31	0.7	-0.5	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	64.4	67.0	61.2	55.6	51.0	44.8	35.6	-0.5	-1.8	-3.5
of which ETS sectors (2013 scope) GHG emissions	39.4	35.6	30.0	28.3	23.1	15.1		-2.3	-6.1	
of which ESD sectors (2013 scope) GHG emissions	27.6	25.6	25.6	22.7	21.7	20.5		-1.2	-1.0	
CO₂ Emissions (energy related)	44.3	49.1	45.9	40.1	38.0	32.2	23.0	0.4	-1.9	-4.9
Power generation/District heating	24.6	27.9	31.2	25.1	23.7	18.7	11.0	2.4	-2.7	-7.4
Energy Branch	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.8	-1.8	-1.5
Industry	10.6	9.8	3.7	4.0	3.9	3.6	2.6	-10.0	0.6	-3.9
Residential	1.4	1.2	1.0	1.0	0.7	0.5	0.4	-3.1	-4.0	-5.4
Tertiary	1.2	1.1	0.8	0.7	0.6	0.4	0.4	-4.0	-1.5	-5.0
Transport	5.7	8.3	8.3	8.4	8.3	8.2	8.0	3.7	0.1	-0.4
CO₂ Emissions (non energy and non land use related)	3.5	4.0	3.0	3.0	3.1	3.2	3.2	-1.5	0.4	0.5
Non-CO₂ GHG emissions	16.7	14.0	12.3	12.5	9.8	9.4	9.3	-3.0	-2.2	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	58.5	60.9	55.6	50.5	46.3	40.7	32.3	-0.5	-1.8	-3.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.46	0.49	0.51	0.41	0.39	0.31	0.20	1.2	-2.8	-6.6
Final energy demand (t of CO ₂ /toe)	2.07	2.01	1.55	1.53	1.44	1.38	1.29	-2.8	-0.8	-1.1
Industry	2.67	2.43	1.44	1.47	1.41	1.28	0.97	-6.0	-0.2	-3.7
Residential	0.63	0.58	0.44	0.41	0.28	0.21	0.18	-3.5	-4.5	-4.3
Tertiary	1.24	0.97	0.69	0.61	0.54	0.48	0.38	-5.8	-2.3	-3.6
Transport	2.85	2.88	2.88	2.80	2.73	2.73	2.70	0.1	-0.5	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.6	9.1	14.1	18.7	21.1	26.5	36.5			
RES-H&C share	10.5	14.1	25.2	30.8	33.9	35.5	47.0			
RES-E share	4.0	8.5	12.3	17.4	18.1	33.8	52.2			
RES-T share (based on ILUC formula)	0.3	0.4	1.1	5.4	9.9	10.7	14.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	53	55	58	68	69	75	82	0.8	1.8	1.8
Average Price of Electricity in Final demand sectors (€13/MWh)	44	56	75	89	106	128	138	5.4	3.5	2.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	5.2	7.4	9.5	10.5	12.9	14.5	17.1	6.2	3.0	2.9
as % of GDP	20.7	22.3	25.3	26.5	28.5	29.1	32.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Croatia: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	4	4	4	4	4	4	-0.4	-0.3	-0.3
GDP (in 000 M€13)	36	45	46	45	49	52	55	2.4	0.5	1.3
Gross Inland Consumption (ktoe)	7793	8888	8561	8018	8229	7773	7083	0.9	-0.4	-1.5
Solids	431	683	683	751	694	307	174	4.7	0.2	-12.9
Oil	3929	4490	3699	3414	3230	3056	2790	-0.6	-1.3	-1.5
Natural gas	2210	2370	2632	2144	2473	2475	1612	1.8	-0.6	-4.2
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1
Renewable energy forms	880	906	1138	1195	1417	1585	2097	2.6	2.2	4.0
Energy Branch Consumption	821	825	745	726	707	599	580	-1.0	-0.5	-2.0
Non-Energy Uses	656	675	596	514	529	536	535	-0.9	-1.2	0.1
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3580	3799	4222	3368	3650	3561	3880	1.7	-1.4	0.6
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0
Oil	1345	1029	767	466	461	436	390	-5.5	-5.0	-1.7
Natural gas	1355	1865	2215	1431	1537	1316	1083	5.0	-3.6	-3.4
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	880	906	1240	1471	1652	1809	2407	3.5	2.9	3.8
Hydro	505	545	716	533	544	549	560	3.6	-2.7	0.3
Biomass & Waste	375	360	500	859	1021	988	1296	2.9	7.4	2.4
Wind	0	1	12	56	56	73	198	0.0	16.6	13.5
Solar and others	0	0	5	16	23	192	336	0.0	16.0	30.8
Geothermal	0	0	7	7	8	8	16	0.0	1.3	7.4
Net Imports (ktoe)	4134	5208	4461	4657	4587	4219	3210	0.8	0.3	-3.5
Solids	478	624	699	751	694	307	174	3.9	-0.1	-12.9
Oil	2406	3583	2980	2955	2776	2627	2406	2.2	-0.7	-1.4
Crude oil and Feedstocks	3952	4334	3647	2979	2838	2746	2589	-0.8	-2.5	-0.9
Oil products	-1546	-751	-667	-24	-62	-119	-183	-8.1	-21.2	11.4
Natural gas	905	562	476	713	937	1160	529	-6.2	7.0	-5.6
Electricity	344	440	410	514	414	350	410	1.8	0.1	-0.1
Import Dependency (%)	52.9	58.4	52.1	58.0	55.7	54.2	45.3			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	10684	12354	13999	11996	14103	14665	13300	2.7	0.1	-0.6
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	1551	2328	2385	2671	2689	915	345	4.4	1.2	-18.6
Oil (including refinery gas)	1687	1855	560	77	25	278	209	-10.4	-26.7	23.7
Gas (including derived gases)	1571	1814	2553	2232	4063	4126	335	5.0	4.8	-22.1
Biomass-waste	1	14	33	98	285	312	720	41.9	24.1	9.7
Hydro (pumping excluded)	5874	6333	8329	6200	6324	6387	6516	3.6	-2.7	0.3
Wind	0	10	139	650	650	843	2306	0.0	16.7	13.5
Solar	0	0	0	68	68	1803	2868	0.0	0.0	45.4
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	3786	3945	4216	4884	4894	6002	7519	1.1	1.5	4.4
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2079	2066	2220	2668	2668	3966	5526	0.7	1.9	7.6
Hydro (pumping excluded)	2079	2060	2141	2190	2190	2190	2226	0.3	0.2	0.2
Wind	0	6	79	423	423	510	1299	0.0	18.3	11.9
Solar	0	0	0	55	55	1266	2001	0.0	0.0	43.2
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1707	1879	1996	2216	2226	2036	1993	1.6	1.1	-1.1
of which cogeneration units	558	515	486	298	596	926	781	-1.4	2.1	2.7
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	311	311	311	311	656	656	656	0.0	7.7	0.0
Gas fired	781	919	1031	1706	1396	1196	1091	2.8	3.1	-2.4
Oil fired	615	646	649	185	150	157	112	0.5	-13.6	-2.9
Biomass-waste fired	0	3	5	13	24	26	134	0.0	17.3	18.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	31.0	34.4	36.6	27.3	32.0	27.4	20.0			
Efficiency of gross thermal power generation (%)	33.1	34.9	37.5	44.0	47.5	45.2	28.8			
% of gross electricity from CHP	16.8	0.0	14.3	15.5	19.0	17.5	10.2			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	55.0	51.5	60.7	58.5	52.0	63.7	93.3			
Fuel Inputs to Thermal Power Generation (ktoe)	1249	1479	1269	993	1278	1072	480	0.2	0.1	-9.3
Solids	357	537	532	612	567	205	112	4.1	0.6	-15.0
Oil (including refinery gas)	395	447	120	14	8	78	63	-11.3	-23.4	22.5
Gas (including derived gases)	497	490	611	350	648	729	82	2.1	0.6	-18.7
Biomass & Waste	0	4	7	17	55	61	223	36.6	23.2	15.1
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	5394	5327	4409	3555	3568	3435	3215	-2.0	-2.1	-1.0
Refineries	5299	5210	4304	3414	3268	3152	2954	-2.1	-2.7	-1.0
Biofuels and hydrogen production	0	0	3	70	223	202	186	0.0	56.1	-1.8
District heating	83	104	97	70	74	72	62	1.6	-2.7	-1.6
Derived gases, cokeries etc.	12	13	4	1	2	10	12	-10.0	-5.6	17.6

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Croatia: EU CO2 30		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	27	31	34	36	39	41	43	2.5	1.4	1.0
Public road transport	3	3	3	3	4	4	4	-0.3	1.0	0.6
Private cars and motorcycles	21	25	27	28	30	31	33	2.4	1.2	0.9
Rail	2	2	2	2	3	3	3	2.7	1.3	0.8
Aviation ⁽³⁾	1	1	2	3	3	3	4	12.0	3.7	2.6
Inland navigation	0	0	0	0	0	0	0	212.2	1.1	1.7
Freight transport activity (Gtkm)	4	12	12	12	14	15	16	10.2	1.5	1.6
Heavy goods and light commercial vehicles	3	9	8	8	10	10	11	12.1	1.5	1.7
Rail	2	3	3	3	3	3	3	3.9	1.4	1.3
Inland navigation	0	0	1	1	1	1	1	30.9	1.4	1.0
Energy demand in transport (ktoe) ⁽⁴⁾	1544	1921	2068	2074	2133	2059	2017	3.0	0.3	-0.6
Public road transport	41	39	61	63	66	66	65	3.9	0.8	-0.1
Private cars and motorcycles	1192	1192	1332	1324	1319	1222	1161	1.1	-0.1	-1.3
Heavy goods and light commercial vehicles	161	508	479	465	510	520	529	11.5	0.6	0.4
Rail	46	52	50	48	52	53	54	0.8	0.5	0.5
Aviation	76	98	108	134	144	154	161	3.6	2.9	1.1
Inland navigation	29	33	38	39	43	45	47	2.8	1.3	0.8
By transport activity										
Passenger transport	1329	1340	1514	1535	1542	1455	1401	1.3	0.2	-1.0
Freight transport	215	581	554	540	591	604	616	9.9	0.7	0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	1.8			
Biofuels in total fuels (excl. hydrogen and electricity) (%)	0.0	0.0	0.1	3.5	10.7	10.5	10.1			
ENERGY EFFICIENCY										
Primary energy consumption	7138	8213	7965	7504	7700	7238	6548	1.1	-0.3	-1.6
Final Energy Demand	5371	6343	6347	6190	6299	6059	5665	1.7	-0.1	-1.1
by sector										
Industry	1378	1563	1366	1394	1388	1306	1237	-0.1	0.2	-1.1
Energy intensive industries	847	907	752	745	734	674	619	-1.2	-0.2	-1.7
Other industrial sectors	531	656	614	649	654	633	619	1.5	0.6	-0.5
Residential	1666	1922	1893	1784	1778	1723	1530	1.3	-0.6	-1.5
Tertiary	781	935	1018	934	996	967	877	2.7	-0.2	-1.3
Transport ⁽⁵⁾	1547	1923	2070	2078	2137	2063	2020	3.0	0.3	-0.6
by fuel										
Solids	74	146	150	139	127	102	62	7.3	-1.6	-6.9
Oil	2683	3108	2902	2755	2564	2378	2137	0.8	-1.2	-1.8
Gas	1009	1236	1288	1170	1227	1203	1059	2.5	-0.5	-1.5
Electricity	1018	1240	1364	1317	1392	1398	1361	3.0	0.2	-0.2
Heat (from CHP and District Heating)	213	258	246	226	239	249	232	1.4	-0.3	-0.3
Renewable energy forms	375	356	397	582	747	720	801	0.6	6.5	0.7
Other	0	0	0	1	2	10	13	0.0	0.0	18.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	214	196	184	179	168	150	128	-1.5	-0.9	-2.7
Industry (Energy on Value added, index 2000=100)	100	97	88	93	86	78	71	-1.3	-0.2	-2.0
Residential (Energy on Private Income, index 2000=100)	100	91	88	84	76	69	57	-1.2	-1.5	-2.8
Tertiary (Energy on Value added, index 2000=100)	100	97	99	95	91	83	70	-0.1	-0.8	-2.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	41	43	41	38	34	31	-1.2	-1.3	-2.0
Freight transport (toe/Mtkm)	48	49	47	45	43	41	38	-0.2	-0.8	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	26.3	30.7	28.5	25.4	25.0	22.5	18.8	0.8	-1.3	-2.8
of which ETS sectors (2013 scope) GHG emissions	12.7	10.8	9.7	10.0	8.3	5.8			-0.8	-5.4
of which ESD sectors (2013 scope) GHG emissions	17.9	17.7	15.7	14.9	14.1	13.0			-1.7	-1.4
CO2 Emissions (energy related)	17.0	20.2	18.6	17.0	17.0	14.8	11.5	0.9	-0.9	-3.9
Power generation/District heating	4.1	5.1	4.3	3.5	4.0	2.9	0.9	0.3	-0.5	-14.2
Energy Branch	2.0	2.0	1.8	1.7	1.7	1.4	1.4	-1.0	-0.5	-2.2
Industry	2.9	3.5	2.8	2.9	2.7	2.3	1.7	-0.2	-0.5	-4.5
Residential	1.9	2.4	2.1	1.7	1.7	1.6	1.3	1.0	-2.1	-2.8
Tertiary	1.5	1.5	1.4	1.2	1.2	1.1	1.0	-0.6	-1.6	-2.1
Transport	4.5	5.7	6.2	6.0	5.7	5.4	5.3	3.1	-0.8	-0.7
CO2 Emissions (non energy and non land use related)	2.6	3.1	2.5	2.4	2.6	2.5	2.3	-0.3	0.1	-1.0
Non-CO2 GHG emissions	6.7	7.4	7.4	5.9	5.4	5.2	5.0	0.9	-3.1	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	74.2	86.5	80.4	71.5	70.4	63.3	53.0	0.8	-1.3	-2.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.30	0.32	0.25	0.23	0.23	0.16	0.05	-2.1	-0.6	-13.9
Final energy demand (t of CO2/toe)	2.01	2.06	1.97	1.90	1.79	1.73	1.63	-0.2	-1.0	-0.9
Industry	2.09	2.23	2.08	2.08	1.94	1.78	1.37	-0.1	-0.7	-3.4
Residential	1.15	1.24	1.12	0.95	0.96	0.94	0.84	-0.3	-1.5	-1.3
Tertiary	1.89	1.57	1.37	1.26	1.19	1.15	1.09	-3.2	-1.4	-0.8
Transport	2.94	2.97	2.97	2.88	2.65	2.64	2.62	0.1	-1.1	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	14.8	12.8	14.3	18.5	21.2	25.0	34.6			
RES-H&C share	13.0	10.9	13.1	18.0	18.8	20.7	32.1			
RES-E share	36.2	32.8	34.2	39.1	38.8	50.0	69.0			
RES-T share (based on ILUC formula)	1.2	0.9	1.1	5.1	10.0	12.5	17.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	83	75	67	59	67	79	87	-2.1	0.1	2.6
Average Price of Electricity in Final demand sectors (€13/MWh)	96	84	109	110	122	131	137	1.3	1.1	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	4.4	5.9	7.6	7.5	9.0	10.3	11.6	5.5	1.7	2.6
as % of GDP	12.2	12.9	16.4	16.8	18.5	19.8	21.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Cyprus: EUC03030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	1	1	1	1	1	1	1	1.7	0.9	0.3	
GDP (in 000 M€13)	14	16	19	16	19	21	22	2.8	0.2	1.9	
Gross Inland Consumption (ktoe)	2412	2539	2740	2157	2149	2004	1897	1.3	-2.4	-1.2	
Solids	33	36	17	0	0	0	0	-6.5	-53.4	-12.3	
Oil	2334	2446	2611	1995	1345	1208	1124	1.1	-6.4	-1.8	
Natural gas	0	0	0	0	558	517	464	0.0	0.0	-1.8	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy forms	46	57	112	162	245	279	308	9.4	8.1	2.3	
Energy Branch Consumption	54	22	19	17	15	8	7	-9.7	-2.4	-7.6	
Non-Energy Uses	86	73	85	38	42	44	44	-0.1	-7.0	0.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	44	51	89	137	195	2042	2870	7.2	8.2	30.8	
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Natural gas	0	0	0	0	0	1810	2609	0.0	0.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	44	51	89	137	195	231	260	7.2	8.2	2.9	
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biomass & Waste	9	10	24	28	37	46	54	10.5	4.3	3.9	
Wind	0	0	3	21	36	36	46	0.0	29.7	2.5	
Solar and others	36	41	61	86	118	144	154	5.6	6.8	2.7	
Geothermal	0	0	1	2	4	5	6	0.0	18.6	3.3	
Net imports (ktoe)	2565	2843	2945	2243	2197	228	-688	1.4	-2.9	0.0	
Solids	33	43	11	0	0	0	0	-10.4	-51.4	-12.3	
Oil	2531	2794	2910	2218	1586	1468	1384	1.4	-5.9	-1.4	
Crude oil and Feedstocks	1160	0	0	0	0	0	0	-100.0	0.0	0.0	
Oil products	1371	2794	2910	2218	1586	1468	1384	7.8	-5.9	-1.4	
Natural gas	0	0	0	0	561	-1288	-2121	0.0	0.0	0.0	
Electricity	0	0	0	0	0	0	0	0.0	0.0	0.0	
Import Dependency (%)	98.6	100.7	100.8	94.3	91.8	10.0	-31.6				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	3370	4376	5322	4573	4932	5171	4936	4.7	-0.8	0.0	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	3370	4376	5249	4086	434	22	22	4.5	-22.1	-25.7	
Gas (including derived gases)	0	0	0	0	3441	3718	3248	0.0	0.0	-0.6	
Biomass-waste	0	0	35	45	59	109	95	0.0	5.4	4.9	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	31	248	422	422	540	0.0	29.8	2.5	
Solar	0	0	6	195	576	899	1030	0.0	58.4	6.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	983	1119	1498	1755	1980	2169	2283	4.3	2.8	1.4	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	0	0	89	292	554	715	828	0.0	20.1	4.1	
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Wind	0	0	82	158	216	216	268	0.0	10.2	2.2	
Solar	0	0	7	135	338	499	560	0.0	47.4	5.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	983	1119	1409	1462	1426	1455	1455	3.7	0.1	0.2	
of which cogeneration units	0	5	22	2	2	1	1	0.0	-21.7	-8.6	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0	
Gas fired	0	0	0	0	34	514	514	0.0	0.0	31.3	
Oil fired	983	1119	1406	1452	1382	930	930	3.6	-0.2	-3.9	
Biomass-waste fired	0	0	3	10	10	10	11	0.0	12.7	0.2	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	37.2	42.1	38.9	28.5	27.4	26.7	24.3				
Efficiency of gross thermal power generation (%)	32.9	34.9	38.4	48.0	51.9	61.8	60.0				
% of gross electricity from CHP	0.0	0.3	1.0	1.7	1.6	1.0	1.0				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	1.4	10.6	21.4	27.7	33.7				
Fuel Inputs to Thermal Power Generation (ktoe)	881	1077	1182	741	652	536	483	3.0	-5.8	-3.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	881	1077	1178	731	81	0	0	2.9	-23.4	-100.0	
Gas (including derived gases)	0	0	0	0	558	516	462	0.0	0.0	-1.9	
Biomass & Waste	0	0	4	10	13	20	21	0.0	12.6	4.7	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	1178	0	15	17	41	37	33	-35.4	10.5	-2.0	
Refineries	1178	0	0	0	0	0	0	-100.0	0.0	0.0	
Biofuels and hydrogen production	0	0	15	17	41	36	33	0.0	10.5	-2.2	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	0	0	0	0	0	0	1	0.0	0.0	16.4	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Cyprus: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	12	14	15	15	18	20	22	1.9	2.3	1.9
Public road transport	1	1	1	1	1	1	1	1.4	0.8	0.2
Private cars and motorcycles	4	5	6	6	7	7	7	4.0	0.9	0.7
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	7	8	7	8	10	12	14	0.5	3.6	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	1	1	1	1	1	1	1	-1.6	0.7	1.3
Heavy goods and light commercial vehicles	1	1	1	1	1	1	1	-1.6	0.7	1.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	860	982	1050	916	962	945	934	2.0	-0.9	-0.3
Public road transport	32	35	37	37	38	37	35	1.5	0.3	-0.6
Private cars and motorcycles	373	444	577	490	483	428	383	4.5	-1.8	-2.3
Heavy goods and light commercial vehicles	173	197	152	125	126	126	127	-1.3	-1.8	0.1
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	282	306	284	263	316	354	389	0.1	1.1	2.1
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	687	785	898	791	836	819	807	2.7	-0.7	-0.4
Freight transport	173	197	152	125	126	126	127	-1.3	-1.8	0.1
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.5	1.4			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.4	1.8	4.2	3.9	3.4			
ENERGY EFFICIENCY										
Primary energy consumption	2326	2466	2655	2118	2107	1960	1853	1.3	-2.3	-1.3
Final Energy Demand	1650	1834	1926	1700	1761	1729	1634	1.6	-0.9	-0.7
by sector										
Industry	445	320	235	202	204	199	189	-6.2	-1.4	-0.8
Energy intensive industries	240	221	171	141	145	146	146	-3.3	-1.7	0.1
Other industrial sectors	205	98	63	61	59	53	42	-11.1	-0.7	-3.3
Residential	211	322	333	323	315	298	259	4.7	-0.5	-1.9
Tertiary	134	209	309	259	279	287	252	8.7	-1.0	-1.0
Transport ⁽⁵⁾	860	983	1050	916	962	945	934	2.0	-0.9	-0.3
by fuel										
Solids	32	36	17	0	0	0	0	-6.4	-53.4	-12.3
Oil	1317	1403	1384	1226	1222	1164	1080	0.5	-1.2	-1.2
Gas	0	0	0	0	0	1	2	0.0	0.0	18.3
Electricity	258	341	420	360	390	417	397	5.0	-0.7	0.2
Heat (from CHP and District Heating)	0	0	0	1	1	1	1	0.0	25.5	-2.3
Renewable energy forms	42	54	105	114	146	145	152	9.6	3.4	0.4
Other	0	0	0	0	0	1	2	-100.0	0.0	26.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	175	157	151	131	115	97	85	-1.5	-2.6	-3.0
Industry (Energy on Value added, index 2000=100)	100	70	56	57	53	48	42	-5.6	-0.7	-2.2
Residential (Energy on Private Income, index 2000=100)	100	129	114	116	102	88	72	1.3	-1.1	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	133	166	151	142	132	106	5.2	-1.5	-2.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	50	51	53	44	38	33	30	0.5	-3.2	-2.4
Freight transport (toe/Mtkm)	129	135	133	109	104	97	92	0.3	-2.5	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	11.3	10.4	10.3	8.2	7.3	6.8	6.6	-0.9	-3.4	-1.0
of which ETS sectors (2013 scope) GHG emissions		6.0	5.7	4.1	3.5	3.2	3.2		-4.9	-0.8
of which ESD sectors (2013 scope) GHG emissions		4.4	4.5	4.2	3.8	3.6	3.3		-1.8	-1.3
CO2 Emissions (energy related)	7.2	8.0	8.1	6.1	5.3	4.8	4.4	1.2	-4.1	-1.9
Power generation/District heating	2.8	3.5	3.8	2.4	1.6	1.2	1.1	2.9	-8.4	-3.7
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	0.0
Industry	1.4	1.0	0.6	0.6	0.5	0.5	0.4	-7.6	-1.6	-3.4
Residential	0.2	0.5	0.4	0.3	0.3	0.2	0.1	4.7	-2.4	-6.4
Tertiary	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.0	-1.9	-4.2
Transport	2.6	3.0	3.1	2.7	2.8	2.7	2.7	1.8	-1.2	-0.3
CO2 Emissions (non energy and non land use related)	0.9	0.9	0.6	0.5	0.6	0.6	0.7	-3.5	-0.5	1.4
Non-CO2 GHG emissions	3.2	1.5	1.6	1.6	1.4	1.4	1.5	-6.9	-1.5	0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	179.4	166.0	163.7	131.1	115.6	108.8	104.3	-0.9	-3.4	-1.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.85	0.80	0.71	0.52	0.32	0.23	0.22	-1.7	-7.7	-3.7
Final energy demand (t of CO2/toe)	2.57	2.45	2.24	2.22	2.14	2.07	2.04	-1.3	-0.5	-0.5
Industry	3.16	3.11	2.70	2.73	2.64	2.48	2.03	-1.6	-0.2	-2.6
Residential	1.11	1.44	1.11	1.04	0.91	0.77	0.58	0.0	-1.9	-4.5
Tertiary	0.00	0.43	0.69	0.73	0.63	0.53	0.46	0.0	-0.9	-3.2
Transport	3.02	3.00	2.95	2.94	2.86	2.87	2.87	-0.2	-0.3	0.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.9	3.1	5.9	9.1	14.9	17.6	20.9			
RES-H&C share	7.9	10.0	18.2	21.8	24.3	27.2	33.8			
RES-E share	0.0	0.0	1.4	10.6	21.4	27.7	33.7			
RES-T share (based on ILUC formula)	0.0	0.0	2.0	1.3	10.3	11.0	12.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	114	115	154	84	112	109	115	3.1	-3.1	0.2
Average Price of Electricity in Final demand sectors (€13/MWh)	132	146	181	204	198	183	190	3.2	0.9	-0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.1	1.9	2.5	2.4	3.0	3.3	3.6	8.1	2.0	1.8
as % of GDP	8.3	12.0	13.7	14.8	16.3	16.0	16.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Czech Republic: EUC03030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
											Annual % Change
Population (in million)	10	10	10	11	11	11	11	0.2	0.2	0.1	
GDP (in 000 ME13)	112	137	157	165	181	197	216	3.4	1.4	1.8	
Gross Inland Consumption (ktoe)	41097	45124	44681	41122	40988	40594	38990	0.8	-0.9	-0.5	
Solids	21643	20248	18364	15061	14936	14358	12686	-1.6	-2.0	-1.6	
Oil	7881	9899	9306	8965	8810	8513	8337	1.7	-0.5	-0.6	
Natural gas	7500	7703	8070	7797	7178	7014	5506	0.7	-1.2	-2.6	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7	
Renewable energy forms	1429	1955	2980	3521	3856	4524	6360	7.6	2.6	5.1	
Energy Branch Consumption	1768	1796	2068	1808	1763	1728	1648	1.6	-1.6	-0.7	
Non-Energy Uses	2093	2948	2783	2447	2583	2691	2747	2.9	-0.7	0.6	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30536	32861	31570	27296	27866	28666	28419	0.3	-1.2	0.2	
Solids	25049	23570	20730	16524	16880	17002	14959	-1.9	-2.0	-1.2	
Oil	386	591	290	223	222	210	189	-2.8	-2.7	-1.6	
Natural gas	169	154	202	191	181	171	159	1.8	-1.1	-1.3	
Nuclear	3506	6405	7248	6798	6798	6798	6798	7.5	-0.6	0.0	
Renewable energy sources	1426	2142	3101	3560	3785	4485	6314	8.1	2.0	5.2	
Hydro	151	205	240	208	218	211	240	4.7	-0.9	0.9	
Biomass & Waste	1275	1933	2770	3106	3234	3735	5117	8.1	1.6	4.7	
Wind	0	2	29	44	65	213	534	76.2	8.5	23.4	
Solar and others	0	3	62	202	266	324	367	0.0	15.7	3.3	
Geothermal	0	0	0	0	2	3	56	0.0	0.0	39.9	
Net imports (ktoe)	9414	12641	11447	13826	13122	11927	10571	2.0	1.4	-2.1	
Solids	-4721	-3270	-2968	-1463	-1944	-2643	-2273	-4.5	-4.1	1.6	
Oil	7512	9649	8974	8742	8588	8303	8147	1.8	-0.4	-0.5	
Crude oil and Feedstocks	5596	7730	7837	6115	6049	5907	5836	3.4	-2.6	-0.4	
Oil products	1916	1919	1137	2627	2539	2396	2311	-5.1	8.4	-0.9	
Natural gas	7482	7535	6846	7606	6998	6843	5348	-0.9	0.2	-2.7	
Electricity	-861	-1086	-1285	-1020	-591	-614	-697	4.1	-7.5	1.7	
Import Dependency (%)	22.9	28.0	25.6	33.6	32.0	29.4	27.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	72911	81931	85319	82069	80201	82816	83691	1.6	-0.6	0.4	
Nuclear energy	13590	24728	27998	27596	27596	27596	27594	7.5	-0.1	0.0	
Solids	52752	49522	47113	41095	42428	40096	35625	-1.1	-1.0	-1.7	
Oil (including refinery gas)	372	326	159	231	0	0	0	-8.1	-100.0	0.0	
Gas (including derived gases)	3907	4215	4121	5855	3561	4901	2943	0.5	-1.5	-1.9	
Biomass-waste	531	739	2188	2213	1099	2835	6011	15.2	-6.7	18.5	
Hydro (pumping excluded)	1758	2380	2789	2421	2541	2449	2790	4.7	-0.9	0.9	
Wind	1	21	335	508	759	2472	6209	78.9	8.5	23.4	
Solar	0	0	615	2149	2214	2466	2518	0.0	13.7	1.3	
Geothermal and other renewables	0	0	1	0	2	2	2	0.0	9.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	13990	16314	17995	18816	18573	19566	21122	2.5	0.3	1.3	
Nuclear energy	1958	4006	4006	4006	4006	4006	4006	7.4	0.0	0.0	
Renewable energy	953	1043	2989	3628	3816	4666	6425	12.1	2.5	5.3	
Hydro (pumping excluded)	952	1020	1049	1080	1080	1085	1158	1.0	0.3	0.7	
Wind	1	22	213	282	408	1018	2651	70.9	6.7	20.6	
Solar	0	1	1727	2266	2328	2563	2617	0.0	3.0	1.2	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	11079	11265	11000	11182	10751	10894	10691	-0.1	-0.2	-0.1	
of which cogeneration units	3733	5199	4792	3842	3973	3127	2377	2.5	-1.9	-5.0	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9823	9935	9571	9656	9487	9414	8797	-0.3	-0.1	-0.8	
Gas fired	1097	1110	1176	1220	935	1150	765	0.7	-2.3	-2.0	
Oil fired	140	140	117	134	72	64	64	-1.8	-4.7	-1.2	
Biomass-waste fired	19	80	136	171	258	266	1065	21.7	6.6	15.3	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	55.0	52.9	50.0	46.3	45.8	45.0	42.3				
Efficiency of gross thermal power generation (%)	31.4	30.0	30.3	31.9	32.8	32.0	30.8				
% of gross electricity from CHP	17.9	16.8	14.2	17.4	19.4	15.2	12.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	21.8	34.0	39.8	42.5	42.7	45.7	53.9				
Fuel Inputs to Thermal Power Generation (ktoe)	15744	15702	15219	13299	12351	12845	12431	-0.3	-2.1	0.1	
Solids	13945	14025	13445	10677	11105	10877	9641	-0.4	-1.9	-1.4	
Oil (including refinery gas)	311	161	78	59	0	0	0	-12.9	-100.0	0.0	
Gas (including derived gases)	1236	1292	1134	1938	959	1197	825	-0.9	-1.7	-1.5	
Biomass & Waste	253	224	562	626	284	769	1963	8.3	-6.6	21.3	
Geothermal heat	0	0	0	0	2	2	2	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	15035	19758	20049	17183	17042	16802	16467	2.9	-1.6	-0.3	
Refineries	6151	8144	8337	6497	6445	6301	6211	3.1	-2.5	-0.4	
Biofuels and hydrogen production	62	3	231	285	594	530	527	14.1	9.9	-1.2	
District heating	975	916	787	650	692	690	606	-2.1	-1.3	-1.3	
Derived gases, cokeries etc.	7846	10696	10693	9751	9311	9281	9122	3.1	-1.4	-0.2	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Czech Republic: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT							Annual % Change			
Passenger transport activity (Gpkm)	103	112	108	113	124	135	146	0.5	1.4	1.6
Public road transport	16	16	17	17	19	20	21	0.5	0.9	1.3
Private cars and motorcycles	67	72	67	68	75	81	86	0.0	1.1	1.4
Rail	15	15	16	18	20	22	24	0.1	2.6	1.9
Aviation ⁽³⁾	5	10	9	9	11	12	14	5.6	2.3	2.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	46	49	48	50	55	59	64	0.3	1.4	1.6
Heavy goods and light commercial vehicles	29	34	34	35	38	41	43	1.7	1.1	1.4
Rail	17	15	14	15	17	19	20	-2.4	2.1	1.9
Inland navigation	0	0	0	0	0	0	0	-7.0	1.1	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	4252	5983	6121	6178	6304	6042	5983	3.7	0.3	-0.5
Public road transport	233	296	379	385	401	408	414	5.0	0.6	0.3
Private cars and motorcycles	2563	3389	3394	3319	3295	2989	2842	2.8	-0.3	-1.5
Heavy goods and light commercial vehicles	1038	1753	1810	1914	1996	1987	2015	5.7	1.0	0.1
Rail	216	197	193	211	235	248	264	-1.1	2.0	1.2
Aviation	197	343	341	345	373	406	443	5.6	0.9	1.7
Inland navigation	5	5	4	4	4	4	5	-2.2	-0.7	1.9
<i>By transport activity</i>										
Passenger transport	3107	4132	4229	4175	4214	3957	3864	3.1	0.0	-0.9
Freight transport	1145	1850	1892	2003	2090	2085	2119	5.1	1.0	0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	1.5	0.0	3.8	4.7	9.7	9.2	9.3			
ENERGY EFFICIENCY										
Primary energy consumption	39004	42175	41899	38675	38405	37903	36242	0.7	-0.9	-0.6
Final Energy Demand	24798	26026	24853	24635	25283	24479	22893	0.0	0.2	-1.0
<i>by sector</i>										
Industry	10129	9681	7933	7883	8105	7934	7661	-2.4	0.2	-0.6
Energy intensive industries	6420	6748	5015	5079	5066	4927	4571	-2.4	0.1	-1.0
Other industrial sectors	3709	2934	2919	2804	3039	3008	3090	-2.4	0.4	0.2
Residential	6150	6345	6665	6340	6582	6413	5602	0.8	-0.1	-1.6
Tertiary	4151	3904	3979	4098	4140	3930	3483	-0.4	0.4	-1.7
Transport ⁽⁵⁾	4368	6095	6276	6315	6457	6202	6147	3.7	0.3	-0.5
<i>by fuel</i>										
Solids	5134	3769	2424	2616	2238	1904	1520	-7.2	-0.8	-3.8
Oil	5322	6817	6541	6366	6151	5760	5490	2.1	-0.6	-1.1
Gas	6491	6741	6662	6128	6320	5989	5196	0.3	-0.5	-1.9
Electricity	4246	4754	4919	5012	5278	5488	5520	1.5	0.7	0.4
Heat (from CHP and District Heating)	2624	2478	2249	2102	2277	2356	2095	-1.5	0.1	-0.8
Renewable energy forms	981	1467	2058	2411	3017	2967	3042	7.7	3.9	0.1
Other	0	0	0	1	2	15	31	-100.0	0.0	30.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	366	329	285	250	227	206	181	-2.5	-2.3	-2.2
Industry (Energy on Value added, index 2000=100)	100	69	44	43	40	37	32	-7.8	-0.9	-2.2
Residential (Energy on Private Income, index 2000=100)	100	87	80	75	70	61	48	-2.2	-1.4	-3.7
Tertiary (Energy on Value added, index 2000=100)	100	82	76	73	67	58	47	-2.7	-1.3	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	35	36	34	31	27	24	2.2	-1.5	-2.5
Freight transport (toe/Mtkm)	25	38	40	40	38	35	33	4.8	-0.4	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	153.1	150.6	140.8	128.6	121.6	117.1	104.2	-0.8	-1.5	-1.5
of which ETS sectors (2013 scope) GHG emissions	87.1	79.4	68.7	65.9	65.0	65.0	57.0		-1.9	-1.4
of which ESD sectors (2013 scope) GHG emissions	63.6	61.4	59.9	55.8	52.1	47.2			-1.0	-1.6
CO2 Emissions (energy related)	125.7	124.3	114.6	102.9	99.2	95.5	84.2	-0.9	-1.4	-1.6
Power generation/District heating	66.8	66.2	63.2	52.9	51.8	51.4	44.8	-0.6	-2.0	-1.4
Energy Branch	2.6	2.2	3.1	2.7	2.6	2.5	2.4	1.6	-1.8	-0.8
Industry	28.3	24.7	17.5	17.0	15.7	14.5	12.2	-4.7	-1.1	-2.5
Residential	8.8	8.4	8.3	7.8	7.5	6.9	6.0	-0.6	-0.9	-2.3
Tertiary	6.8	4.9	4.9	4.8	4.7	3.8	3.0	-3.3	-0.4	-4.2
Transport	12.4	17.8	17.6	17.6	17.0	16.3	15.9	3.6	-0.4	-0.6
CO2 Emissions (non energy and non land use related)	5.6	5.3	4.8	5.2	5.3	5.1	5.1	-1.7	1.1	-0.4
Non-CO2 GHG emissions	21.7	21.1	21.5	20.5	17.1	16.4	14.9	-0.1	-2.3	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	77.5	76.3	71.3	65.1	61.6	59.3	52.8	-0.8	-1.5	-1.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.60	0.55	0.52	0.46	0.45	0.44	0.39	-1.4	-1.4	-1.4
Final energy demand (t of CO2/toe)	2.27	2.15	1.94	1.92	1.78	1.70	1.62	-1.6	-0.9	-0.9
Industry	2.79	2.55	2.21	2.16	1.94	1.83	1.59	-2.3	-1.3	-2.0
Residential	1.43	1.33	1.24	1.24	1.14	1.07	1.06	-1.4	-0.8	-0.7
Tertiary	1.63	1.26	1.22	1.18	1.13	0.97	0.87	-2.9	-0.8	-2.6
Transport	2.85	2.92	2.81	2.79	2.63	2.63	2.59	-0.1	-0.7	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	6.1	9.5	11.9	13.6	15.7	23.0			
RES-H&C share	5.9	9.1	12.6	15.5	17.3	19.4	29.2			
RES-E share	3.4	3.8	7.5	10.3	9.0	13.5	23.2			
RES-T share (based on ILUC formula)	1.8	0.3	4.4	5.5	10.2	10.7	12.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	60	83	83	89	86	2.0	3.3	0.4
Average Price of Electricity in Final demand sectors (€13/MWh)	66	83	142	128	132	134	139	7.9	-0.7	0.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	14.7	20.3	28.4	27.5	32.1	35.2	39.7	6.8	1.2	2.2
as % of GDP	13.1	14.8	18.1	16.7	17.7	17.9	18.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Denmark: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	5	5	6	6	6	6	6	0.4	0.4	0.5
GDP (in 000 M€13)	233	248	247	256	289	321	350	0.6	1.6	1.9
Gross Inland Consumption (ktoe)	19733	19553	20040	16820	16818	15819	15157	0.2	-1.7	-1.0
Solids	3985	3713	3809	1860	1678	866	287	-0.5	-7.9	-16.2
Oil	9101	8063	7568	6738	6247	5743	5168	-1.3	-1.9	-1.9
Natural gas	4465	4413	4435	3680	2643	2455	1987	-0.1	-5.0	-2.8
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Renewable energy forms	2124	3246	4326	3795	5635	6050	7350	7.4	2.7	2.7
Energy Branch Consumption	1121	1205	1132	911	890	739	615	0.1	-2.4	-3.6
Non-Energy Uses	301	289	263	283	313	339	346	-1.3	1.8	1.0
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	27958	30781	22915	15259	15896	13585	12192	-2.0	-3.6	-2.6
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil	18465	18464	12040	8158	7711	6408	4417	-4.2	-4.4	-5.4
Natural gas	7428	9397	7356	4188	3858	2455	1774	-0.1	-6.2	-7.5
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy sources	2065	2920	3520	2913	4327	4721	6001	5.5	2.1	3.3
Hydro	3	2	2	2	2	2	2	-3.6	0.2	0.0
Biomass & Waste	1688	2335	2825	1819	2823	2980	3254	5.3	0.0	1.4
Wind	365	569	672	1007	1318	1495	1988	6.3	7.0	4.2
Solar and others	8	10	16	80	100	127	198	7.2	19.9	7.1
Geothermal	1	4	5	6	85	117	560	13.8	32.6	20.7
Net Imports (ktoe)	-7370	-10130	-3257	2304	1724	3085	3670	-7.8	0.0	8.4
Solids	3783	3505	2642	1860	1678	866	287	-3.5	-4.4	-16.2
Oil	-8386	-9068	-3586	-676	-670	167	1572	-8.1	-15.4	0.0
Crude oil and Feedstocks	-8783	-10933	-5033	-669	-740	68	1529	-5.4	-17.4	0.0
Oil products	397	1865	1447	-7	70	99	43	13.8	-26.1	-4.8
Natural gas	-2882	-5010	-3022	-508	-1208	17	297	0.5	-8.8	0.0
Electricity	57	118	-98	747	615	706	366	0.0	0.0	-5.1
Import Dependency (%)	-35.1	-49.9	-15.7	13.1	9.8	18.5	24.1			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	36053	36246	38862	26963	30693	30668	35346	0.8	-2.3	1.4
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids	16673	15463	17006	6498	5408	2590	825	0.2	-10.8	-17.1
Oil (including refinery gas)	4439	1375	774	214	7	58	62	-16.0	-37.5	24.3
Gas (including derived gases)	8774	8780	7906	4589	708	1353	1022	-1.0	-21.4	3.7
Biomass-waste	1895	3989	5340	3164	8455	8491	9530	10.9	4.7	1.2
Hydro (pumping excluded)	30	23	21	21	21	21	21	-3.5	0.2	0.0
Wind	4241	6614	7809	11709	15325	17387	23118	6.3	7.0	4.2
Solar	1	2	6	768	768	768	768	17.5	63.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	11787	13021	13419	15207	13634	13242	13619	1.3	0.2	0.0
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0
Renewable energy	2401	3141	3818	5910	6456	6682	8214	4.7	5.4	2.4
Hydro (pumping excluded)	10	11	9	9	9	9	9	-1.0	0.0	0.0
Wind	2390	3127	3802	5064	5609	5835	7368	4.8	4.0	2.8
Solar	1	3	7	837	838	838	838	21.5	61.4	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	9386	9880	9601	9297	7179	6561	5405	0.2	-2.9	-2.8
of which cogeneration units	5578	5685	5806	7114	6188	5411	4215	0.4	0.6	-3.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	5214	5061	4466	4225	2366	2090	1472	-1.5	-6.2	-4.6
Gas fired	1862	2278	2274	2274	1135	1135	846	2.0	-6.7	-2.9
Oil fired	860	860	1017	1017	492	223	218	1.7	-7.0	-7.8
Biomass-waste fired	1449	1681	1844	1781	3186	3113	2870	2.4	5.6	-1.0
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	33.4	30.2	31.4	19.6	24.7	25.6	28.8			
Efficiency of gross thermal power generation (%)	34.9	35.7	35.3	32.4	33.4	32.8	32.9			
% of gross electricity from CHP	52.6	52.1	49.2	53.6	46.9	39.4	31.2			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	17.1	29.3	33.9	58.1	80.1	87.0	94.6			
Fuel Inputs to Thermal Power Generation (ktoe)	7834	7127	7624	3838	3759	3275	2990	-0.3	-6.8	-2.3
Solids	3669	3444	3770	1696	1529	771	207	0.3	-8.6	-18.1
Oil (including refinery gas)	1354	346	221	65	2	17	18	-16.6	-39.0	27.8
Gas (including derived gases)	2112	1996	1812	1197	203	353	260	-1.5	-19.7	2.5
Biomass & Waste	699	1341	1821	880	2026	2133	2505	10.0	1.1	2.1
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	9001	8288	8139	8416	8106	7519	7252	-1.0	0.0	-1.1
Refineries	8435	7700	7175	7493	6971	6473	5939	-1.6	-0.3	-1.6
Biofuels and hydrogen production	0	0	27	277	433	364	339	0.0	32.1	-2.4
District heating	549	575	923	644	691	642	923	5.3	-2.9	2.9
Derived gases, cokeries etc.	17	13	13	3	10	39	51	-2.9	-2.2	17.2

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Denmark: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT							Annual % Change			
Passenger transport activity (Gpkm)	75	76	78	83	90	94	99	0.4	1.3	1.0
Public road transport	7	7	7	7	8	8	8	-0.7	0.9	0.6
Private cars and motorcycles	51	51	52	54	58	59	61	0.1	1.1	0.6
Rail	6	6	7	7	8	9	10	1.8	1.7	2.3
Aviation ⁽³⁾	8	9	10	12	13	14	17	2.7	2.5	2.2
Inland navigation	3	3	3	3	3	4	4	-0.7	1.1	1.1
Freight transport activity (Gtkm)	21	22	23	25	29	31	33	0.6	2.3	1.3
Heavy goods and light commercial vehicles	18	18	18	20	23	25	26	0.2	2.5	1.3
Rail	2	2	2	2	3	3	3	1.0	1.6	1.9
Inland navigation	2	2	2	2	3	3	3	3.6	1.0	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	4816	5324	5180	5009	4961	4700	4560	0.7	-0.4	-0.8
Public road transport	203	202	199	204	213	214	212	-0.2	0.7	0.0
Private cars and motorcycles	2627	2866	2828	2599	2396	2089	1950	0.7	-1.6	-2.0
Heavy goods and light commercial vehicles	864	1003	1011	971	1059	1070	1058	1.6	0.5	0.0
Rail	103	107	113	118	125	132	137	0.9	1.0	0.9
Aviation	856	955	874	960	997	1014	1017	0.2	1.3	0.2
Inland navigation	163	192	156	158	171	180	186	-0.4	0.9	0.8
<i>By transport activity</i>										
Passenger transport	3874	4197	4049	3915	3771	3493	3362	0.4	-0.7	-1.1
Freight transport	942	1128	1132	1094	1190	1207	1198	1.9	0.5	0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.5	5.6	9.0	8.7	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	19432	19264	19777	16536	16505	15481	14812	0.2	-1.8	-1.1
Final Energy Demand	14717	15497	15606	14800	14753	14126	13210	0.6	-0.6	-1.1
<i>by sector</i>										
Industry	2934	2864	2417	2568	2704	2631	2517	-1.9	1.1	-0.7
Energy intensive industries	1156	1107	849	908	934	855	779	-3.0	1.0	-1.8
Other industrial sectors	1778	1757	1569	1659	1771	1776	1738	-1.2	1.2	-0.2
Residential	4162	4453	4916	4345	4188	4012	3596	1.7	-1.6	-1.5
Tertiary	2805	2856	3094	2879	2900	2783	2537	1.0	-0.6	-1.3
Transport ⁽⁵⁾	4816	5324	5179	5009	4961	4700	4560	0.7	-0.4	-0.8
<i>by fuel</i>										
Solids	290	253	166	163	150	95	80	-5.4	-1.0	-6.1
Oil	7058	7293	6759	6083	5655	5138	4585	-0.4	-1.8	-2.1
Gas	1667	1708	1771	1744	1825	1683	1459	0.6	0.3	-2.2
Electricity	2791	2877	2783	2733	2836	2922	3037	0.0	0.2	0.7
Heat (from CHP and District Heating)	2255	2424	2840	2556	2495	2384	2098	2.3	-1.3	-1.7
Renewable energy forms	656	943	1287	1519	1783	1864	1896	7.0	3.3	0.6
Other	0	0	0	3	10	40	56	-100.0	0.0	18.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	85	79	81	66	58	49	43	-0.4	-3.3	-2.9
Industry (Energy on Value added, index 2000=100)	100	101	91	94	90	80	71	-0.9	-0.1	-2.4
Residential (Energy on Private Income, index 2000=100)	100	96	102	84	71	61	50	0.2	-3.5	-3.5
Tertiary (Energy on Value added, index 2000=100)	100	96	101	91	80	69	57	0.1	-2.3	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	44	46	43	39	34	30	27	-0.4	-2.2	-2.4
Freight transport (toe/Mtkm)	44	51	50	44	42	39	37	1.3	-1.7	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.7	66.3	63.9	50.5	45.7	39.9	34.1	-1.1	-3.3	-2.9
of which ETS sectors (2013 scope) GHG emissions	29.3	27.9	18.0	14.6	11.1	7.7		-6.3	-6.2	
of which ESD sectors (2013 scope) GHG emissions	37.0	36.0	32.5	31.1	28.8	26.4		-1.5	-1.6	
CO₂ Emissions (energy related)	53.3	50.0	48.8	35.8	31.1	25.7	20.4	-0.9	-4.4	-4.1
Power generation/District heating	24.5	20.3	21.2	10.6	7.1	4.2	1.5	-1.4	-10.4	-14.3
Energy Branch	2.2	2.3	2.1	1.9	1.7	1.4	1.1	-0.5	-2.1	-4.3
Industry	5.4	5.1	3.9	4.1	4.1	3.5	2.5	-3.2	0.4	-4.7
Residential	3.9	3.6	3.2	2.6	2.2	2.0	1.5	-2.0	-3.7	-3.6
Tertiary	3.0	2.7	2.9	2.5	2.4	1.9	1.5	-0.3	-1.8	-4.9
Transport	14.3	15.9	15.5	14.2	13.5	12.8	12.3	0.8	-1.3	-1.0
CO₂ Emissions (non energy and non land use related)	2.6	2.3	1.4	1.4	1.5	1.4	1.4	-6.1	1.0	-1.1
Non-CO₂ GHG emissions	15.8	14.0	13.7	13.3	13.1	12.7	12.3	-1.4	-0.4	-0.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.2	91.8	88.4	69.8	63.3	55.2	47.2	-1.1	-3.3	-2.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.36	0.28	0.26	0.17	0.11	0.07	0.02	-3.0	-8.3	-14.0
Final energy demand (t of CO ₂ /toe)	1.81	1.76	1.63	1.58	1.51	1.42	1.35	-1.0	-0.8	-1.1
Industry	1.85	1.79	1.63	1.58	1.52	1.31	1.01	-1.3	-0.7	-4.0
Residential	0.95	0.80	0.66	0.59	0.53	0.50	0.43	-3.6	-2.1	-2.2
Tertiary	1.05	0.95	0.93	0.88	0.83	0.67	0.57	-1.2	-1.2	-3.6
Transport	2.97	2.99	2.99	2.83	2.72	2.72	2.69	0.0	-0.9	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	10.5	15.6	22.0	23.9	33.9	39.5	48.8			
RES-H&C share	15.3	22.2	30.8	28.3	36.9	45.1	56.7			
RES-E share	15.0	25.0	33.1	41.9	62.7	66.7	82.7			
RES-T share (based on ILUC formula)	0.3	0.5	1.3	8.0	13.1	16.0	24.0			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	75	87	89	108	108	112	100	1.8	1.9	-0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	169	178	195	186	207	212	214	1.4	0.6	0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	18.3	21.9	23.2	20.9	25.6	28.2	31.3	2.4	1.0	2.0
as % of GDP	7.9	8.8	9.4	8.2	8.8	8.8	8.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Estonia: EUCO3030					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	1	1	1	1	1	1	1	-0.5	-0.4	-0.6			
GDP (in 000 ME13)	11	15	15	18	20	22	24	3.6	3.0	1.6			
Gross Inland Consumption (ktoe)	4979	5622	6155	6344	6428	6263	5003	2.1	0.4	-2.5			
Solids	2968	3190	3917	3589	3673	3593	2082	2.8	-0.6	-5.5			
Oil	916	1182	1109	1065	975	891	822	1.9	-1.3	-1.7			
Natural gas	662	800	563	796	855	811	455	-1.6	4.3	-6.1			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0			
Renewable energy forms	513	589	847	995	1039	1066	1573	5.1	2.1	4.2			
Energy Branch Consumption	163	193	199	190	186	178	112	2.0	-0.7	-4.9			
Non-Energy Uses	180	229	90	280	295	305	309	-6.7	12.6	0.4			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	3435	4250	5467	5368	5401	5306	4271	4.8	-0.1	-2.3			
Solids	2669	3176	3943	3594	3675	3603	2087	4.0	-0.7	-5.5			
Oil	249	375	532	681	649	588	524	7.9	2.0	-2.1			
Natural gas	5	7	5	0	0	0	0	-1.7	-100.0	0.0			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	512	692	988	1093	1077	1116	1660	6.8	0.9	4.4			
Hydro	0	2	2	3	3	3	3	19.1	2.1	0.0			
Biomass & Waste	512	686	962	1040	1015	1049	1367	6.5	0.5	3.0			
Wind	0	5	24	49	57	61	283	0.0	9.2	17.3			
Solar and others	0	0	0	0	2	3	7	0.0	0.0	15.3			
Geothermal	0	0	0	0	0	0	1	0.0	0.0	18.8			
Net Imports (ktoe)	1628	1489	862	1219	1262	1191	968	-6.2	3.9	-2.6			
Solids	270	23	-22	-5	-2	-10	-5	0.0	-22.6	10.3			
Oil	786	917	760	625	555	525	502	-0.3	-3.1	-1.0			
Crude oil and Feedstocks	-125	-225	-394	-560	-524	-466	-408	12.2	2.9	-2.5			
Oil products	911	1142	1153	1185	1079	991	910	2.4	-0.7	-1.7			
Natural gas	657	792	558	796	861	824	488	-1.6	4.4	-5.5			
Electricity	-80	-138	-280	-100	-114	-98	70	13.4	-8.6	0.0			
Import Dependency (%)	32.0	25.9	13.5	18.5	18.9	18.3	18.5						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	8513	10205	12964	10765	11316	11330	8708	4.3	-1.4	-2.6			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	7682	9302	11167	8608	9082	9059	3714	3.8	-2.0	-8.6			
Oil (including refinery gas)	56	32	41	0	0	0	0	-3.1	-100.0	0.0			
Gas (including derived gases)	757	760	712	689	659	634	529	-0.6	-0.8	-2.2			
Biomass-waste	13	35	740	859	873	893	1138	49.8	1.7	2.7			
Hydro (pumping excluded)	5	22	27	33	33	33	33	18.4	2.0	0.0			
Solar	0	54	277	575	668	710	3293	0.0	9.2	17.3			
Geothermal and other renewables	0	0	0	1	1	1	1	0.0	0.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	2912	2684	2827	2689	2276	2289	3341	-0.3	-2.1	3.9			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	2	36	114	312	343	364	1350	49.8	11.6	14.7			
Hydro (pumping excluded)	2	5	6	8	8	8	8	11.6	2.9	0.0			
Wind	0	31	108	303	334	355	1341	0.0	12.0	14.9			
Solar	0	0	0	1	1	1	1	0.0	0.0	0.0			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	2910	2648	2713	2377	1933	1925	1991	-0.7	-3.3	0.3			
of which cogeneration units	452	1604	447	438	266	253	194	-0.1	-5.1	-3.1			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	2684	2411	2430	1871	1413	1413	1413	-1.0	-5.3	0.0			
Gas fired	218	224	224	362	371	364	390	0.3	5.2	0.5			
Oil fired	8	8	8	0	0	0	0	0.0	-100.0	0.0			
Biomass-waste fired	0	5	51	144	148	148	187	0.0	11.2	2.4			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	29.8	38.8	47.4	40.9	51.2	51.1	27.9						
Efficiency of gross thermal power generation (%)	30.0	33.5	34.9	34.3	34.3	33.8	32.3						
% of gross electricity from CHP	11.0	10.2	10.3	12.7	11.1	9.3	9.8						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	0.2	1.1	8.1	13.6	13.9	14.4	51.3						
Fuel Inputs to Thermal Power Generation (ktoe)	2442	2600	3115	2543	2662	2691	1435	2.5	-1.6	-6.0			
Solids	2199	2353	2715	2171	2288	2309	916	2.1	-1.7	-8.7			
Oil (including refinery gas)	16	10	12	0	0	0	0	-3.0	-100.0	0.0			
Gas (including derived gases)	226	227	209	168	166	168	143	-0.8	-2.3	-1.5			
Biomass & Waste	2	10	179	205	208	214	376	55.3	1.5	6.1			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	926	1271	1523	1753	1789	1670	1469	5.1	1.6	-2.0			
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0			
Biofuels and hydrogen production	0	0	0	10	65	54	49	0.0	0.0	-2.8			
District heating	454	489	446	418	434	418	326	-0.2	-0.3	-2.8			
Derived gases, cokeries etc.	473	782	1077	1325	1290	1198	1094	8.6	1.8	-1.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Estonia: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
TRANSPORT										
Passenger transport activity (Gpkm)	10	14	14	15	16	16	17	2.8	1.6	0.8
Public road transport	3	3	2	2	2	2	3	-2.4	1.5	0.6
Private cars and motorcycles	7	10	10	11	12	12	12	4.3	1.4	0.5
Rail	0	0	0	0	0	1	1	-1.3	3.0	2.6
Aviation ⁽³⁾	0	1	1	1	1	1	1	12.3	4.1	3.6
Inland navigation	0	0	0	0	0	0	0	-0.3	1.3	1.2
Freight transport activity (Gtkm)	10	13	9	10	11	12	14	-1.1	2.2	2.1
Heavy goods and light commercial vehicles	2	3	2	3	3	3	3	1.9	3.1	1.3
Rail	8	11	7	7	8	9	10	-2.0	1.9	2.4
Inland navigation	0	0	0	0	0	0	0	-6.9	1.0	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	580	766	781	811	794	732	699	3.0	0.2	-1.1
Public road transport	62	62	67	74	76	76	74	0.7	1.3	-0.2
Private cars and motorcycles	349	475	499	524	483	408	362	3.6	-0.3	-2.9
Heavy goods and light commercial vehicles	95	135	116	132	139	142	145	2.0	1.9	0.4
Rail	46	44	54	33	39	41	45	1.7	-3.2	1.5
Aviation	21	42	38	42	50	58	66	6.4	2.8	2.7
Inland navigation	7	8	8	6	7	7	7	1.2	-1.7	0.9
By transport activity										
Passenger transport	441	589	614	647	618	551	511	3.4	0.1	-1.9
Freight transport	138	178	167	164	176	181	188	1.9	0.5	0.6
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.9	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.0	1.3	8.2	7.8	7.6			
ENERGY EFFICIENCY										
Primary energy consumption	4799	5394	6065	6064	6133	5958	4694	2.4	0.1	-2.6
Final Energy Demand	2434	2877	2907	3036	3091	3002	2765	1.8	0.6	-1.1
by sector										
Industry	571	718	575	713	745	742	697	0.1	2.6	-0.7
Energy intensive industries	245	273	231	294	305	303	287	-0.6	2.8	-0.6
Other industrial sectors	327	446	343	419	440	440	410	0.5	2.5	-0.7
Residential	929	890	1028	963	989	980	881	1.0	-0.4	-1.1
Tertiary	348	495	520	544	557	542	481	4.1	0.7	-1.4
Transport ⁽⁵⁾	586	774	785	816	800	738	705	3.0	0.2	-1.2
by fuel										
Solids	118	118	83	64	56	46	33	-3.4	-3.8	-5.1
Oil	772	982	941	966	860	763	690	2.0	-0.9	-2.2
Gas	177	263	207	286	328	327	213	1.6	4.7	-4.2
Electricity	431	519	594	614	653	679	672	3.3	1.0	0.3
Heat (from CHP and District Heating)	511	547	531	484	512	504	455	0.4	-0.4	-1.2
Renewable energy forms	425	447	550	622	680	681	694	2.6	2.1	0.2
Other	0	0	0	0	0	3	7	-100.0	0.0	40.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	465	372	405	346	314	282	208	-1.4	-2.5	-4.0
Industry (Energy on Value added, index 2000=100)	100	84	67	69	66	61	54	-4.0	-0.2	-1.9
Residential (Energy on Private Income, index 2000=100)	100	63	74	58	52	47	38	-2.9	-3.4	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	104	108	93	85	75	61	0.8	-2.4	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	44	41	37	32	28	0.3	-1.7	-2.8
Freight transport (toe/Mtkm)	14	13	19	17	16	15	14	3.1	-1.6	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	17.0	18.2	18.8	16.5	16.7	16.3	9.1	1.0	-1.2	-5.8
of which ETS sectors (2013 scope) GHG emissions		13.0	13.8	11.3	11.9	11.9	5.3		-1.4	-7.8
of which ESD sectors (2013 scope) GHG emissions		5.1	5.0	5.1	4.7	4.4	3.8		-0.6	-2.0
CO ₂ Emissions (energy related)	14.0	15.5	16.4	14.1	14.4	14.1	7.2	1.6	-1.3	-6.7
Power generation/District heating	10.7	11.3	12.7	10.1	10.6	10.7	4.3	1.7	-1.7	-8.6
Energy Branch	0.1	0.2	0.1	0.1	0.1	0.1	0.1	-0.5	3.0	-3.8
Industry	0.9	1.0	0.8	0.8	0.7	0.7	0.4	-1.8	-0.1	-6.6
Residential	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-4.2	0.5	-2.7
Tertiary	0.3	0.5	0.4	0.5	0.5	0.4	0.3	2.1	1.9	-3.9
Transport	1.7	2.3	2.3	2.4	2.2	2.0	1.9	3.1	-0.6	-1.5
CO ₂ Emissions (non energy and non land use related)	0.7	0.7	0.4	0.5	0.5	0.4	0.4	-6.0	3.0	-1.5
Non-CO2 GHG emissions	2.3	1.9	2.0	1.9	1.8	1.8	1.6	-1.4	-1.0	-1.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	42.2	45.2	46.7	41.0	41.5	40.5	22.8	1.0	-1.2	-5.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.67	0.64	0.63	0.59	0.59	0.60	0.30	-0.6	-0.6	-6.6
Final energy demand (t of CO ₂ /toe)	1.33	1.42	1.27	1.28	1.17	1.09	0.99	-0.5	-0.8	-1.6
Industry	1.58	1.43	1.31	1.07	1.01	0.94	0.54	-1.8	-2.6	-6.0
Residential	0.32	0.26	0.19	0.20	0.20	0.18	0.17	-5.2	0.9	-1.6
Tertiary	0.91	1.05	0.75	0.92	0.84	0.70	0.66	-2.0	1.2	-2.5
Transport	2.96	2.98	2.99	2.96	2.75	2.74	2.69	0.1	-0.8	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	17.9	17.4	24.6	24.2	25.9	26.8	46.2			
RES-H&C share	31.8	32.2	43.2	39.9	38.8	40.4	62.7			
RES-E share	0.2	1.1	10.4	14.4	14.9	15.2	46.2			
RES-T share (based on ILUC formula)	0.0	0.0	0.2	0.2	10.0	10.4	16.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	43	47	65	66	73	99	1.0	3.5	4.2
Average Price of Electricity in Final demand sectors (€13/MWh)	59	63	80	109	124	137	157	3.2	4.5	2.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	1.3	2.0	2.9	3.7	4.4	4.8	5.5	8.6	4.1	2.3
as % of GDP	12.0	13.5	19.3	20.0	21.4	21.6	22.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Finland: EUC03030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	5	5	5	5	6	6	6	0.3	0.5	0.5	
GDP (in 000 ME13)	157	179	187	188	199	210	226	1.7	0.6	1.3	
Gross Inland Consumption (ktoe)	32531	34529	37124	33972	35234	34820	31396	1.3	-0.5	-1.1	
Solids	5131	4936	6874	4106	4615	4200	2681	3.0	-3.9	-5.3	
Oil	9342	10335	10121	9288	8367	7417	6113	0.8	-1.9	-3.1	
Natural gas	3422	3598	3838	2821	2678	2673	2098	1.2	-3.5	-2.4	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Renewable energy forms	7816	8195	9508	10767	10552	12314	13775	2.0	1.0	2.7	
Energy Branch Consumption	1168	1209	1529	1577	1541	1352	1294	2.7	0.1	-1.7	
Non-Energy Uses	1040	1155	1229	1157	1191	1240	1243	1.7	-0.3	0.4	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	14892	16669	17662	18108	20959	22838	22366	1.7	1.7	0.7	
Solids	1088	2136	1803	1007	1111	1271	1154	5.2	-4.7	0.4	
Oil	189	257	389	433	393	353	305	7.5	0.1	-2.5	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	5799	6003	5881	5763	8733	8733	6664	0.1	4.0	-2.7	
Renewable energy sources	7816	8273	9589	10905	10722	12480	14244	2.1	1.1	2.9	
Hydro	1261	1185	1111	1350	1215	1273	1315	-1.3	0.9	0.8	
Biomass & Waste	6549	7072	8451	9354	9030	10260	11745	2.6	0.7	2.7	
Wind	7	15	25	198	464	923	968	14.2	33.8	7.6	
Solar and others	1	1	1	2	13	23	41	10.0	26.4	11.7	
Geothermal	0	0	0	0	0	1	176	0.0	0.0	100.4	
Net Imports (ktoe)	18337	18979	17869	16077	14481	12180	9225	-0.3	-2.1	-4.4	
Solids	3537	3341	3977	3099	3504	2929	1527	1.2	-1.3	-8.0	
Oil	10357	10655	9232	9068	8176	7255	5984	-1.1	-1.2	-3.1	
Crude oil and Feedstocks	11964	10713	11206	13148	11842	10668	9297	-0.7	0.6	-2.4	
Oil products	-1607	-58	-1974	-4080	-3666	-3413	-3313	2.1	6.4	-1.0	
Natural gas	3422	3598	3838	2821	2681	2681	2118	1.2	-3.5	-2.3	
Electricity	1022	1463	903	1226	289	-518	65	-1.2	-10.8	-13.8	
Import Dependency (%)	55.2	54.2	47.9	47.0	40.9	34.8	29.2				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	69934	70538	80591	71479	84090	98241	91064	1.4	0.4	0.8	
Nuclear energy	22479	23271	22800	23137	36999	37079	28850	0.1	5.0	-2.5	
Solids	12452	10998	20826	8559	11120	11950	8399	5.3	-6.1	-2.8	
Oil (including refinery gas)	587	500	484	635	38	261	20	-1.9	-22.4	-6.2	
Gas (including derived gases)	10816	11921	11847	7771	6538	8083	6133	0.9	-5.8	-0.6	
Biomass-waste	8860	9891	11413	13361	9874	15333	21101	2.6	-1.4	7.9	
Hydro (pumping excluded)	14660	13784	12922	15701	14123	14797	15287	-1.3	0.9	0.8	
Wind	78	170	294	2307	5392	10732	11260	14.2	33.8	7.6	
Solar	1	2	5	7	6	6	14	14.9	2.0	9.7	
Geothermal and other renewables	1	1	0	0	0	0	0	-8.4	-96.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	16012	16586	16691	18173	19612	20486	19745	0.4	1.6	0.1	
Nuclear energy	2726	2726	2726	2726	4378	4378	3398	0.0	4.8	-2.5	
Renewable energy	2923	3121	3359	4289	5628	7438	7749	1.4	5.3	3.2	
Hydro (pumping excluded)	2882	3035	3155	3276	3276	3383	3499	0.9	0.4	0.7	
Wind	38	82	197	1001	2343	4046	4231	17.9	28.1	6.1	
Solar	3	4	7	12	9	9	19	8.8	2.5	7.8	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	10363	10739	10605	11158	9607	8671	8598	0.2	-1.0	-1.1	
of which cogeneration units	8280	5832	6168	6361	5446	5366	3488	-2.9	-1.2	-4.4	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4676	4633	4532	4340	3303	2308	1763	-0.3	-3.1	-6.1	
Gas fired	2570	2481	2703	2698	2825	2873	2656	0.5	0.4	-0.6	
Oil fired	1519	1505	1194	1532	643	628	607	-2.4	-6.0	-0.6	
Biomass-waste fired	1597	2120	2176	2589	2836	2863	3571	3.1	2.7	2.3	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	47.9	46.7	52.8	43.2	47.0	52.6	50.4				
Efficiency of gross thermal power generation (%)	39.3	36.8	36.6	34.5	34.4	34.6	34.9				
% of gross electricity from CHP	36.4	38.9	36.2	33.7	26.9	27.4	20.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	65.9	66.8	58.9	76.3	79.0	79.3	84.0				
Fuel Inputs to Thermal Power Generation (ktoe)	7166	7782	10460	7561	6884	8847	8798	3.9	-4.1	2.5	
Solids	3181	2998	5098	2421	2885	2902	1880	4.8	-5.5	-4.2	
Oil (including refinery gas)	122	98	99	168	12	65	6	-2.1	-18.8	-6.8	
Gas (including derived gases)	2119	2385	2516	1493	1283	1432	1032	1.7	-6.5	-2.2	
Biomass & Waste	1744	2302	2747	3480	2704	4448	5880	4.6	-0.2	8.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	21306	21544	23155	24530	26262	24180	19947	0.8	1.3	-2.7	
Refineries	13059	12876	14265	15688	14225	12780	11036	0.9	0.0	-2.5	
Biofuels and hydrogen production	0	0	140	334	373	339	341	0.0	10.3	-0.9	
District heating	1059	1265	1600	1434	1502	1246	1115	4.2	-0.6	-2.9	
Derived gases, cokeries etc.	7188	7403	7149	7074	10162	9815	7456	-0.1	3.6	-3.0	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Finland: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	80	87	91	94	97	100	104	1.2	0.7	0.7
Public road transport	8	8	8	8	8	8	8	-0.2	0.3	0.3
Private cars and motorcycles	57	63	66	68	69	70	71	1.5	0.4	0.4
Rail	4	4	4	5	5	6	6	1.4	1.5	1.5
Aviation ⁽³⁾	8	9	9	10	12	13	14	1.2	3.0	2.2
Inland navigation	4	4	4	4	4	4	4	-0.6	0.6	0.6
Freight transport activity (Gtkm)	42	42	42	43	46	49	53	-0.2	1.0	1.4
Heavy goods and light commercial vehicles	29	30	27	28	30	31	33	-0.5	0.8	1.2
Rail	10	10	10	10	11	12	13	-0.4	1.4	1.8
Inland navigation	3	3	5	5	5	5	6	3.0	0.8	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	4338	4624	4827	4896	4735	4449	4221	1.1	-0.2	-1.1
Public road transport	120	116	121	121	121	119	116	0.1	0.0	-0.4
Private cars and motorcycles	2334	2542	2693	2631	2399	2102	1903	1.4	-1.1	-2.3
Heavy goods and light commercial vehicles	1158	1186	1129	1145	1163	1144	1151	-0.3	0.3	-0.1
Rail	90	92	90	94	101	106	110	0.0	1.2	0.9
Aviation	469	526	619	746	785	807	762	2.8	2.4	-0.3
Inland navigation	167	163	175	159	166	172	178	0.5	-0.6	0.7
<i>By transport activity</i>										
Passenger transport	3086	3310	3549	3604	3416	3142	2898	1.4	-0.4	-1.6
Freight transport	1251	1314	1278	1292	1319	1307	1323	0.2	0.3	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	1.1	2.5			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.9	7.0	8.2	8.3	8.9			
ENERGY EFFICIENCY										
Primary energy consumption	31491	33375	35896	32814	34043	33579	30153	1.3	-0.5	-1.2
Final Energy Demand	24510	25239	26243	24732	24691	23035	20589	0.7	-0.6	-1.8
<i>by sector</i>										
Industry	12313	11922	11428	10647	10738	9881	8580	-0.7	-0.6	-2.2
Energy intensive industries	10172	9616	9017	8347	8405	7504	6310	-1.2	-0.7	-2.8
Other industrial sectors	2141	2306	2412	2299	2333	2377	2270	1.2	-0.3	-0.3
Residential	4544	5053	5804	5338	5406	5005	4419	2.5	-0.7	-2.0
Tertiary	3296	3616	4169	3837	3797	3687	3356	2.4	-0.9	-1.2
Transport ⁽⁵⁾	4356	4648	4842	4910	4749	4462	4234	1.1	-0.2	-1.1
<i>by fuel</i>										
Solids	1109	873	843	702	698	666	377	-2.7	-1.9	-6.0
Oil	7850	8102	7619	7073	6493	5504	4350	-0.3	-1.6	-3.9
Gas	1209	1082	1012	981	985	1053	1032	-1.8	-0.3	0.5
Electricity	6507	6942	7178	6788	6894	7252	7212	1.0	-0.4	0.5
Heat (from CHP and District Heating)	3334	3972	4656	4143	4252	3790	3100	3.4	-0.9	-3.1
Renewable energy forms	4501	4268	4935	5042	5362	4747	4484	0.9	0.8	-1.8
Other	0	0	0	3	7	23	33	0.0	1586.2	17.3
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	207	193	199	181	177	166	139	-0.4	-1.2	-2.4
Industry (Energy on Value added, index 2000=100)	100	81	79	75	73	65	53	-2.3	-0.8	-3.2
Residential (Energy on Private Income, index 2000=100)	100	94	98	86	82	72	59	-0.2	-1.8	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	100	110	100	92	84	71	0.9	-1.7	-2.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	36	36	34	32	29	26	23	-0.6	-1.5	-2.5
Freight transport (toe/Mtkm)	30	31	31	30	29	27	25	0.4	-0.6	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	73.1	71.5	78.2	61.1	58.8	53.2	41.4	0.7	-2.8	-3.4
of which ETS sectors (2013 scope) GHG emissions	37.2	43.9	30.8	31.6	29.1	20.4			-3.2	-4.3
of which ESD sectors (2013 scope) GHG emissions	34.3	34.3	30.3	27.2	24.1	21.1			-2.3	-2.5
CO₂ Emissions (energy related)	58.1	57.7	65.3	48.5	47.6	42.4	31.0	1.2	-3.1	-4.2
Power generation/District heating	22.5	23.0	32.3	17.5	18.7	17.8	11.5	3.7	-5.3	-4.8
Energy Branch	2.5	2.5	2.8	3.1	2.8	2.1	1.9	1.2	0.0	-3.5
Industry	14.2	12.7	11.0	10.1	9.5	8.0	5.0	-2.5	-1.4	-6.2
Residential	2.4	2.3	1.8	1.4	1.3	1.0	0.5	-2.6	-3.5	-9.0
Tertiary	3.6	3.5	3.4	2.8	2.4	1.4	0.9	-0.6	-3.6	-9.2
Transport	12.9	13.8	14.0	13.6	13.0	12.1	11.2	0.8	-0.8	-1.4
CO₂ Emissions (non energy and non land use related)	1.5	1.6	2.2	2.3	2.2	2.0	2.0	3.8	0.3	-0.9
Non-CO₂ GHG emissions	13.6	12.2	10.8	10.3	9.0	8.6	8.4	-2.3	-1.8	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	101.1	98.9	108.1	84.4	81.3	73.5	57.3	0.7	-2.8	-3.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.20	0.19	0.23	0.14	0.14	0.12	0.09	1.4	-5.2	-4.3
Final energy demand (t of CO ₂ /toe)	1.35	1.28	1.15	1.13	1.06	0.97	0.86	-1.6	-0.8	-2.1
Industry	1.15	1.06	0.96	0.95	0.89	0.81	0.58	-1.8	-0.8	-4.1
Residential	0.52	0.45	0.32	0.26	0.24	0.20	0.11	-5.0	-2.8	-7.2
Tertiary	1.09	0.97	0.81	0.74	0.62	0.38	0.27	-2.9	-2.7	-8.0
Transport	2.97	2.97	2.89	2.77	2.73	2.70	2.65	-0.3	-0.6	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	28.7	28.8	32.5	41.1	42.1	46.8	54.5			
RES-H&C share	38.2	39.1	44.4	55.2	57.9	61.9	74.5			
RES-E share	27.3	26.9	27.7	36.2	33.2	43.9	51.5			
RES-T share (based on ILUC formula)	0.8	0.9	4.3	16.3	18.9	22.4	27.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	52	55	59	95	92	88	95	1.4	4.5	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	68	80	98	122	132	139	144	3.7	3.0	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.9	20.3	25.8	27.4	32.7	35.2	38.6	4.4	2.4	1.7
as % of GDP	10.7	11.3	13.8	14.6	16.4	16.7	17.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										France: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	57	60	61	63	64	66	67	0.7	0.5	0.4		
GDP (in 000 M€13)	1812	1962	2024	2091	2266	2417	2594	1.1	1.1	1.4		
Gross Inland Consumption (ktoe)	257565	276646	267546	258764	248911	234441	212294	0.4	-0.7	-1.6		
Solids	15048	14303	12076	8763	8469	5836	4924	-2.2	-3.5	-5.3		
Oil	88937	93185	82668	79806	75195	69861	64051	-0.7	-0.9	-1.6		
Natural gas	35766	41025	42540	38807	35958	32187	26891	1.7	-1.7	-2.9		
Nuclear	107093	116474	110539	109294	97019	94378	85231	0.3	-1.3	-1.3		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Renewable energy forms	16695	16847	22365	24473	37965	37866	36742	3.0	5.4	-0.3		
Energy Branch Consumption	10822	9989	9635	8309	7411	6641	5924	-1.2	-2.6	-2.2		
Non-Energy Uses	16851	16704	14290	14232	14666	14892	14848	-1.6	0.3	0.1		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	129790	136271	135095	135170	136034	133062	122680	0.4	0.1	-1.0		
Solids	2483	383	162	143	0	0	0	-23.9	-100.0	0.0		
Oil	2023	1604	1542	1217	1122	957	902	-2.7	-3.1	-2.2		
Natural gas	1505	909	646	304	294	283	271	-8.1	-7.6	-0.8		
Nuclear	107093	116474	110539	109294	97019	94378	85231	0.3	-1.3	-1.3		
Renewable energy sources	16688	16902	22206	24212	37598	37444	36276	2.9	5.4	-0.4		
Hydro	5771	4442	5364	5476	5753	5515	5565	-0.7	0.7	-0.3		
Biomass & Waste	10763	12159	15690	15780	23697	21407	17354	3.8	4.2	-3.1		
Wind	7	83	855	1850	4741	5620	7844	62.6	18.7	5.2		
Solar and others	21	26	118	870	3082	4518	5056	18.7	38.6	5.1		
Geothermal	126	192	180	236	325	385	457	3.6	6.1	3.5		
Net Imports (ktoe)	134082	144103	132149	123217	115629	104244	92581	-0.1	-1.3	-2.2		
Solids	13005	13511	12192	8620	8469	5836	4924	-0.6	-3.6	-5.3		
Oil	91265	95114	82886	81211	76770	71643	65778	-1.0	-0.8	-1.5		
Crude oil and Feedstocks	85329	85302	65254	46552	45749	43971	41695	-2.6	-3.5	-0.9		
Oil products	5936	9813	17632	34659	31021	27672	24082	11.5	5.8	-2.5		
Natural gas	35779	40720	39553	38504	35719	32030	26959	1.0	-1.0	-2.8		
Electricity	-5974	-5187	-2641	-5379	-5695	-5687	-5544	-7.8	8.0	-0.3		
Import Dependency (%)	51.5	51.6	49.0	47.7	45.9	43.9	43.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	535965	571353	563931	584201	597277	595665	575391	0.5	0.6	-0.4		
Nuclear energy	415162	451529	428521	444338	396167	385196	346058	0.3	-0.8	-1.3		
Solids	27004	27515	23359	8820	9109	414	0	-1.4	-9.0	-100.0		
Oil (including refinery gas)	7165	7925	5565	516	0	337	319	-2.5	-100.0	0.0		
Gas (including derived gases)	15365	26254	26385	25753	23473	14939	5346	5.6	-1.2	-13.8		
Biomass-waste	3559	5016	6675	10512	14131	19575	17925	6.5	7.8	2.4		
Hydro (pumping excluded)	67121	51658	62388	63670	66898	64123	64710	-0.7	0.7	-0.3		
Wind	77	964	9942	21517	55129	65350	91209	62.6	18.7	5.2		
Solar	5	10	620	8601	31589	44533	47817	63.1	48.2	4.2		
Geothermal and other renewables	507	482	476	474	782	1198	2008	-0.6	5.1	9.9		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	114543	114015	123033	127555	148953	154927	164443	0.7	1.9	1.0		
Nuclear energy	64293	64053	63679	63247	61327	59493	59493	-0.1	-0.4	-0.3		
Renewable energy	23570	24601	32099	40333	66684	77564	87974	3.1	7.6	2.8		
Hydro (pumping excluded)	23266	23571	23779	23635	23635	23635	23762	0.2	-0.1	0.1		
Wind	57	777	7050	10358	22130	25130	33206	61.9	12.1	4.1		
Solar	7	13	1030	6100	20535	28228	30093	64.7	34.9	3.9		
Other renewables (tidal etc.)	240	240	240	240	384	571	914	0.0	4.8	9.1		
Thermal power	26680	25361	27256	23974	20942	17870	16976	0.2	-2.6	-2.1		
of which cogeneration units	7013	5779	4606	10611	5918	4272	3272	-4.1	2.5	-5.8		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	10552	8637	7229	5385	3856	3834	3780	-3.7	-6.1	-0.2		
Gas fired	4116	6055	9334	9646	9181	8963	8261	8.5	-0.2	-1.1		
Oil fired	11328	9794	9643	7693	5008	1849	1700	-1.6	-6.3	-10.2		
Biomass-waste fired	684	876	1049	1249	2894	3221	3233	4.4	10.7	1.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	2	3	3	3	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	51.0	54.6	50.0	50.2	44.1	42.4	38.7					
Efficiency of gross thermal power generation (%)	34.9	33.3	30.0	39.7	38.7	35.3	31.9					
% of gross electricity from CHP	3.0	2.4	2.8	2.4	1.9	1.7	1.6					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	90.8	89.2	90.2	94.0	94.5	97.4	99.0					
Fuel Inputs to Thermal Power Generation (ktoe)	13278	17328	17887	9873	10381	8594	6374	3.0	-5.3	-4.8		
Solids	6559	6402	4717	2258	2323	94	0	-3.2	-6.8	-100.0		
Oil (including refinery gas)	1242	2160	1639	135	0	111	106	2.8	-79.3	266.7		
Gas (including derived gases)	4002	6298	8178	4941	3915	2990	1421	7.4	-7.1	-9.6		
Biomass & Waste	1476	2469	3352	2529	4127	5382	4832	8.5	2.1	1.6		
Geothermal heat	0	0	0	10	15	15	15	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	205144	211862	191250	166425	153060	148613	136889	-0.7	-2.2	-1.1		
Refineries	90823	88392	73306	49009	48036	46118	43733	-2.1	-4.1	-0.9		
Biofuels and hydrogen production	325	651	2397	2746	3118	2941	3066	22.1	2.7	-0.2		
District heating	312	448	608	546	574	581	477	6.9	-0.6	-1.8		
Derived gases, cokeries etc.	113684	122371	114938	114124	101332	98973	89612	0.1	-1.3	-1.2		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								France: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	950	998	1033	1091	1169	1210	1264	0.8	1.2	0.8
Public road transport	42	42	50	55	60	63	65	1.7	1.9	0.8
Private cars and motorcycles	754	801	811	850	901	916	942	0.7	1.1	0.4
Rail	81	90	101	107	119	131	144	2.1	1.7	1.9
Aviation ⁽³⁾	69	62	68	76	86	97	110	-0.1	2.3	2.5
Inland navigation	3	3	3	3	3	4	4	-0.8	0.7	1.3
Freight transport activity (Gtkm)	412	409	392	413	470	519	575	-0.5	1.8	2.0
Heavy goods and light commercial vehicles	311	319	296	310	356	391	433	-0.5	1.9	2.0
Rail	58	41	30	37	42	50	59	-6.3	3.5	3.4
Inland navigation	43	49	66	66	71	77	83	4.4	0.8	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	50360	50194	49347	50154	49937	47528	45969	-0.2	0.1	-0.8
Public road transport	536	519	595	654	705	718	718	1.0	1.7	0.2
Private cars and motorcycles	31157	31368	31602	31615	29848	26461	24314	0.1	-0.6	-2.0
Heavy goods and light commercial vehicles	10961	10554	9424	9543	10233	10574	11029	-1.5	0.8	0.8
Rail	1134	980	932	1017	1082	1156	1223	-1.9	1.5	1.2
Aviation	6088	6291	6294	6827	7535	8046	8076	0.3	1.8	0.7
Inland navigation	483	481	500	499	535	573	609	0.4	0.7	1.3
<i>By transport activity</i>										
Passenger transport	38753	38887	39197	39839	38861	36026	33927	0.1	-0.1	-1.3
Freight transport	11607	11307	10150	10316	11076	11502	12042	-1.3	0.9	0.8
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.4	3.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.7	1.3	4.9	5.6	6.5	6.7	7.2			
ENERGY EFFICIENCY										
Primary energy consumption	240713	259943	253256	241532	234245	219548	197446	0.5	-0.8	-1.7
Final Energy Demand	154639	160337	155397	155251	156418	145018	130606	0.0	0.1	-1.8
<i>by sector</i>										
Industry	36670	34356	28478	30330	31198	29861	28273	-2.5	0.9	-1.0
Energy intensive industries	20906	20576	16506	17590	17970	16890	15721	-2.3	0.9	-1.3
Other industrial sectors	15764	13780	11972	12740	13227	12972	12551	-2.7	1.0	-0.5
Residential	42153	45931	45463	44159	45108	40098	32883	0.8	-0.1	-3.1
Tertiary	25209	29569	31792	30270	29811	27138	23060	2.3	-0.6	-2.5
Transport ⁽⁵⁾	50607	50482	49664	50492	50302	47920	46390	-0.2	0.1	-0.8
<i>by fuel</i>										
Solids	5775	5218	4547	4076	4129	3550	2769	-2.4	-1.0	-3.9
Oil	72503	71421	64647	63583	58925	53626	48101	-1.1	-0.9	-2.0
Gas	30907	33744	32430	32675	30977	28614	25123	0.5	-0.5	-2.1
Electricity	33096	36352	38185	37788	38972	39112	37971	1.4	0.2	-0.3
Heat (from CHP and District Heating)	3236	4163	3525	3658	3385	3246	2819	0.9	-0.4	-1.8
Renewable energy forms	9123	9439	12064	13458	19984	16704	13508	2.8	5.2	-3.8
Other	0	0	0	12	46	168	315	0.0	0.0	21.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	141	132	122	110	97	82	-0.7	-1.8	-2.9
Industry (Energy on Value added, index 2000=100)	100	89	78	80	77	70	63	-2.5	-0.1	-2.0
Residential (Energy on Private Income, index 2000=100)	100	98	91	86	80	67	51	-0.9	-1.3	-4.5
Tertiary (Energy on Value added, index 2000=100)	100	108	110	101	91	78	61	1.0	-1.8	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	34	33	32	30	27	24	21	-0.7	-1.6	-2.5
Freight transport (toe/Mtkm)	28	28	26	25	24	22	21	-0.9	-0.9	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	585.3	552.1	512.0	482.2	444.0	401.3	361.3	-1.3	-1.4	-2.0
of which ETS sectors (2013 scope) GHG emissions	173.2	147.3	131.7	125.0	109.5	97.6		-1.6	-2.4	
of which ESD sectors (2013 scope) GHG emissions	378.8	364.7	350.4	319.0	291.8	263.7		-1.3	-1.9	
CO₂ Emissions (energy related)	388.3	394.4	360.0	332.5	307.2	271.4	237.9	-0.8	-1.6	-2.5
Power generation/District heating	46.7	53.6	48.1	26.7	22.3	12.8	8.7	0.3	-7.4	-9.0
Energy Branch	19.9	16.3	15.0	13.7	11.5	10.2	9.4	-2.7	-2.6	-2.0
Industry	74.6	67.0	54.1	59.8	57.3	50.4	43.5	-3.2	0.6	-2.7
Residential	59.3	64.8	57.2	51.5	43.6	38.7	30.1	-0.4	-2.7	-3.6
Tertiary	39.8	44.4	44.7	38.9	33.3	28.7	23.1	1.1	-2.9	-3.6
Transport	148.0	148.1	140.9	141.9	139.2	130.6	123.0	-0.5	-0.1	-1.2
CO₂ Emissions (non energy and non land use related)	28.9	28.5	25.7	25.6	26.6	24.8	22.4	-1.2	0.4	-1.7
Non-CO₂ GHG emissions	168.1	129.2	126.3	124.1	110.1	105.1	101.0	-2.8	-1.4	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	104.5	98.6	91.4	86.1	79.3	71.7	64.5	-1.3	-1.4	-2.0
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.08	0.09	0.08	0.04	0.03	0.02	0.01	-0.3	-7.9	-8.6
Final energy demand (t of CO ₂ /toe)	2.08	2.02	1.91	1.88	1.75	1.71	1.68	-0.8	-0.9	-0.4
Industry	2.03	1.95	1.90	1.97	1.84	1.69	1.54	-0.7	-0.3	-1.8
Residential	1.41	1.41	1.26	1.17	0.97	0.97	0.92	-1.1	-2.6	-0.5
Tertiary	1.58	1.50	1.41	1.29	1.12	1.06	1.00	-1.2	-2.3	-1.1
Transport	2.92	2.93	2.84	2.81	2.77	2.73	2.65	-0.3	-0.2	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	9.5	9.5	12.5	15.5	23.6	25.3	27.3			
RES-H&C share	12.4	12.3	15.8	19.4	30.0	30.3	30.0			
RES-E share	14.7	13.7	14.9	19.8	31.5	36.6	43.6			
RES-T share (based on ILUC formula)	1.4	2.0	6.3	7.7	10.2	12.9	19.1			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	61	58	57	90	93	82	76	-0.7	5.1	-2.1
Average Price of Electricity in Final demand sectors (€13/MWh)	108	100	109	123	145	147	159	0.0	2.9	0.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	176.3	196.0	216.7	273.9	281.7	297.1	2.4	3.4	0.8
as % of GDP	8.5	9.0	9.7	10.4	12.1	11.7	11.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Germany: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	82	83	82	81	81	80	80	0.0	-0.1	-0.1	
GDP (in 000 M€13)	2370	2442	2608	2790	2973	3126	3251	1.0	1.3	0.9	
Gross Inland Consumption (ktoe)	342337	341916	332974	322609	308870	289697	254919	-0.3	-0.7	-1.9	
Solids	84802	81952	78824	78036	77905	75708	54712	-0.7	-0.1	-3.5	
Oil	130980	121460	111798	111688	102703	92941	82650	-1.6	-0.8	-2.1	
Natural gas	71878	77782	75905	74011	68485	66923	58384	0.5	-1.0	-1.6	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Renewable energy forms	10665	19054	31477	39195	50747	52740	57851	11.4	4.9	1.3	
Energy Branch Consumption	14566	14384	13378	13631	12248	11531	10086	-0.8	-0.9	-1.9	
Non-Energy Uses	25064	24662	22582	24685	25861	26629	26415	-1.0	1.4	0.2	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	135549	137356	129648	120921	110005	99901	88548	-0.4	-1.6	-2.1	
Solids	60629	56484	45906	42340	37288	36199	22583	-2.7	-2.1	-4.9	
Oil	4680	5782	4754	4964	3809	2919	2233	0.2	-2.2	-5.2	
Natural gas	15825	14334	11113	10749	9888	8240	6125	-3.5	-1.2	-4.7	
Nuclear	43751	42061	36257	23825	8474	0	0	-1.9	-13.5	-100.0	
Renewable energy sources	10665	18695	31618	39044	50546	52544	57608	11.5	4.8	1.3	
Hydro	1869	1689	1802	1925	1936	2024	2116	-0.4	0.7	0.9	
Biomass & Waste	7876	14249	24988	27662	32667	32286	31128	12.2	2.7	-0.5	
Wind	804	2341	3250	5689	9411	10063	14109	15.0	11.2	4.1	
Solar and others	116	371	1493	3575	5506	7095	8749	29.1	13.9	4.7	
Geothermal	0	46	86	192	1026	1075	1506	0.0	28.1	3.9	
Net Imports (ktoe)	204709	208118	201696	204465	201862	192868	169566	-0.1	0.0	-1.7	
Solids	21663	25972	31644	35695	40616	39509	32130	3.9	2.5	-2.3	
Oil	125918	120239	109834	109501	101831	92961	83365	-1.4	-0.8	-2.0	
Crude oil and Feedstocks	101441	111039	91612	87783	82379	76047	69507	-1.0	-1.1	-1.7	
Oil products	24477	9200	18222	21718	19452	16915	13858	-2.9	0.7	-3.3	
Natural gas	56865	61940	61645	63262	58656	58816	52507	0.8	-0.5	-1.1	
Electricity	263	-393	-1286	-4145	558	1385	1321	0.0	0.0	9.0	
Import Dependency (%)	59.4	60.4	60.1	62.8	64.7	65.9	65.7				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	572313	615800	626583	645694	598225	617708	582058	0.9	-0.5	-0.3	
Nuclear energy	169606	163055	140556	96916	34469	0	0	-1.9	-13.1	-100.0	
Solids	296687	288142	262896	272885	273972	273517	190527	-1.2	0.4	-3.6	
Oil (including refinery gas)	4785	11997	8741	1079	941	2145	1451	6.2	-20.0	4.4	
Gas (including derived gases)	59970	83608	100912	92758	72109	92581	75864	5.3	-3.3	0.5	
Biomass-waste	10121	20849	42975	58775	35366	45718	45244	15.6	-1.9	2.5	
Hydro (pumping excluded)	21732	19638	20953	22381	22506	23540	24609	-0.4	0.7	0.9	
Wind	9352	27229	37793	66153	109427	117015	164056	15.0	11.2	4.1	
Solar	60	1283	11727	34612	48465	62223	79337	69.3	15.2	5.1	
Geothermal and other renewables	0	-1	30	137	969	969	969	0.0	41.4	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	114373	123973	154603	189032	207113	205259	228169	3.1	3.0	1.0	
Nuclear energy	21644	20656	20660	12188	6907	0	0	-0.5	-10.4	-100.0	
Renewable energy	11040	25641	50141	90293	120216	132008	167087	16.3	9.1	3.3	
Hydro (pumping excluded)	4831	5210	5407	5590	5592	5802	6013	1.1	0.3	0.7	
Wind	6095	18375	27180	44946	61821	60536	79571	16.1	8.6	2.6	
Solar	114	2056	17554	39757	52803	65670	81503	65.5	11.6	4.4	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	81689	77676	83806	86551	79990	73250	61082	0.3	-0.5	-2.7	
of which cogeneration units	14369	20840	24554	17060	6200	9990	9475	5.5	-12.9	4.3	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	50924	48087	47789	52819	49170	44020	36715	-0.6	0.3	-2.9	
Gas fired	21336	21671	26890	25178	21891	20393	15749	2.3	-2.0	-3.2	
Oil fired	8066	5686	5688	5028	1674	1457	1247	-3.4	-11.5	-2.9	
Biomass-waste fired	1363	2232	3432	3501	7084	7209	7200	9.7	7.5	0.2	
Hydrogen plants	0	0	0	1	1	1	1	0.0	0.0	0.0	
Geothermal heat	0	0	8	24	170	170	170	0.0	35.8	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	53.3	53.0	43.5	36.8	31.2	32.6	27.9				
Efficiency of gross thermal power generation (%)	37.8	38.6	39.4	40.5	37.6	38.9	39.0				
% of gross electricity from CHP	10.6	12.6	13.2	12.8	6.2	9.6	9.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	36.8	37.7	40.5	43.2	42.0	40.4	54.0				
Fuel Inputs to Thermal Power Generation (ktoe)	84562	90075	90587	90286	87575	91704	69197	0.7	-0.3	-2.3	
Solids	67101	65740	59687	61356	60916	60155	40713	-1.2	0.2	-3.9	
Oil (including refinery gas)	1411	1427	855	236	311	690	474	-4.9	-9.6	4.3	
Gas (including derived gases)	12891	17808	19955	16546	12453	16242	13490	4.5	-4.6	0.8	
Biomass & Waste	3158	5100	10066	12030	13061	13783	13687	12.3	2.6	0.5	
Geothermal heat	0	0	24	118	834	834	834	0.0	42.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	180304	187908	163048	142875	120386	103065	95357	-1.0	-3.0	-2.3	
Refineries	119420	125092	103238	98875	92821	85715	78265	-1.4	-1.1	-1.7	
Biofuels and hydrogen production	237	1859	2884	3011	2833	2654	2974	28.4	-0.2	0.5	
District heating	1198	3942	4754	4043	3515	3023	2842	14.8	-3.0	-2.1	
Derived gases, cokeries etc.	59450	57015	52171	36947	21218	11674	11275	-1.3	-8.6	-6.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Germany: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	1066	1099	1130	1187	1208	1238	1267	0.6	0.7	0.5
Public road transport	69	67	62	63	67	67	68	-1.1	0.8	0.2
Private cars and motorcycles	850	876	905	942	949	959	973	0.6	0.5	0.2
Rail	90	92	100	111	115	129	138	1.1	1.4	1.8
Aviation ⁽³⁾	55	62	61	69	75	81	86	1.1	2.0	1.4
Inland navigation	2	2	2	2	2	3	3	-0.8	1.0	1.5
Freight transport activity (Gtkm)	493	545	592	619	682	720	762	1.9	1.4	1.1
Heavy goods and light commercial vehicles	342	385	422	439	486	511	539	2.1	1.4	1.0
Rail	83	95	107	116	126	135	144	2.6	1.6	1.4
Inland navigation	68	65	63	65	70	74	79	-0.7	1.1	1.2
Energy demand in transport (ktoe) ⁽⁴⁾	65101	59797	58145	59791	56095	51725	48703	-1.1	-0.4	-1.4
Public road transport	1047	897	803	815	836	821	798	-2.6	0.4	-0.5
Private cars and motorcycles	42176	37675	35607	35814	31214	26949	24432	-1.7	-1.3	-2.4
Heavy goods and light commercial vehicles	12303	11057	11325	11780	12340	12100	12107	-0.8	0.9	-0.2
Rail	1947	1580	1414	1496	1454	1520	1525	-3.2	0.3	0.5
Aviation	7345	8265	8719	9601	9944	10011	9502	1.7	1.3	-0.5
Inland navigation	283	323	278	285	307	324	338	-0.2	1.0	1.0
<i>By transport activity</i>										
Passenger transport	51841	47805	45951	47113	42807	38634	35572	-1.2	-0.7	-1.8
Freight transport	13261	11992	12194	12678	13288	13091	13131	-0.8	0.9	-0.1
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.4	3.1			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.4	3.2	5.1	5.2	5.3	6.0	6.7			
ENERGY EFFICIENCY										
Primary energy consumption	317273	317254	310393	297924	283009	263068	228504	-0.2	-0.9	-2.1
Final Energy Demand	219989	218456	219721	217308	213319	198563	179286	0.0	-0.3	-1.7
<i>by sector</i>										
Industry	57570	59093	60563	62096	65071	62759	58413	0.5	0.7	-1.1
Energy intensive industries	39345	40705	42170	43510	45846	44083	40131	0.7	0.8	-1.3
Other industrial sectors	18225	18389	18393	18586	19225	18676	18282	0.1	0.4	-0.5
Residential	63072	63498	62442	58726	57393	52684	45714	-0.1	-0.8	-2.2
Tertiary	34239	35302	38222	36396	34480	31131	26220	1.1	-1.0	-2.7
Transport ⁽⁵⁾	65109	60563	58494	60090	56375	51990	48940	-1.1	-0.4	-1.4
<i>by fuel</i>										
Solids	10958	8238	9379	9284	9909	9570	8003	-1.5	0.6	-2.1
Oil	99738	90309	83168	82419	73182	63001	53752	-1.8	-1.3	-3.0
Gas	56064	55136	56501	56368	55497	49904	45118	0.1	-0.2	-2.0
Electricity	41570	44907	45781	44880	45873	48249	45778	1.0	0.0	0.0
Heat (from CHP and District Heating)	6831	10751	11268	9856	9768	9600	9251	5.1	-1.4	-0.5
Renewable energy forms	4828	9116	13625	14468	18996	17805	16675	10.9	3.4	-1.3
Other	0	0	0	32	94	434	708	0.0	0.0	22.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	144	140	128	116	104	93	78	-1.2	-2.0	-2.8
Industry (Energy on Value added, index 2000=100)	100	96	93	90	90	83	75	-0.7	-0.3	-1.7
Residential (Energy on Private Income, index 2000=100)	100	99	94	83	76	65	54	-0.6	-2.2	-3.4
Tertiary (Energy on Value added, index 2000=100)	100	98	98	87	77	66	53	-0.2	-2.4	-3.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	37	33	32	28	24	21	-2.2	-1.7	-2.7
Freight transport (toe/Mtkm)	27	22	21	20	19	18	17	-2.6	-0.6	-1.2
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	1076.8	1015.8	957.1	943.5	892.2	836.6	687.0	-1.2	-0.7	-2.6
of which ETS sectors (2013 scope) GHG emissions	543.7	505.7	510.9	510.9	495.8	485.2	377.1		-0.2	-2.7
of which ESD sectors (2013 scope) GHG emissions	472.1	451.3	432.6	396.4	351.3	309.9			-1.3	-2.4
CO₂ Emissions (energy related)	852.1	825.2	787.8	777.7	733.3	685.5	547.5	-0.8	-0.7	-2.9
Power generation/District heating	330.6	344.9	324.5	317.5	303.6	308.9	219.0	-0.2	-0.7	-3.2
Energy Branch	28.1	26.2	23.5	25.9	22.0	19.7	17.8	-1.8	-0.6	-2.1
Industry	130.2	115.3	115.3	112.7	114.8	100.7	86.6	-1.2	0.0	-2.8
Residential	119.4	110.8	104.3	98.0	87.9	76.3	65.6	-1.3	-1.7	-2.9
Tertiary	58.5	55.9	56.3	55.4	47.9	37.6	28.4	-0.4	-1.6	-5.1
Transport	185.3	172.2	163.8	168.2	157.0	142.3	130.0	-1.2	-0.4	-1.9
CO₂ Emissions (non energy and non land use related)	63.7	61.6	55.6	56.8	58.4	57.1	53.8	-1.4	0.5	-0.8
Non-CO₂ GHG emissions	161.0	128.9	113.7	109.1	100.4	94.0	85.7	-3.4	-1.2	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	85.5	80.6	76.0	74.9	70.8	66.4	54.5	-1.2	-0.7	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.50	0.46	0.42	0.41	0.42	0.42	0.31	-1.7	-0.1	-2.9
Final energy demand (t of CO ₂ /toe)	2.24	2.08	2.00	2.00	1.91	1.80	1.73	-1.1	-0.5	-1.0
Industry	2.26	1.95	1.90	1.81	1.76	1.60	1.48	-1.7	-0.8	-1.7
Residential	1.89	1.74	1.67	1.67	1.53	1.45	1.44	-1.2	-0.9	-0.6
Tertiary	1.71	1.58	1.47	1.52	1.39	1.21	1.08	-1.5	-0.6	-2.4
Transport	2.85	2.84	2.80	2.80	2.79	2.74	2.66	-0.2	-0.1	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.6	6.7	10.5	13.5	18.6	21.1	26.0			
RES-H&C share	4.2	6.7	9.6	10.6	17.6	19.3	21.2			
RES-E share	6.1	10.5	18.1	29.5	34.9	38.4	51.8			
RES-T share (based on ILUC formula)	0.8	4.2	6.9	8.8	10.4	15.4	23.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	51	62	86	106	103	104	3.7	5.6	-0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	132	171	164	160	169	176	181	2.2	0.3	0.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	225.6	285.4	302.7	290.0	344.0	362.1	394.1	3.0	1.3	1.4
as % of GDP	9.5	11.7	11.6	10.4	11.6	11.6	12.1			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Greece: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	11	11	11	11	11	10	10	0.3	-0.5	-0.6	
GDP (in 000 ME13)	190	231	232	200	207	213	225	2.0	-1.1	0.8	
Gross Inland Consumption (ktoe)	28292	31410	28725	26055	25191	22092	18106	0.2	-1.3	-3.2	
Solids	9038	8944	7863	6765	5644	3694	1767	-1.4	-3.3	-11.0	
Oil	16085	18119	14974	12997	12143	10606	8865	-0.7	-2.1	-3.1	
Natural gas	1705	2354	3235	2979	3779	3371	1596	6.6	1.6	-8.3	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5	
Renewable energy forms	1466	1668	2163	2714	3225	4175	5695	4.0	4.1	5.9	
Energy Branch Consumption	1634	1820	1839	1906	1779	1569	1429	1.2	-0.3	-2.2	
Non-Energy Uses	719	761	1108	824	847	842	835	4.4	-2.7	-0.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	10012	10326	9461	9027	8359	7448	7136	-0.6	-1.2	-1.6	
Solids	8222	8538	7315	6430	5346	3468	1644	-1.2	-3.1	-11.1	
Oil	282	101	132	75	73	70	68	-7.3	-5.7	-0.8	
Natural gas	42	18	8	0	0	0	0	-15.8	-100.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	1466	1668	2006	2521	2940	3910	5424	3.2	3.9	6.3	
Hydro	318	431	641	506	508	477	480	7.3	-2.3	-0.6	
Biomass & Waste	1009	1015	919	1157	1348	1385	1557	-0.9	3.9	1.5	
Wind	39	109	233	330	448	1044	1759	19.7	6.7	14.7	
Solar and others	99	101	197	514	621	986	1607	7.1	12.2	10.0	
Geothermal	2	12	16	16	15	17	22	25.9	-0.4	3.7	
Net Imports (ktoe)	22151	23498	21712	20057	19817	17573	13932	-0.2	-0.9	-3.5	
Solids	769	364	401	335	297	227	123	-6.3	-2.9	-8.5	
Oil	19695	20476	17433	15950	15020	13392	11572	-1.2	-1.5	-2.6	
Crude oil and Feedstocks	20596	19488	20633	24349	23254	21620	19910	0.0	1.2	-1.5	
Oil products	-900	988	-3200	-8399	-8235	-8228	-8338	13.5	9.9	0.1	
Natural gas	1689	2332	3231	2979	3814	3443	1783	6.7	1.7	-7.3	
Electricity	-1	325	491	600	401	246	183	0.0	-2.0	-7.5	
Import Dependency (%)	69.5	68.6	69.1	69.0	70.3	70.2	66.1				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	53425	59427	57367	54082	58239	56102	50170	0.7	0.2	-1.5	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	34313	35543	30797	26751	23072	15394	7030	-1.1	-2.8	-11.2	
Oil (including refinery gas)	8885	9207	6089	4847	5122	2384	129	-3.7	-1.7	-30.8	
Gas (including derived gases)	5920	8171	9830	8817	13840	11441	695	5.2	3.5	-25.9	
Biomass-waste	163	222	319	195	382	670	1375	6.9	1.8	13.7	
Hydro (pumping excluded)	3693	5017	7460	5880	5901	5552	5577	7.3	-2.3	-0.6	
Wind	451	1266	2714	3834	5207	12142	20448	19.7	6.7	14.7	
Solar	0	1	158	3757	4715	8519	14917	0.0	40.4	12.2	
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	11212	13208	15889	19208	19724	23769	29555	3.5	2.2	4.1	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	3298	3598	4715	8146	9363	14311	20925	3.6	7.1	8.4	
Hydro (pumping excluded)	3072	3106	3215	3389	3579	3579	3579	0.5	1.1	0.0	
Wind	226	491	1298	2152	2637	5211	7812	19.1	7.3	11.5	
Solar	0	1	202	2605	3147	5521	9534	0.0	31.6	11.7	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7914	9610	11174	11062	10361	9458	8630	3.5	-0.8	-1.8	
of which cogeneration units	195	3051	588	284	309	311	276	11.7	-6.2	-1.1	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	4454	4754	4312	3923	3051	3120	2865	-0.3	-3.4	-0.6	
Gas fired	1157	2203	4189	5062	5306	5272	4737	13.7	2.4	-1.1	
Oil fired	2302	2625	2618	2022	1824	834	734	1.3	-3.6	-8.7	
Biomass-waste fired	1	28	55	55	180	232	294	50.5	12.6	5.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	50.3	47.7	38.3	29.6	31.5	25.7	19.0				
Efficiency of gross thermal power generation (%)	36.9	37.0	37.5	38.6	41.4	42.9	36.0				
% of gross electricity from CHP	2.1	7.8	4.3	3.0	3.4	3.0	2.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	8.1	10.9	18.6	25.3	27.8	47.9	84.3				
Fuel Inputs to Thermal Power Generation (ktoe)	11492	12344	10787	9041	8814	5996	2204	-0.6	-2.0	-12.9	
Solids	8170	8694	7567	6558	5451	3533	1676	-0.8	-3.2	-11.1	
Oil (including refinery gas)	1978	1992	1278	1005	1071	505	42	-4.3	-1.8	-27.6	
Gas (including derived gases)	1280	1605	1863	1435	2209	1812	155	3.8	1.7	-23.3	
Biomass & Waste	64	52	79	43	83	146	330	2.2	0.4	14.8	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	22570	21629	22585	24150	24046	22487	20835	0.0	0.6	-1.4	
Refineries	22508	21536	22462	23941	23761	22192	20512	0.0	0.6	-1.5	
Biofuels and hydrogen production	0	0	124	207	279	277	297	0.0	8.4	0.6	
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0	
Derived gases, cokeries etc.	62	93	0	2	7	18	26	-95.7	1750.5	14.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Greece: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	129	153	161	164	172	176	183	2.2	0.7	0.6
Public road transport	22	22	21	21	22	23	23	-0.3	0.6	0.4
Private cars and motorcycles	67	90	105	106	108	107	108	4.7	0.2	0.1
Rail	3	3	3	3	3	4	4	-0.2	1.0	1.8
Aviation ⁽³⁾	30	31	24	26	32	35	40	-2.2	2.8	2.3
Inland navigation	7	7	7	7	7	8	8	-0.1	0.2	0.6
Freight transport activity (Gtkm)	38	34	37	37	39	41	42	-0.1	0.5	0.7
Heavy goods and light commercial vehicles	28	24	30	30	32	33	34	0.8	0.5	0.7
Rail	0	1	1	1	1	1	1	3.7	0.8	1.1
Inland navigation	9	9	6	6	7	7	7	-3.6	0.5	0.9
Energy demand in transport (ktoe) ⁽⁴⁾	7286	8174	8147	7472	7249	6838	6472	1.1	-1.2	-1.1
Public road transport	423	438	403	403	408	402	387	-0.5	0.1	-0.5
Private cars and motorcycles	3327	4435	4483	4018	3693	3240	2851	3.0	-1.9	-2.6
Heavy goods and light commercial vehicles	1668	1426	1601	1480	1486	1452	1407	-0.4	-0.7	-0.5
Rail	49	46	24	22	23	24	24	-6.8	-0.3	0.3
Aviation	1325	1181	919	936	1016	1086	1156	-3.6	1.0	1.3
Inland navigation	495	648	717	612	622	635	647	3.8	-1.4	0.4
<i>By transport activity</i>										
Passenger transport	5530	6460	6297	5784	5547	5165	4836	1.3	-1.3	-1.4
Freight transport	1756	1714	1850	1688	1701	1673	1636	0.5	-0.8	-0.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.6	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	2.8	3.9	4.3	4.8			
ENERGY EFFICIENCY										
Primary energy consumption	27573	30650	27617	25230	24344	21250	17271	0.0	-1.3	-3.4
Final Energy Demand	18676	20958	19197	17486	17110	16003	14230	0.3	-1.1	-1.8
<i>by sector</i>										
Industry	4450	4161	3672	3224	3305	3196	2778	-1.9	-1.0	-1.7
Energy intensive industries	2737	2588	2427	2157	2194	2091	1736	-1.2	-1.0	-2.3
Other industrial sectors	1714	1573	1245	1067	1111	1105	1043	-3.1	-1.1	-0.6
Residential	4502	5510	4615	4351	4280	3927	3303	0.2	-0.8	-2.6
Tertiary	2426	3100	2752	2426	2284	2027	1662	1.3	-1.9	-3.0
Transport ⁽⁵⁾	7297	8188	8158	7484	7262	6852	6487	1.1	-1.2	-1.1
<i>by fuel</i>										
Solids	891	458	302	208	192	161	91	-10.3	-4.4	-7.2
Oil	12744	14413	12110	10307	9461	8581	7430	-0.5	-2.4	-2.4
Gas	257	586	982	1018	1030	1023	884	14.3	0.5	-1.5
Electricity	3710	4377	4568	4397	4595	4404	3918	2.1	0.1	-1.6
Heat (from CHP and District Heating)	28	49	46	44	50	56	59	5.2	0.8	1.6
Renewable energy forms	1046	1076	1191	1510	1775	1756	1810	1.3	4.1	0.2
Other	0	0	0	2	7	21	38	0.0	0.0	18.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	149	136	124	130	122	104	81	-1.8	-0.2	-4.0
Industry (Energy on Value added, index 2000=100)	100	88	101	99	97	92	77	0.1	-0.4	-2.4
Residential (Energy on Private Income, index 2000=100)	100	99	80	88	88	79	64	-2.2	1.0	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	101	86	88	79	69	53	-1.5	-0.9	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	40	40	37	33	30	27	24	-0.9	-2.1	-2.1
Freight transport (toe/Mtkm)	46	51	50	45	43	41	39	0.7	-1.4	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	133.3	139.6	121.4	105.7	96.7	79.6	59.2	-0.9	-2.3	-4.8
of which ETS sectors (2013 scope) GHG emissions	77.2	64.9	57.3	53.0	39.9	24.0	24.0		-2.0	-7.6
of which ESD sectors (2013 scope) GHG emissions	62.4	56.5	48.4	43.6	39.7	35.2	35.2		-2.6	-2.1
CO₂ Emissions (energy related)	98.4	106.4	92.1	79.6	73.0	57.2	37.6	-0.7	-2.3	-6.4
Power generation/District heating	52.1	55.6	47.9	40.9	37.2	24.4	9.3	-0.8	-2.5	-13.0
Energy Branch	3.1	3.4	3.6	3.9	3.5	3.3	3.0	1.6	-0.1	-1.8
Industry	10.4	8.9	7.2	6.2	5.9	5.2	3.6	-3.7	-1.9	-4.9
Residential	7.6	9.9	6.7	5.0	4.3	3.8	2.8	-1.3	-4.2	-4.2
Tertiary	3.4	4.3	2.8	1.8	1.2	1.0	0.7	-2.1	-8.0	-5.7
Transport	21.8	24.4	24.0	21.7	20.9	19.6	18.3	1.0	-1.4	-1.3
CO₂ Emissions (non energy and non land use related)	8.9	9.6	6.6	6.8	6.7	6.9	7.5	-2.9	0.1	1.1
Non-CO₂ GHG emissions	26.1	23.6	22.6	19.3	16.9	15.4	14.0	-1.4	-2.9	-1.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.1	129.9	113.0	98.4	90.0	74.1	55.1	-0.9	-2.3	-4.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.97	0.93	0.83	0.75	0.63	0.43	0.18	-1.6	-2.7	-11.7
Final energy demand (t of CO ₂ /toe)	2.32	2.26	2.12	1.99	1.89	1.85	1.78	-0.9	-1.1	-0.6
Industry	2.35	2.13	1.96	1.91	1.79	1.64	1.29	-1.8	-0.9	-3.2
Residential	1.69	1.79	1.45	1.16	1.01	0.96	0.86	-1.5	-3.5	-1.7
Tertiary	1.41	1.38	1.01	0.76	0.53	0.47	0.41	-3.3	-6.2	-2.7
Transport	2.99	2.98	2.94	2.90	2.87	2.86	2.82	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	7.2	7.0	9.7	14.4	18.5	25.5	38.9			
RES-H&C share	13.6	12.8	17.4	24.8	30.1	33.3	42.7			
RES-E share	7.2	8.2	12.3	22.4	25.8	45.6	82.7			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	1.4	10.2	12.3	19.4			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	60	63	72	85	97	102	100	1.9	3.0	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	74	78	108	124	137	149	161	3.8	2.4	1.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	15.2	20.2	26.7	26.6	31.4	33.1	35.4	5.8	1.6	1.2
as % of GDP	8.0	8.7	11.5	13.3	15.1	15.6	15.8			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Hungary: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	10	10	10	10	10	10	10	-0.2	-0.2	-0.1	
GDP (in 000 M€13)	83	102	101	107	117	131	145	1.9	1.5	2.2	
Gross Inland Consumption (ktoe)	25298	27611	25811	23493	24255	24584	23756	0.2	-0.6	-0.2	
Solids	3850	3031	2730	2635	2124	1435	1093	-3.4	-2.5	-6.4	
Oil	6964	7115	6699	6271	6314	6375	6292	-0.4	-0.6	0.0	
Natural gas	9657	12094	9816	7786	8578	6777	5861	0.2	-1.3	-3.7	
Nuclear	3672	3585	4078	3666	3677	6045	6107	1.1	-1.0	5.2	
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2	
Renewable energy forms	859	1251	2042	1931	2701	3126	3715	9.0	2.8	3.2	
Energy Branch Consumption	1164	1062	1095	1029	949	929	931	-0.6	-1.4	-0.2	
Non-Energy Uses	1587	2169	1974	2275	2502	2826	3079	2.2	2.4	2.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	11598	10372	11065	10244	9899	10954	11415	-0.5	-1.1	1.4	
Solids	2893	1748	1593	1794	1366	669	570	-5.8	-1.5	-8.4	
Oil	1699	1457	1150	795	619	277	193	-3.8	-6.0	-11.0	
Natural gas	2475	2331	2235	1857	1199	520	487	-1.0	-6.0	-8.6	
Nuclear	3672	3585	4078	3666	3677	6045	6107	1.1	-1.0	5.2	
Renewable energy sources	859	1251	2010	2132	3039	3444	4058	8.9	4.2	2.9	
Hydro	15	17	16	20	20	20	20	0.6	2.1	0.0	
Biomass & Waste	758	1145	1844	1905	2660	2609	2833	9.3	3.7	0.6	
Wind	0	1	46	50	77	183	247	0.0	5.3	12.4	
Solar and others	0	2	6	9	45	209	262	0.0	23.5	19.2	
Geothermal	86	87	99	148	237	423	694	1.4	9.1	11.4	
Net Imports (ktoe)	13956	17421	14988	13249	14356	13630	12343	0.7	-0.4	-1.5	
Solids	1087	1299	1143	841	758	766	523	0.5	-4.0	-3.6	
Oil	5291	5780	5637	5476	5695	6098	6099	0.6	0.1	0.7	
Crude oil and Feedstocks	5887	5988	5806	5273	5501	5917	5970	-0.1	-0.5	0.8	
Oil products	-596	-208	-169	203	194	181	130	-11.9	0.0	-4.0	
Natural gas	7283	9808	7726	5929	7379	6257	5373	0.6	-0.5	-3.1	
Electricity	296	535	447	1204	862	827	690	4.2	6.8	-2.2	
Import Dependency (%)	55.2	63.1	58.1	56.4	59.2	55.4	52.0				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	35191	35756	37371	27859	33192	35949	35472	0.6	-1.2	0.7	
Nuclear energy	14180	13834	15761	15087	15024	24706	24962	1.1	-0.5	5.2	
Solids	9590	7023	6234	6436	5072	2310	2008	-4.2	-2.0	-8.8	
Oil (including refinery gas)	4404	455	490	52	0	0	0	-19.7	-100.0	0.0	
Gas (including derived gases)	6719	12502	11714	3383	9571	2504	576	5.7	-2.0	-24.5	
Biomass-waste	120	1730	2449	2015	2241	2344	2878	35.2	-0.9	2.5	
Hydro (pumping excluded)	178	202	188	232	232	232	232	0.5	2.1	0.0	
Wind	0	10	534	585	890	2133	2878	0.0	5.2	12.4	
Solar	0	0	1	32	97	1656	1873	0.0	55.6	34.5	
Geothermal and other renewables	0	0	0	38	65	65	65	0.0	0.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	8589	8297	8292	7495	7095	9714	11449	-0.4	-1.5	4.9	
Nuclear energy	1920	1920	1920	1960	1960	3221	4482	0.0	0.2	8.6	
Renewable energy	48	66	348	431	640	2661	3334	21.9	6.3	18.0	
Hydro (pumping excluded)	48	49	53	57	57	57	57	1.0	0.7	0.0	
Wind	0	17	293	329	477	1040	1511	0.0	5.0	12.2	
Solar	0	0	2	45	106	1564	1766	0.0	48.7	32.5	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	6621	6311	6024	5103	4495	3832	3633	-0.9	-2.9	-2.1	
of which cogeneration units	1464	2047	1862	1144	1575	1009	527	2.4	-1.7	-10.4	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	1747	1380	1155	1137	691	425	414	-4.1	-5.0	-5.0	
Gas fired	4160	4622	4605	3496	3385	2986	2702	1.0	-3.0	-2.2	
Oil fired	602	176	91	91	11	11	5	-17.2	-19.2	-7.3	
Biomass-waste fired	112	133	173	349	356	358	461	4.4	7.5	2.6	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	30	52	52	52	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	42.9	45.7	47.7	39.3	50.4	40.0	33.6				
Efficiency of gross thermal power generation (%)	29.8	32.8	34.1	37.3	40.5	34.7	29.3				
% of gross electricity from CHP	13.5	19.1	19.6	14.4	13.8	9.5	6.4				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	41.1	44.1	50.7	64.6	55.9	86.6	92.7				
Fuel Inputs to Thermal Power Generation (ktoe)	6009	5692	5265	2752	3597	1792	1621	-1.3	-3.7	-7.7	
Solids	2755	1924	1646	1611	1288	599	511	-5.0	-2.4	-8.8	
Oil (including refinery gas)	1052	155	138	15	0	0	0	-18.4	-100.0	0.0	
Gas (including derived gases)	2140	3079	2704	657	1600	464	168	2.4	-5.1	-20.2	
Biomass & Waste	61	534	777	436	653	674	886	28.9	-1.7	3.1	
Geothermal heat	0	0	0	32	56	56	56	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	12946	13165	14441	12781	12805	15163	15104	1.1	-1.2	1.7	
Refineries	7638	8118	8427	6997	7086	7169	7097	1.0	-1.7	0.0	
Biofuels and hydrogen production	0	3	175	182	348	322	330	0.0	7.1	-0.5	
District heating	471	627	474	648	634	614	621	0.1	3.0	2.6	
Derived gases, cokeries etc.	4837	4417	5365	4954	4737	7058	6856	1.0	-1.2	3.8	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Hungary: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
							Annual % Change			
TRANSPORT										
Passenger transport activity (Gpkm)	80	84	84	86	95	103	110	0.5	1.3	1.5
Public road transport	19	18	16	17	18	18	19	-1.3	0.8	0.7
Private cars and motorcycles	47	51	54	54	60	64	68	1.4	1.1	1.1
Rail	12	12	10	11	12	14	16	-1.8	2.1	2.3
Aviation ⁽³⁾	2	4	4	4	5	6	8	5.9	3.0	5.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	27	35	34	35	38	42	46	2.3	1.1	1.9
Heavy goods and light commercial vehicles	17	24	23	23	24	26	28	2.7	0.7	1.6
Rail	9	9	9	10	11	12	14	0.0	2.1	2.6
Inland navigation	1	2	2	2	3	3	3	10.4	1.0	1.9
Energy demand in transport (ktoe) ⁽⁴⁾	3309	4308	4341	3958	4116	4104	4162	2.8	-0.5	0.1
Public road transport	339	361	335	346	353	351	346	-0.1	0.5	-0.2
Private cars and motorcycles	1805	2191	2208	2035	2070	1974	1921	2.0	-0.6	-0.7
Heavy goods and light commercial vehicles	763	1341	1418	1214	1274	1282	1321	6.4	-1.1	0.4
Rail	171	154	150	152	172	193	208	-1.3	1.3	1.9
Aviation	230	261	230	207	243	300	362	0.0	0.6	4.1
Inland navigation	1	1	1	4	4	4	5	3.1	14.6	1.6
By transport activity										
Passenger transport	2449	2877	2826	2642	2730	2696	2704	1.4	-0.3	-0.1
Freight transport	860	1431	1515	1316	1386	1408	1458	5.8	-0.9	0.5
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	4.1	4.7	8.8	8.5	8.8			
ENERGY EFFICIENCY										
Primary energy consumption	23711	25442	23837	21219	21753	21758	20680			
Final Energy Demand	16139	18218	16596	15895	16145	15568	14339	0.1	-0.9	-0.5
by sector								0.3	-0.3	-1.2
Industry	3513	3369	2890	3081	3004	3129	2943	-1.9	0.4	-0.2
Energy intensive industries	2517	2267	1854	1941	1853	1892	1683	-3.0	0.0	-1.0
Other industrial sectors	996	1102	1036	1141	1151	1237	1260	0.4	1.1	0.9
Residential	5603	6464	5740	5253	5260	4921	4386	0.2	-0.9	-1.8
Tertiary	3712	4072	3625	3566	3726	3380	2817	-0.2	0.3	-2.8
Transport ⁽⁵⁾	3311	4313	4341	3995	4155	4138	4193	2.7	-0.4	0.1
by fuel										
Solids	665	690	481	501	371	387	198	-3.2	-2.6	-6.1
Oil	4218	4904	4638	4261	4176	3998	3763	1.0	-1.0	-1.0
Gas	6503	7852	6261	5868	5790	5334	4678	-0.4	-0.8	-2.1
Electricity	2531	2780	2941	2977	3096	3254	3163	1.5	0.5	0.2
Heat (from CHP and District Heating)	1447	1308	1090	985	1007	904	887	-2.8	-0.8	-1.3
Renewable energy forms	774	683	1184	1301	1702	1675	1631	4.3	3.7	-0.4
Other	0	0	0	1	5	15	21	0.0	0.0	15.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	305	271	257	219	207	188	164	-1.7	-2.1	-2.3
Industry (Energy on Value added, index 2000=100)	100	74	64	63	56	53	45	-4.4	-1.2	-2.3
Residential (Energy on Private Income, index 2000=100)	100	90	87	77	71	59	48	-1.4	-2.0	-3.9
Tertiary (Energy on Value added, index 2000=100)	100	90	81	75	71	58	43	-2.0	-1.3	-4.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	30	33	32	30	27	25	23	0.8	-1.7	-1.7
Freight transport (toe/Mtkm)	32	41	45	38	37	34	32	3.5	-2.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	79.8	76.9	67.7	59.4	55.7	47.5	42.5	-1.6	-1.9	-2.7
of which ETS sectors (2013 scope) GHG emissions		30.6	25.6	19.8	19.5	13.6	11.5		-2.7	-5.2
of which ESD sectors (2013 scope) GHG emissions		46.3	42.1	39.6	36.2	33.9	31.0		-1.5	-1.5
CO ₂ Emissions (energy related)	55.0	56.4	49.0	41.5	40.5	32.8	28.5	-1.1	-1.9	-3.5
Power generation/District heating	22.1	18.3	16.0	10.5	10.9	5.0	3.9	-3.2	-3.8	-9.8
Energy Branch	1.5	1.2	1.5	1.6	1.4	1.3	1.2	-0.3	-0.6	-1.2
Industry	6.8	6.7	5.3	5.8	4.9	4.7	3.4	-2.4	-0.7	-3.8
Residential	8.8	10.7	8.6	7.3	7.0	6.6	5.7	-0.2	-2.1	-2.1
Tertiary	6.1	6.7	5.2	5.2	5.2	4.3	3.4	-1.6	-0.1	-4.2
Transport	9.7	12.7	12.3	11.2	11.2	11.0	11.0	2.4	-1.0	-0.2
CO ₂ Emissions (non energy and non land use related)	4.5	4.9	3.7	4.4	4.8	5.0	5.1	-1.9	2.5	0.8
Non-CO ₂ GHG emissions	20.3	15.6	15.0	13.5	10.4	9.6	8.9	-3.0	-3.6	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.3	81.2	71.5	62.7	58.8	50.1	44.9	-1.6	-1.9	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.34	0.31	0.26	0.23	0.10	0.08	-2.7	-2.7	-9.9
Final energy demand (t of CO ₂ /toe)	1.94	2.02	1.90	1.85	1.75	1.70	1.63	-0.2	-0.8	-0.7
Industry	1.92	2.00	1.84	1.87	1.64	1.49	1.14	-0.4	-1.1	-3.6
Residential	1.57	1.66	1.50	1.39	1.33	1.33	1.29	-0.4	-1.2	-0.3
Tertiary	1.65	1.65	1.44	1.45	1.39	1.26	1.19	-1.4	-0.3	-1.5
Transport	2.92	2.94	2.83	2.81	2.69	2.67	2.62	-0.3	-0.5	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.8	4.5	8.6	10.0	13.2	15.4	18.4			
RES-H&C share	7.6	6.0	11.1	13.4	17.1	19.0	23.5			
RES-E share	0.6	4.4	7.1	6.7	7.9	13.9	18.0			
RES-T share (based on ILUC formula)	0.0	0.3	4.7	6.0	10.0	10.6	11.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	48	60	67	76	71	79	97	3.5	0.5	3.1
Average Price of Electricity in Final demand sectors (€13/MWh)	78	107	132	113	130	140	172	5.4	-0.2	2.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	11.2	16.1	20.3	18.0	22.2	25.3	29.2	6.1	0.9	2.8
as % of GDP	13.5	15.9	20.2	16.7	18.9	19.3	20.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Ireland: EUCO3030					
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30			
								Annual % Change					
Population (in million)	4	4	5	5	5	5	5	1.9	0.8	0.0			
GDP (in 000 M€13)	130	165	165	183	208	225	245	2.4	2.3	1.6			
Gross Inland Consumption (ktoe)	14425	15265	15191	14208	14445	14080	12605	0.5	-0.5	-1.4			
Solids	2601	2664	1979	2028	1844	1526	1106	-2.7	-0.7	-5.0			
Oil	8145	8589	7818	6926	6744	6470	6064	-0.4	-1.5	-1.1			
Natural gas	3436	3470	4683	4016	4011	3997	2353	3.1	-1.5	-5.2			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1			
Renewable energy forms	235	366	671	1152	1983	2235	3207	11.1	11.4	4.9			
Energy Branch Consumption	254	300	243	250	206	197	164	-0.4	-1.7	-2.2			
Non-Energy Uses	675	516	341	360	405	441	449	-6.6	1.7	1.0			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	2159	1647	1843	2031	1944	2167	3095	-1.6	0.5	4.8			
Solids	965	820	981	740	0	1	0	0.2	-56.5	-14.8			
Oil	0	0	0	44	0	0	0	0.0	0.0	-14.8			
Natural gas	958	461	233	231	233	232	221	-13.2	0.0	-0.5			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	235	366	628	1016	1711	1933	2874	10.3	10.5	5.3			
Hydro	73	54	52	62	66	65	70	-3.4	2.6	0.6			
Biomass & Waste	141	216	327	420	652	816	985	8.8	7.1	4.2			
Wind	21	96	242	520	935	963	1466	27.7	14.5	4.6			
Solar and others	0	1	8	13	58	88	350	54.0	22.6	19.8			
Geothermal	0	0	0	0	0	1	3	0.0	0.0	21.9			
Net Imports (ktoe)	12370	13765	13215	12285	12609	12029	9632	0.7	-0.5	-2.7			
Solids	1681	1886	945	1288	1844	1525	1106	-5.6	6.9	-5.0			
Oil	8203	8694	7706	6991	6852	6583	6171	-0.6	-1.2	-1.0			
Crude oil and Feedstocks	3016	3166	2987	2873	2873	2690	2472	-0.1	-0.4	-1.5			
Oil products	5186	5527	4718	4118	3979	3894	3699	-0.9	-1.7	-0.7			
Natural gas	2478	3010	4480	3784	3779	3767	2146	6.1	-1.7	-5.5			
Electricity	8	176	40	87	-138	-147	-124	17.0	0.0	-1.1			
Import Dependency (%)	84.9	89.6	86.5	85.8	86.6	84.7	75.7						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	23673	25626	28425	26857	31141	32102	31557	1.8	0.9	0.1			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	8587	8839	6384	6793	6070	5094	3717	-2.9	-0.5	-4.8			
Oil (including refinery gas)	4638	3340	605	15	3	15	6	-18.4	-41.0	7.3			
Gas (including derived gases)	9263	11574	17705	12617	12730	14130	5682	6.7	-3.2	-7.8			
Biomass-waste	95	130	317	660	682	886	1510	12.8	8.0	8.3			
Hydro (pumping excluded)	846	631	599	721	771	760	819	-3.4	2.6	0.6			
Solar	244	1112	2815	6049	10869	11201	17047	27.7	14.5	4.6			
Geothermal and other renewables	0	0	0	1	16	16	2777	0.0	0.0	68.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	4452	5930	8091	9091	9685	9172	13787	6.2	1.8	3.6			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	355	751	1611	2724	4222	4334	9410	16.3	10.1	8.3			
Hydro (pumping excluded)	236	234	237	237	258	258	273	0.0	0.8	0.6			
Wind	119	517	1374	2486	3945	4058	5921	27.7	11.1	4.1			
Solar	0	0	0	1	19	19	3215	0.0	0.0	67.3			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	4097	5179	6480	6366	5464	4838	4377	4.7	-1.7	-2.2			
of which cogeneration units	77	240	285	264	63	266	273	14.0	-14.0	15.8			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	1369	1387	1213	1186	842	842	842	-1.2	-3.6	0.0			
Gas fired	1872	2625	4081	3969	3624	3472	3136	8.1	-1.2	-1.4			
Oil fired	842	1124	1143	1143	801	326	173	3.1	-3.5	-14.2			
Biomass-waste fired	14	43	43	69	197	198	225	11.4	16.6	1.3			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	57.4	47.1	38.5	32.4	35.6	38.9	25.7						
Efficiency of gross thermal power generation (%)	40.7	43.2	46.8	47.2	47.6	47.4	43.6						
% of gross electricity from CHP	2.4	1.7	6.7	8.4	2.9	12.0	14.0						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	5.0	7.3	13.1	27.7	39.6	40.1	70.2						
Fuel Inputs to Thermal Power Generation (ktoe)	4775	4758	4600	3661	3518	3653	2151	-0.4	-2.6	-4.8			
Solids	1930	1920	1358	1448	1344	1130	833	-3.5	-0.1	-4.7			
Oil (including refinery gas)	997	769	128	4	1	4	1	-18.5	-40.4	7.4			
Gas (including derived gases)	1825	2040	3039	2066	2020	2308	960	5.2	-4.0	-7.2			
Biomass & Waste	24	30	75	143	153	211	356	12.2	7.5	8.8			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	3341	3204	3033	3024	3133	2964	2771	-1.0	0.3	-1.2			
Refineries	3341	3203	2940	2933	2926	2736	2516	-1.3	0.0	-1.5			
Biofuels and hydrogen production	0	1	93	89	199	193	206	0.0	7.9	0.3			
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0			
Derived gases, cokeries etc.	0	0	0	2	8	36	50	0.0	2204.5	20.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Ireland: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	50	65	70	69	78	86	92	3.4	1.1	1.7
Public road transport	7	8	8	9	9	9	9	2.0	0.3	0.6
Private cars and motorcycles	35	45	48	46	52	58	62	3.3	0.8	1.8
Rail	1	2	2	2	2	2	2	2.7	1.0	1.0
Aviation ⁽³⁾	6	10	10	11	14	16	17	5.2	3.1	1.9
Inland navigation	1	1	1	1	1	1	1	0.9	1.0	0.9
Freight transport activity (Gtkm)	12	17	11	12	14	15	17	-0.9	2.4	2.5
Heavy goods and light commercial vehicles	11	17	10	11	13	15	17	-0.5	2.4	2.5
Rail	0	0	0	0	0	0	0	-15.4	1.2	1.5
Inland navigation	0	0	0	0	0	0	0	-2.5	1.4	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	4082	5078	4715	4586	4762	4744	4809	1.5	0.1	0.1
Public road transport	96	101	110	111	111	113	113	1.4	0.1	0.2
Private cars and motorcycles	2206	2577	2807	2583	2525	2410	2322	2.4	-1.1	-0.8
Heavy goods and light commercial vehicles	1086	1482	967	1019	1135	1228	1343	-1.2	1.6	1.7
Rail	40	42	44	44	47	49	50	0.8	0.7	0.6
Aviation	629	857	767	809	921	921	956	2.0	1.8	0.4
Inland navigation	25	18	20	21	22	23	24	-2.1	1.0	0.8
<i>By transport activity</i>										
Passenger transport	2958	3559	3724	3544	3602	3489	3439	2.3	-0.3	-0.5
Freight transport	1124	1519	990	1042	1160	1255	1370	-1.3	1.6	1.7
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.2	0.8	1.8			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.0	2.0	4.4	4.9	5.3			
ENERGY EFFICIENCY										
Primary energy consumption	13750	14749	14850	13848	14040	13639	12156	0.8	-0.6	-1.4
Final Energy Demand	10779	12597	11957	11423	11760	11311	10627	1.0	-0.2	-1.0
<i>by sector</i>										
Industry	2498	2582	2146	2453	2560	2409	2246	-1.5	1.8	-1.3
Energy intensive industries	1245	1341	1023	1166	1181	1022	891	-1.9	1.4	-2.8
Other industrial sectors	1252	1241	1123	1287	1379	1387	1354	-1.1	2.1	-0.2
Residential	2513	2954	3296	2823	2857	2739	2348	2.7	-1.4	-1.9
Tertiary	1684	1979	1799	1556	1577	1414	1219	0.7	-1.3	-2.5
Transport ⁽⁵⁾	4085	5082	4715	4590	4767	4749	4814	1.4	0.1	0.1
<i>by fuel</i>										
Solids	671	751	604	567	501	396	273	-1.0	-1.9	-5.9
Oil	7045	8204	7270	6439	6229	5925	5517	0.3	-1.5	-1.2
Gas	1200	1364	1593	1883	1926	1627	1359	2.9	1.9	-3.4
Electricity	1745	2094	2186	2107	2262	2334	2338	2.3	0.3	0.3
Heat (from CHP and District Heating)	0	0	0	1	14	36	63	0.0	0.0	15.9
Renewable energy forms	118	184	304	424	820	957	1025	10.0	10.4	2.3
Other	0	0	0	2	8	36	53	0.0	1734.1	21.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	93	92	78	70	63	52	-1.9	-2.8	-2.9
Industry (Energy on Value added, index 2000=100)	100	85	75	80	73	64	55	-2.8	-0.3	-2.7
Residential (Energy on Private Income, index 2000=100)	100	95	98	86	75	63	48	-0.2	-2.7	-4.4
Tertiary (Energy on Value added, index 2000=100)	100	97	82	64	57	47	37	-1.9	-3.6	-4.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	51	46	46	43	38	34	31	-1.2	-1.8	-2.2
Freight transport (toe/Mtkm)	96	88	92	89	86	81	79	-0.3	-0.7	-0.8
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	71.8	73.1	65.0	63.1	61.3	59.5	52.6	-1.0	-0.6	-1.5
of which ETS sectors (2013 scope) GHG emissions	25.4	20.0	18.5	17.6	16.7	11.6		-1.2	-4.1	
of which ESD sectors (2013 scope) GHG emissions	47.8	45.0	44.6	43.7	42.8	41.0		-0.3	-0.6	
CO₂ Emissions (energy related)	43.2	47.3	42.0	37.8	36.1	33.9	27.1	-0.3	-1.5	-2.8
Power generation/District heating	15.6	15.3	13.3	11.0	10.3	10.1	5.7	-1.6	-2.5	-5.7
Energy Branch	0.3	0.4	0.3	0.4	0.3	0.2	0.2	-1.3	-1.1	-1.2
Industry	5.3	5.6	3.6	3.8	3.4	2.6	1.7	-3.9	-0.5	-6.4
Residential	6.4	7.2	7.8	6.5	6.1	5.4	4.2	2.1	-2.5	-3.6
Tertiary	3.4	3.5	3.1	2.5	2.4	2.0	1.6	-0.7	-2.8	-3.9
Transport	12.3	15.3	13.9	13.6	13.8	13.6	13.6	1.3	-0.1	-0.1
CO₂ Emissions (non energy and non land use related)	2.9	2.7	1.4	1.8	1.9	1.7	1.7	-7.0	3.1	-1.2
Non-CO₂ GHG emissions	25.6	23.1	21.5	23.5	23.2	23.8	23.8	-1.7	0.8	0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	124.2	126.5	112.3	109.1	106.0	102.9	91.0	-1.0	-0.6	-1.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.66	0.60	0.47	0.41	0.33	0.31	0.18	-3.4	-3.5	-6.0
Final energy demand (t of CO ₂ /toe)	2.53	2.51	2.38	2.32	2.18	2.08	1.99	-0.6	-0.9	-0.9
Industry	2.13	2.16	1.66	1.56	1.33	1.08	0.78	-2.5	-2.2	-5.2
Residential	2.53	2.44	2.37	2.30	2.13	1.96	1.79	-0.7	-1.1	-1.7
Tertiary	1.99	1.77	1.74	1.63	1.50	1.40	1.30	-1.3	-1.5	-1.4
Transport	3.00	3.01	2.96	2.96	2.89	2.87	2.83	-0.2	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	2.0	2.8	5.6	8.7	15.4	18.2	28.0			
RES-H&C share	2.4	3.5	4.5	6.1	12.0	17.3	22.9			
RES-E share	4.8	7.2	14.5	26.5	41.7	42.3	73.6			
RES-T share (based on ILUC formula)	0.0	0.0	2.4	4.3	10.0	12.3	18.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	42	72	75	89	92	97	95	5.9	2.1	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	117	147	158	175	178	182	189	3.0	1.2	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.8	13.9	15.5	15.6	18.8	20.7	22.7	4.7	1.9	1.9
as % of GDP	7.5	8.4	9.4	8.5	9.1	9.2	9.3			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Italy: EUCO3030
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change
Population (in million)	57	58	59	61	62	63	64	0.4	0.5	0.3	
GDP (in 000 M€13)	1564	1643	1622	1565	1675	1776	1885	0.4	0.3	1.2	
Gross Inland Consumption (ktoe)	174219	187471	174761	159036	161356	151416	136590	0.0	-0.8	-1.7	
Solids	12550	16461	14170	16106	18607	11540	6345	1.2	2.8	-10.2	
Oil	89540	83963	69558	61171	56721	51508	44758	-2.5	-2.0	-2.3	
Natural gas	57945	70651	68057	56177	59884	58574	48622	1.6	-1.3	-2.1	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Renewable energy forms	10371	12170	19180	21628	23567	27030	34112	6.3	2.1	3.8	
Energy Branch Consumption	7704	10052	9539	8520	8168	7265	6533	2.2	-1.5	-2.2	
Non-Energy Uses	9019	8607	9560	7050	7322	7453	7364	0.6	-2.6	0.1	
SECURITY OF SUPPLY											
Production (incl. recovery of products) (ktoe)	28400	27839	29560	30751	31756	33879	40159	0.4	0.7	2.4	
Solids	3	60	64	55	0	0	0	33.7	-100.0	0.0	
Oil	4915	6376	5687	5142	5667	5615	5596	1.5	0.0	-0.1	
Natural gas	13627	9886	6885	6760	5767	4602	3953	-6.6	-1.8	-3.7	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	9856	11516	16924	18793	20322	23661	30609	5.6	1.8	4.2	
Hydro	3800	3101	4395	4138	4087	4212	4320	1.5	-0.7	0.6	
Biomass & Waste	1736	3392	6670	10105	11385	12759	16356	14.4	5.5	3.7	
Wind	48	202	785	1258	1260	1328	3244	32.1	4.8	9.9	
Solar and others	12	30	298	2199	2500	4198	5357	37.4	23.7	7.9	
Geothermal	4259	4791	4776	1092	1089	1164	1332	1.2	-13.7	2.0	
Net Imports (ktoe)	152069	160241	149804	131764	133162	121260	100275	-0.1	-1.2	-2.8	
Solids	13133	16367	14301	16050	18607	11540	6345	0.9	2.7	-10.2	
Oil	87599	79154	67826	59509	54579	49486	42657	-2.5	-2.1	-2.4	
Crude oil and Feedstocks	89451	94307	84882	68525	61712	55359	47644	-0.5	-3.1	-2.6	
Oil products	-1852	-15153	-17056	-9016	-7134	-5874	-4987	24.9	-8.3	-3.5	
Natural gas	47008	59840	61600	49416	54173	54101	45017	2.7	-1.3	-1.8	
Electricity	3813	4227	3797	3954	2578	2764	2753	0.0	-3.8	0.7	
Import Dependency (%)	86.5	84.5	84.3	81.1	80.7	78.2	71.4				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	269941	296840	298773	288970	318028	310009	292362	1.0	0.6	-0.8	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	26272	43606	39734	58856	67163	41209	20648	4.2	5.4	-11.1	
Oil (including refinery gas)	85878	47124	21714	8782	7796	6943	2562	-12.8	-9.7	-10.5	
Gas (including derived gases)	106398	156191	158215	110293	127687	116143	87156	4.0	-2.1	-3.7	
Biomass-waste	1908	6153	11586	18671	21446	31620	35757	19.8	6.4	5.2	
Hydro (pumping excluded)	44199	36067	51116	48121	47528	48979	50227	1.5	-0.7	0.6	
Wind	563	2344	9126	14628	14646	15447	37719	32.1	4.8	9.9	
Solar	17	31	1906	23409	25552	43458	52082	59.9	29.6	7.4	
Geothermal and other renewables	4706	5324	5376	6210	6210	6210	6210	1.3	1.5	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	71896	82950	104920	127454	122843	123573	130636	3.9	1.6	0.6	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	16770	18701	26470	46375	47826	59403	73739	4.7	6.1	4.4	
Hydro (pumping excluded)	16390	17036	17563	18512	18805	18805	19020	0.7	0.7	0.1	
Wind	363	1635	5794	8958	8963	9222	17607	31.9	4.5	7.0	
Solar	17	30	3113	18905	20057	31375	37111	68.3	20.5	6.3	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	55126	64249	78450	81079	75018	64170	56897	3.6	-0.4	-2.7	
of which cogeneration units	6476	5888	7351	17214	16822	16976	7931	1.3	8.6	-7.2	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	9518	8279	9511	9511	8858	5103	5098	0.0	-0.7	-5.4	
Gas fired	22819	36431	51677	52045	51358	46807	41314	8.5	-0.1	-2.2	
Oil fired	21763	17998	14748	13928	8629	5987	2173	-3.8	-5.2	-12.9	
Biomass-waste fired	436	870	1774	4810	5388	5488	7526	15.1	11.7	3.4	
Hydrogen plants	0	0	12	12	12	12	12	0.0	0.0	0.0	
Geothermal heat	590	671	728	773	773	773	773	2.1	0.6	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	40.8	39.1	31.3	24.8	28.4	27.6	24.9				
Efficiency of gross thermal power generation (%)	39.4	37.7	37.7	45.5	45.6	46.2	43.7				
% of gross electricity from CHP	8.3	9.0	11.5	15.3	15.4	11.3	6.7				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	19.0	16.8	26.5	38.4	36.3	47.0	62.3				
Fuel Inputs to Thermal Power Generation (ktoe)	49150	58911	53964	38349	43392	37627	30009	0.9	-2.2	-3.6	
Solids	6045	10399	9484	12963	14694	8342	4180	4.6	4.5	-11.8	
Oil (including refinery gas)	18954	12079	7365	1905	1675	1525	703	-9.0	-13.8	-8.3	
Gas (including derived gases)	19668	29585	28966	18745	21753	20294	14389	3.9	-2.8	-4.0	
Biomass & Waste	438	2270	3527	3795	4330	6526	9796	23.2	2.1	8.5	
Geothermal heat	4046	4578	4623	941	941	941	941	1.3	-14.7	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	101609	106909	97409	78677	74335	67685	59363	-0.4	-2.7	-2.2	
Refineries	95900	101959	91472	74873	68935	62738	55001	-0.5	-2.8	-2.2	
Biofuels and hydrogen production	0	177	1419	1593	2210	1996	1920	0.0	4.5	-1.4	
District heating	0	0	110	121	122	122	116	0.0	1.1	-0.6	
Derived gases, cokeries etc.	5709	4773	4408	2090	3068	2829	2326	-2.6	-3.6	-2.7	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Italy: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	943	931	952	967	1020	1053	1088	0.1	0.7	0.6
Public road transport	93	101	102	105	107	109	110	0.9	0.5	0.3
Private cars and motorcycles	756	727	740	746	781	799	821	-0.2	0.5	0.5
Rail	55	56	54	55	63	70	77	-0.2	1.5	2.0
Aviation ⁽³⁾	34	43	51	56	63	70	75	4.3	2.2	1.7
Inland navigation	5	5	5	5	5	5	6	-0.3	0.5	1.1
Freight transport activity (Gtkm)	253	303	268	271	290	306	324	0.6	0.8	1.1
Heavy goods and light commercial vehicles	192	226	202	203	217	228	240	0.5	0.7	1.0
Rail	23	23	19	20	22	24	26	-2.0	1.7	1.6
Inland navigation	38	54	48	48	51	54	58	2.4	0.5	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	42174	44377	41220	39856	38983	36973	35664	-0.2	-0.6	-0.9
Public road transport	1061	1231	1245	1278	1309	1302	1280	1.6	0.5	-0.2
Private cars and motorcycles	27882	27505	25835	24747	23387	21160	19794	-0.8	-1.0	-1.7
Heavy goods and light commercial vehicles	7944	10062	8686	8259	8425	8441	8476	0.9	-0.3	0.1
Rail	526	492	463	487	522	560	586	-1.3	1.2	1.2
Aviation	3491	3700	3863	4073	4275	4382	4350	1.0	1.0	0.2
Inland navigation	1269	1387	1128	1012	1065	1128	1178	-1.2	-0.6	1.0
<i>By transport activity</i>										
Passenger transport	33399	32865	31375	30531	29429	27335	25937	-0.6	-0.6	-1.3
Freight transport	8775	11512	9844	9324	9554	9638	9727	1.2	-0.3	0.2
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.4	1.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	3.5	4.1	5.8	5.7	5.6			
ENERGY EFFICIENCY										
Primary energy consumption	165200	178864	165201	151985	154034	143964	129226	0.0	-0.7	-1.7
Final Energy Demand	125579	134544	124781	122385	122503	116982	106598	-0.1	-0.2	-1.4
<i>by sector</i>										
Industry	40502	39858	30905	27952	28693	27057	24668	-2.7	-0.7	-1.5
Energy intensive industries	25289	25477	19382	16985	17677	16695	14856	-2.6	-0.9	-1.7
Other industrial sectors	15214	14382	11523	10966	11016	10362	9812	-2.7	-0.4	-1.2
Residential	27656	31313	31959	34859	34812	33687	29935	1.5	0.9	-1.5
Tertiary	14901	18537	20182	19017	19273	18503	15570	3.1	-0.5	-2.1
Transport ⁽⁵⁾	42519	44836	41734	40557	39726	37735	36426	-0.2	-0.5	-0.9
<i>by fuel</i>										
Solids	3586	3980	2910	2094	2654	2154	1181	-2.1	-0.9	-7.8
Oil	57249	59005	48733	45659	41854	37344	32191	-1.6	-1.5	-2.6
Gas	38022	40609	38499	36390	37277	37417	33487	0.1	-0.3	-1.1
Electricity	23472	25871	25736	25288	26278	26023	24847	0.9	0.2	-0.6
Heat (from CHP and District Heating)	1449	3082	3332	3592	3779	3849	3623	8.7	1.3	-0.4
Renewable energy forms	1802	1997	5570	9356	10643	10111	11110	11.9	6.7	0.4
Other	0	0	0	6	17	84	159	0.0	0.0	24.7
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	111	114	108	102	96	85	72	-0.3	-1.1	-2.8
Industry (Energy on Value added, index 2000=100)	100	100	83	79	77	71	62	-1.8	-0.7	-2.1
Residential (Energy on Private Income, index 2000=100)	100	109	110	123	114	103	86	0.9	0.4	-2.7
Tertiary (Energy on Value added, index 2000=100)	100	117	126	121	114	102	81	2.3	-1.0	-3.4
Passenger transport (toe/Mpkm) ⁽⁶⁾	33	33	30	29	26	23	21	-1.0	-1.5	-2.0
Freight transport (toe/Mtkm)	35	38	37	34	33	31	30	0.6	-1.1	-0.9
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	558.5	592.5	509.9	457.0	458.8	403.5	334.5	-0.9	-1.0	-3.1
of which ETS sectors (2013 scope) GHG emissions	261.5	213.8	172.1	188.4	152.3	111.4		-1.3	-5.1	
of which ESD sectors (2013 scope) GHG emissions	331.0	296.1	284.8	270.4	251.2	223.1		-0.9	-1.9	
CO₂ Emissions (energy related)	432.5	470.4	404.2	354.7	361.5	312.7	248.8	-0.7	-1.1	-3.7
Power generation/District heating	137.1	158.5	135.9	106.9	122.0	90.5	57.4	-0.1	-1.1	-7.3
Energy Branch	15.9	18.4	16.4	14.1	12.9	11.3	10.0	0.4	-2.4	-2.5
Industry	78.0	72.5	49.5	42.3	42.8	37.5	27.6	-4.5	-1.4	-4.3
Residential	53.4	59.9	53.6	51.4	49.7	48.1	39.6	0.0	-0.8	-2.3
Tertiary	24.4	29.3	30.2	26.0	25.5	23.6	18.3	2.2	-1.7	-3.2
Transport	123.7	131.8	118.6	114.0	108.7	101.8	96.0	-0.4	-0.9	-1.2
CO₂ Emissions (non energy and non land use related)	28.6	30.8	24.1	21.1	21.8	21.6	21.5	-1.7	-1.0	-0.1
Non-CO₂ GHG emissions	97.3	91.3	81.6	81.2	75.5	69.2	64.1	-1.7	-0.8	-1.6
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	106.3	112.8	97.1	87.0	87.4	76.8	63.7	-0.9	-1.0	-3.1
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.47	0.45	0.38	0.31	0.32	0.24	0.16	-2.0	-1.7	-6.5
Final energy demand (t of CO ₂ /toe)	2.23	2.18	2.02	1.91	1.85	1.80	1.70	-1.0	-0.9	-0.8
Industry	1.93	1.82	1.60	1.51	1.49	1.38	1.12	-1.8	-0.7	-2.8
Residential	1.93	1.91	1.68	1.48	1.43	1.43	1.32	-1.4	-1.6	-0.8
Tertiary	1.64	1.58	1.50	1.37	1.32	1.27	1.18	-0.9	-1.2	-1.2
Transport	2.91	2.94	2.84	2.81	2.74	2.70	2.63	-0.2	-0.4	-0.4
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	4.7	5.8	10.5	18.2	19.8	23.4	31.0			
RES-H&C share	2.9	4.6	10.4	20.1	22.3	24.8	34.3			
RES-E share	15.7	16.3	20.1	33.6	32.5	42.0	55.5			
RES-T share (based on ILUC formula)	0.6	1.1	5.0	7.1	10.6	13.1	18.3			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	68	77	90	86	93	99	102	3.2	0.4	0.8
Average Price of Electricity in Final demand sectors (€13/MWh)	140	130	153	152	157	167	175	0.9	0.3	1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	134.7	151.9	164.9	170.7	190.1	203.1	224.4	2.0	1.4	1.7
as % of GDP	8.6	9.2	10.2	10.9	11.3	11.4	11.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Latvia: EUC03030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	2	2	2	2	2	2	2	-1.2	-1.0	-1.4		
GDP (in 000 ME13)	13	20	19	23	27	29	31	3.6	3.5	1.7		
Gross Inland Consumption (ktoe)	3864	4592	4629	4341	4527	4653	4346	1.8	-0.2	-0.4		
Solids	132	82	109	84	72	49	21	-1.9	-4.1	-11.4		
Oil	1295	1487	1521	1464	1433	1391	1271	1.6	-0.6	-1.2		
Natural gas	1092	1358	1462	867	922	1125	462	3.0	-4.5	-6.7		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6		
Renewable energy forms	1191	1481	1463	1758	1956	2012	2424	2.1	3.0	2.2		
Energy Branch Consumption	39	42	48	33	36	40	32	2.1	-2.9	-1.0		
Non-Energy Uses	75	97	73	105	127	143	147	-0.3	5.7	1.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	1411	1868	1979	2228	2482	2527	2987	3.4	2.3	1.9		
Solids	16	3	2	1	0	0	0	-17.4	-100.0	0.0		
Oil	2	7	2	0	0	0	0	1.1	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	2.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	1393	1858	1975	2228	2482	2527	2987	3.6	2.3	1.9		
Hydro	242	286	303	248	272	272	272	2.2	-1.1	0.0		
Biomass & Waste	1150	1568	1668	1972	2155	2198	2570	3.8	2.6	1.8		
Wind	0	4	4	8	54	55	140	30.2	29.1	10.0		
Solar and others	0	0	0	0	1	2	4	0.0	0.0	13.6		
Geothermal	0	0	0	0	0	0	1	0.0	0.0	17.7		
Net Imports (ktoe)	2361	3097	2220	2456	2405	2494	1736	-0.6	0.8	-3.2		
Solids	61	77	112	84	72	49	21	6.3	-4.4	-11.4		
Oil	1235	1783	1671	1807	1788	1749	1618	3.1	0.7	-1.0		
Crude oil and Feedstocks	87	4	2	0	0	0	0	-31.8	-100.0	0.0		
Oil products	1148	1779	1669	1807	1788	1749	1618	3.8	0.7	-1.0		
Natural gas	1113	1434	903	867	927	1136	492	-2.1	0.3	-6.1		
Electricity	154	185	75	169	143	76	168	-6.9	6.7	1.6		
Import Dependency (%)	61.0	63.9	45.5	52.4	49.2	49.7	36.8					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	4136	4906	6627	5587	6670	8060	7057	4.8	0.1	0.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	78	0	2	78	108	102	45	-30.7	49.0	-8.5		
Oil (including refinery gas)	107	6	2	0	0	0	0	-32.8	-100.0	0.0		
Gas (including derived gases)	1128	1486	2988	2023	2111	3337	518	10.2	-3.4	-13.1		
Biomass-waste	0	41	66	511	662	819	1710	0.0	25.9	10.0		
Hydro (pumping excluded)	2819	3326	3520	2878	3160	3160	3160	2.2	-1.1	0.0		
Wind	4	47	49	95	628	640	1623	28.5	29.1	10.0		
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	2089	2162	2546	2837	3101	3112	3625	2.0	2.0	1.6		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	1515	1562	1606	1652	1872	1873	2229	0.6	1.5	1.8		
Hydro (pumping excluded)	1513	1536	1576	1589	1589	1589	1589	0.4	0.1	0.0		
Wind	2	26	30	62	281	283	638	31.1	25.1	8.5		
Solar	0	0	0	1	2	2	2	0.0	0.0	0.0		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	574	600	940	1185	1229	1239	1395	5.1	2.7	1.3		
of which cogeneration units	254	586	870	1026	1028	1031	1183	13.1	1.7	1.4		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	23	2	21	21	21	21	21	-0.9	0.0	0.0		
Gas fired	522	572	893	1098	1098	1091	1091	5.5	2.1	-0.1		
Oil fired	27	15	15	15	15	15	15	-5.4	0.0	0.0		
Biomass-waste fired	2	10	10	50	95	112	268	17.8	24.9	10.9		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.2	23.3	27.2	20.9	23.0	27.9	21.2					
Efficiency of gross thermal power generation (%)	20.7	21.9	32.3	45.9	45.5	45.5	33.1					
% of gross electricity from CHP	31.4	30.7	45.0	38.6	33.8	45.4	23.4					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	68.3	69.6	54.9	62.4	66.7	57.3	92.0					
Fuel Inputs to Thermal Power Generation (ktoe)	545	602	815	490	544	805	590	4.1	-4.0	0.8		
Solids	53	1	9	13	17	16	7	-15.9	6.4	-8.8		
Oil (including refinery gas)	84	19	10	0	0	0	0	-19.3	-100.0	0.0		
Gas (including derived gases)	408	562	767	360	383	582	87	6.5	-6.7	-13.8		
Biomass & Waste	0	22	29	117	144	207	496	0.0	17.4	13.2		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	570	479	383	344	425	409	369	-3.9	1.1	-1.4		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	3	27	37	89	73	68	0.0	12.6	-2.6		
District heating	569	476	356	307	336	334	297	-4.6	-0.6	-1.2		
Derived gases, cokeries etc.	1	0	0	0	0	2	4	-95.3	1788.1	29.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Latvia: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	15	17	18	18	20	21	22	1.5	1.0	1.2
Public road transport	2	3	2	2	2	3	3	-0.2	0.7	0.4
Private cars and motorcycles	12	12	13	13	14	14	15	0.8	0.7	0.7
Rail	1	1	1	1	1	1	1	-1.2	1.8	3.0
Aviation ⁽³⁾	0	1	2	2	2	3	4	20.4	2.2	3.6
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	15	24	21	24	26	30	33	3.1	2.2	2.4
Heavy goods and light commercial vehicles	2	4	4	4	5	5	6	5.8	2.2	1.6
Rail	13	20	17	20	21	24	27	2.6	2.2	2.5
Inland navigation	0	0	0	0	0	0	0	179.2	1.5	1.6
Energy demand in transport (ktoe) ⁽⁴⁾	746	1064	1200	1158	1194	1187	1144	4.9	-0.1	-0.4
Public road transport	51	67	68	65	66	67	67	2.9	-0.3	0.1
Private cars and motorcycles	502	603	673	613	590	531	472	3.0	-1.3	-2.2
Heavy goods and light commercial vehicles	89	242	260	255	292	314	314	11.2	1.2	0.8
Rail	76	94	76	87	91	101	110	0.1	1.8	1.9
Aviation	27	59	118	132	148	166	172	15.9	2.3	1.5
Inland navigation	0	0	5	6	7	8	8	0.0	3.5	1.2
<i>By transport activity</i>										
Passenger transport	582	729	861	811	805	765	713	4.0	-0.7	-1.2
Freight transport	163	335	340	347	389	422	431	7.6	1.4	1.0
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.3	2.3	3.3	7.6	6.6	6.4			
ENERGY EFFICIENCY										
Primary energy consumption	3789	4495	4556	4237	4400	4510	4198	1.9	-0.3	-0.5
Final Energy Demand	3254	4018	4120	4104	4245	4204	3911	2.4	0.3	-0.8
<i>by sector</i>										
Industry	576	699	774	912	989	1015	970	3.0	2.5	-0.2
Energy intensive industries	229	282	305	277	305	303	267	2.9	0.0	-1.3
Other industrial sectors	348	417	469	635	683	712	702	3.0	3.8	0.3
Residential	1327	1504	1389	1286	1299	1262	1135	0.5	-0.7	-1.3
Tertiary	602	749	756	744	761	737	660	2.3	0.1	-1.4
Transport ⁽⁵⁾	749	1067	1201	1162	1197	1190	1146	4.8	0.0	-0.4
<i>by fuel</i>										
Solids	62	74	94	70	54	32	15	4.2	-5.4	-12.3
Oil	1056	1323	1446	1355	1306	1248	1123	3.2	-1.0	-1.5
Gas	329	508	498	391	437	457	374	4.2	-1.3	-1.6
Electricity	385	493	534	568	620	656	669	3.3	1.5	0.8
Heat (from CHP and District Heating)	598	603	575	524	569	563	489	-0.4	-0.1	-1.5
Renewable energy forms	824	1018	973	1194	1258	1244	1235	1.7	2.6	-0.2
Other	0	0	0	0	0	3	7	0.0	0.0	35.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	293	235	246	189	171	159	138	-1.8	-3.6	-2.1
Industry (Energy on Value added, index 2000=100)	100	87	102	98	93	87	78	0.2	-1.0	-1.7
Residential (Energy on Private Income, index 2000=100)	100	74	67	51	45	39	33	-4.0	-3.9	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	83	82	67	59	52	43	-2.0	-3.2	-3.1
Passenger transport (toe/Mpkm) ⁽⁶⁾	37	41	44	41	37	33	28	1.7	-1.8	-2.7
Freight transport (toe/Mtkm)	11	14	16	14	15	14	13	4.4	-0.8	-1.3
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	10.5	11.3	12.3	10.6	10.1	10.2	8.1	1.6	-1.9	-2.2
of which ETS sectors (2013 scope) GHG emissions		3.1	3.6	2.4	2.5	2.9	1.4		-3.7	-5.3
of which ESD sectors (2013 scope) GHG emissions		8.2	8.7	8.3	7.6	7.3	6.7		-1.3	-1.3
CO₂ Emissions (energy related)	6.8	7.7	8.3	6.5	6.4	6.6	4.6	2.0	-2.6	-3.3
Power generation/District heating	2.6	2.2	2.4	1.2	1.2	1.6	0.2	-0.9	-6.6	-15.1
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.0	1.1	1.0	0.8	0.8	0.7	0.4	0.0	-2.9	-6.5
Residential	0.3	0.4	0.6	0.4	0.4	0.4	0.3	6.5	-2.2	-2.8
Tertiary	0.7	0.8	0.8	0.7	0.7	0.6	0.5	2.1	-1.8	-2.7
Transport	2.2	3.2	3.5	3.4	3.3	3.3	3.1	4.9	-0.6	-0.7
CO₂ Emissions (non energy and non land use related)	0.2	0.2	0.5	0.7	0.7	0.7	0.7	10.4	2.8	0.0
Non-CO₂ GHG emissions	3.5	3.3	3.4	3.4	3.0	2.9	2.8	-0.1	-1.3	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	39.5	42.5	46.3	40.0	38.1	38.6	30.6	1.6	-1.9	-2.2
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.21	0.17	0.16	0.09	0.09	0.11	0.02	-2.2	-6.4	-14.6
Final energy demand (t of CO ₂ /toe)	1.29	1.37	1.45	1.30	1.23	1.19	1.11	1.1	-1.6	-1.0
Industry	1.80	1.55	1.34	0.85	0.78	0.71	0.41	-2.9	-5.2	-6.3
Residential	0.22	0.29	0.40	0.35	0.34	0.31	0.29	6.0	-1.5	-1.5
Tertiary	1.14	1.10	1.12	0.98	0.92	0.84	0.81	-0.2	-1.9	-1.3
Transport	2.93	2.97	2.93	2.90	2.76	2.76	2.70	0.0	-0.6	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	33.5	32.4	30.5	37.5	40.3	42.3	55.2			
RES-H&C share	40.1	43.0	40.9	51.2	51.7	55.8	72.6			
RES-E share	52.7	43.0	42.1	46.2	53.4	51.7	72.5			
RES-T share (based on ILUC formula)	2.1	1.5	3.5	5.2	10.2	12.2	20.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	107	86	93	77	85	92	113	-1.4	-0.9	2.9
Average Price of Electricity in Final demand sectors (€13/MWh)	57	66	107	102	115	125	136	6.5	0.7	1.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.0	3.4	5.1	4.4	5.1	5.8	6.9	10.0	0.1	3.0
as % of GDP	14.8	17.3	27.0	19.0	19.4	19.9	21.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Lithuania: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	4	3	3	3	3	3	2	-1.1	-1.0	-1.8
GDP (in 000 M€13)	19	27	29	35	40	42	43	4.4	3.3	0.7
Gross Inland Consumption (ktoe)	7063	8711	6787	6651	6565	6420	6876	-0.4	-0.3	0.5
Solids	91	185	213	254	198	140	72	8.8	-0.8	-9.6
Oil	2125	2710	2502	2432	2367	2255	1981	1.6	-0.6	-1.8
Natural gas	2064	2477	2492	2122	2093	2241	1113	1.9	-1.7	-6.1
Nuclear	2223	2713	0	0	0	0	1894	-100.0	0.0	0.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Renewable energy forms	675	881	1065	1249	1341	1391	1933	4.7	2.3	3.7
Energy Branch Consumption	610	853	743	680	612	596	577	2.0	-1.9	-0.6
Non-Energy Uses	662	804	714	717	793	788	759	0.8	1.1	-0.4
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3269	3900	1318	1358	1472	1512	3933	-8.7	1.1	10.3
Solids	12	20	9	19	7	8	1	-3.0	-2.1	-18.6
Oil	352	267	125	77	77	73	68	-9.9	-4.7	-1.2
Natural gas	0	0	0	0	0	0	0	4.2	-100.0	0.0
Nuclear	2223	2713	0	0	0	0	1894	-100.0	0.0	0.0
Renewable energy sources	682	900	1185	1262	1388	1432	1970	5.7	1.6	3.6
Hydro	29	39	46	38	38	38	38	4.7	-2.0	0.2
Biomass & Waste	653	858	1114	1158	1276	1186	1696	5.5	1.4	2.9
Wind	0	0	19	60	60	185	190	0.0	12.0	12.3
Solar and others	0	0	0	5	8	7	10	0.0	0.0	2.6
Geothermal	0	3	5	1	6	15	35	0.0	3.1	19.1
Net Imports (ktoe)	4247	5026	5668	5454	5258	5077	3115	2.9	-0.7	-5.1
Solids	80	174	196	235	190	132	71	9.4	-0.3	-9.4
Oil	2223	2622	2607	2516	2451	2344	2069	1.6	-0.6	-1.7
Crude oil and Feedstocks	4760	9029	9339	9639	9124	8587	7921	7.0	-0.2	-1.4
Oil products	-2537	-6408	-6732	-7123	-6672	-6243	-5852	10.3	-0.1	-1.3
Natural gas	2065	2493	2485	2122	2096	2249	1125	1.9	-1.7	-6.0
Electricity	-115	-255	515	594	567	393	-114	0.0	1.0	0.0
Import Dependency (%)	59.4	56.8	81.8	80.1	78.1	77.0	44.2			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	11121	14415	4994	5066	5986	8345	13552	-7.7	1.8	8.5
Nuclear energy	8419	10337	0	0	0	0	8838	-100.0	0.0	0.0
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0
Oil (including refinery gas)	655	401	647	182	0	0	0	-0.1	-100.0	0.0
Gas (including derived gases)	1707	3217	3436	3028	4062	4892	42	7.2	1.7	-36.7
Biomass-waste	0	7	147	657	725	793	1947	0.0	17.3	10.4
Hydro (pumping excluded)	340	451	540	440	440	447	447	4.7	-2.0	0.2
Wind	0	2	224	695	695	2148	2214	0.0	12.0	12.3
Solar	0	0	0	64	64	64	64	0.0	0.0	0.0
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	5539	4135	2878	3443	2422	3094	4238	-6.3	-1.7	5.8
Nuclear energy	2880	1440	0	0	0	0	1117	-100.0	0.0	0.0
Renewable energy	103	118	249	614	614	1418	1445	9.2	9.4	8.9
Hydro (pumping excluded)	103	117	116	116	116	118	118	1.2	0.0	0.2
Wind	0	1	133	424	424	1226	1253	0.0	12.3	11.4
Solar	0	0	0	74	74	74	74	0.0	0.0	0.0
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	2556	2577	2629	2829	1808	1676	1676	0.3	-3.7	-0.8
of which cogeneration units	650	1038	1100	1799	576	1094	759	5.4	-6.3	2.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	3	3	0	0	0	0	0	-100.0	0.0	0.0
Gas fired	1736	1781	1822	1992	1519	1519	1348	0.5	-1.8	-1.2
Oil fired	817	793	770	770	200	48	0	-0.6	-12.6	-55.4
Biomass-waste fired	0	0	37	67	90	110	328	0.0	9.3	13.9
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	20.1	36.5	18.3	15.0	26.4	29.2	34.5			
Efficiency of gross thermal power generation (%)	22.0	25.1	28.4	36.6	47.0	45.1	27.0			
% of gross electricity from CHP	15.5	15.5	34.6	45.5	51.0	42.6	10.5			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	78.8	74.9	18.2	36.6	32.1	41.4	99.7			
Fuel Inputs to Thermal Power Generation (ktoe)	924	1240	1282	909	875	1084	634	3.3	-3.7	-3.2
Solids	0	0	0	0	0	0	0	-100.0	0.0	0.0
Oil (including refinery gas)	200	178	100	49	0	0	0	-6.7	-100.0	0.0
Gas (including derived gases)	723	1057	1117	725	713	860	9	4.4	-4.4	-35.6
Biomass & Waste	1	5	65	135	163	224	625	59.7	9.7	14.4
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	7911	12651	9987	10232	9878	9378	10517	2.4	-0.1	0.6
Refineries	5032	9415	9446	9704	9277	8809	8153	6.5	-0.2	-1.3
Biofuels and hydrogen production	0	3	45	59	113	101	101	0.0	9.7	-1.1
District heating	656	520	496	468	488	467	366	-2.7	-0.2	-2.8
Derived gases, cokeries etc.	2223	2713	0	0	0	1	1896	0.0	0.0	152.8

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Lithuania: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
							Annual % Change				
TRANSPORT											
Passenger transport activity (Gpkm)	30	40	38	39	41	43	44	2.3	1.0	0.7	
Public road transport	3	4	3	3	3	3	3	-0.2	0.6	0.2	
Private cars and motorcycles	26	35	33	34	36	37	38	2.4	0.8	0.6	
Rail	1	0	0	0	1	1	1	-4.8	3.4	1.7	
Aviation ⁽³⁾	0	1	1	2	2	2	2	14.6	4.2	2.5	
Inland navigation	0	0	0	0	0	0	0	0.4	1.4	0.8	
Freight transport activity (Gtkm)	11	17	19	20	24	26	27	5.3	2.6	1.3	
Heavy goods and light commercial vehicles	2	4	5	6	7	7	7	9.1	2.8	0.5	
Rail	9	12	13	14	17	19	20	4.2	2.5	1.6	
Inland navigation	0	0	0	0	0	0	0	0.4	1.7	0.7	
Energy demand in transport (ktoe) ⁽⁴⁾	1054	1413	1521	1582	1630	1574	1472	3.7	0.7	-1.0	
Public road transport	40	51	40	41	41	41	39	0.0	0.3	-0.4	
Private cars and motorcycles	705	845	919	881	871	802	721	2.7	-0.5	-1.9	
Heavy goods and light commercial vehicles	204	387	443	517	555	559	547	8.1	2.3	-0.1	
Rail	76	79	65	67	78	80	80	-1.5	1.8	0.3	
Aviation	27	46	49	69	79	85	78	6.1	4.9	-0.1	
Inland navigation	3	5	6	6	7	7	7	7.2	1.3	0.5	
By transport activity											
Passenger transport	777	947	1013	998	998	934	846	2.7	-0.2	-1.6	
Freight transport	277	466	508	584	632	639	626	6.2	2.2	-0.1	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.2	3.0	3.8	7.0	6.6	7.1				
ENERGY EFFICIENCY											
Primary energy consumption	6401	7907	6073	5934	5772	5631	6119	-0.5	-0.5	0.6	
Final Energy Demand	3767	4601	4763	4996	5032	4791	4235	2.4	0.6	-1.7	
by sector											
Industry	780	987	898	1172	1183	1194	1076	1.4	2.8	-0.9	
Energy intensive industries	363	436	486	689	694	696	625	3.0	3.6	-1.0	
Other industrial sectors	416	551	412	483	489	498	451	-0.1	1.7	-0.8	
Residential	1368	1509	1599	1498	1436	1320	1103	1.6	-1.1	-2.6	
Tertiary	563	672	720	718	757	678	563	2.5	0.5	-2.9	
Transport ⁽⁵⁾	1057	1433	1546	1608	1656	1599	1493	3.9	0.7	-1.0	
by fuel											
Solids	82	177	208	238	180	121	72	9.8	-1.4	-8.8	
Oil	1356	1616	1613	1664	1693	1594	1425	1.7	0.5	-1.7	
Gas	363	519	567	649	600	606	454	4.6	0.6	-2.7	
Electricity	533	686	717	832	893	885	842	3.0	2.2	-0.6	
Heat (from CHP and District Heating)	827	905	922	870	910	899	731	1.1	-0.1	-2.2	
Renewable energy forms	605	698	738	743	756	684	709	2.0	0.3	-0.6	
Other	0	0	0	0	0	1	3	0.0	0.0	30.5	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	374	317	234	191	164	151	161	-4.6	-3.5	-0.2	
Industry (Energy on Value added, index 2000=100)	100	80	66	74	69	67	60	-4.1	0.4	-1.4	
Residential (Energy on Private Income, index 2000=100)	100	72	76	59	50	43	35	-2.7	-4.2	-3.4	
Tertiary (Energy on Value added, index 2000=100)	100	88	87	72	65	55	45	-1.3	-2.9	-3.7	
Passenger transport (toe/Mpkm) ⁽⁶⁾	26	23	27	25	24	21	19	0.3	-1.2	-2.3	
Freight transport (toe/Mtkm)	25	27	27	29	26	24	23	0.9	-0.3	-1.3	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	19.8	24.8	23.0	21.3	19.5	18.9	14.8	1.5	-1.6	-2.7	
of which ETS sectors (2013 scope) GHG emissions		11.7	9.4	7.8	7.0	7.2	4.0		-2.9	-5.5	
of which ESD sectors (2013 scope) GHG emissions		13.2	13.6	13.4	12.3	12.5	11.7		-0.8	-1.4	
CO ₂ Emissions (energy related)	10.3	12.4	12.3	11.4	10.7	10.5	6.8	1.8	-1.4	-4.5	
Power generation/District heating	4.0	4.0	3.7	2.4	2.1	2.5	0.0	-0.8	-5.4	-37.0	
Energy Branch	1.1	1.7	1.6	1.5	1.4	1.3	1.1	3.8	-1.4	-2.1	
Industry	1.1	1.3	1.2	1.5	1.4	1.4	0.9	0.7	2.2	-4.6	
Residential	0.5	0.6	0.8	0.8	0.6	0.4	0.4	3.7	-2.6	-4.8	
Tertiary	0.5	0.6	0.6	0.6	0.6	0.4	0.3	2.2	-0.6	-5.9	
Transport	3.1	4.2	4.5	4.6	4.6	4.4	4.0	3.7	0.2	-1.2	
CO ₂ Emissions (non energy and non land use related)	1.5	3.1	2.8	2.3	2.4	2.3	2.1	6.0	-1.4	-1.5	
Non-CO2 GHG emissions	8.0	9.3	7.9	7.6	6.4	6.2	6.0	0.0	-2.1	-0.7	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	41.1	51.5	47.7	44.1	40.4	39.3	30.7	1.5	-1.6	-2.7	
Carbon Intensity indicators											
Electricity and Steam production (t of CO ₂ /MWh)	0.17	0.14	0.21	0.14	0.12	0.12	0.00	2.3	-5.5	-38.6	
Final energy demand (t of CO ₂ /toe)	1.39	1.47	1.48	1.50	1.43	1.40	1.33	0.6	-0.3	-0.7	
Industry	1.38	1.35	1.29	1.31	1.21	1.19	0.84	-0.7	-0.6	-3.7	
Residential	0.40	0.43	0.50	0.51	0.42	0.33	0.34	2.1	-1.6	-2.3	
Tertiary	0.88	0.84	0.86	0.82	0.77	0.64	0.56	-0.3	-1.1	-3.0	
Transport	2.94	2.94	2.89	2.87	2.76	2.76	2.71	-0.2	-0.5	-0.2	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	15.7	17.0	19.7	22.8	24.1	25.9	38.0				
RES-H&C share	26.1	30.4	33.2	36.7	38.3	37.2	59.1				
RES-E share	4.0	3.8	7.4	15.6	15.4	27.1	38.8				
RES-T share (based on ILUC formula)	0.1	0.3	3.5	4.7	10.2	11.0	14.5				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	75	57	174	124	110	110	116	8.7	-4.5	0.6	
Average Price of Electricity in Final demand sectors (€13/MWh)	64	73	112	104	120	136	166	5.7	0.6	3.4	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	2.7	4.0	5.6	5.9	7.1	7.9	8.6	7.6	2.5	1.9	
as % of GDP	14.2	14.4	19.3	16.8	17.9	18.5	20.2				

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Luxembourg: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	0	0	1	1	1	1	1	1.5	2.5	2.2	
GDP (in 000 M€13)	32	38	41	45	52	60	68	2.6	2.3	2.8	
Gross Inland Consumption (ktoe)	3654	4800	4642	4616	4725	4749	4724	2.4	0.2	0.0	
Solids	108	77	66	51	44	31	15	-4.8	-4.0	-10.0	
Oil	2320	3160	2869	2908	2862	2795	2824	2.2	0.0	-0.1	
Natural gas	671	1176	1197	1031	1044	1106	978	6.0	-1.4	-0.6	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9	
Renewable energy forms	64	106	160	245	391	429	486	9.6	9.4	2.2	
Energy Branch Consumption	26	30	50	51	55	60	70	6.9	0.9	2.4	
Non-Energy Uses	55	29	33	39	42	45	47	-5.1	2.5	1.1	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	64	111	122	148	265	307	349	6.7	8.1	2.8	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil	0	0	0	0	0	0	0	11.5	-100.0	0.0	
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0	
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy sources	64	111	122	148	265	307	349	6.7	8.1	2.8	
Hydro	11	8	9	9	9	10	13	-1.4	0.2	3.3	
Biomass & Waste	51	97	105	119	186	205	203	7.5	5.9	0.9	
Wind	2	5	5	7	43	42	57	7.4	24.8	2.9	
Solar and others	0	2	3	13	27	50	75	0.0	25.2	11.0	
Geothermal	0	0	0	0	0	0	0	0.0	0.0	14.2	
Net Imports (ktoe)	3639	4671	4503	4468	4460	4442	4375	2.2	-0.1	-0.2	
Solids	108	77	66	51	44	31	15	-4.8	-4.0	-10.0	
Oil	2368	3141	2852	2908	2862	2795	2824	1.9	0.0	-0.1	
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil products	2368	3141	2852	2908	2862	2795	2824	1.9	0.0	-0.1	
Natural gas	671	1176	1197	1031	1044	1106	978	6.0	-1.4	-0.6	
Electricity	491	280	350	381	385	388	421	-3.3	1.0	0.9	
Import Dependency (%)	99.6	97.3	97.0	96.8	94.4	93.5	92.6				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	422	3348	3230	2762	3273	3850	4065	22.6	0.1	2.2	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	0	1	1	0	3	3	3	0.0	11.2	0.0	
Gas (including derived gases)	215	3107	2916	2304	2362	2765	2590	29.8	-2.1	0.9	
Biomass-waste	56	76	129	158	175	210	215	8.7	3.1	2.0	
Hydro (pumping excluded)	124	94	108	110	110	114	152	-1.4	0.2	3.3	
Wind	27	52	55	78	501	491	664	7.4	24.7	2.9	
Solar	0	17	21	112	121	268	441	0.0	19.2	13.8	
Geothermal and other renewables	0	1	0	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	163	574	597	702	971	1104	1409	13.8	5.0	3.8	
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0	
Renewable energy	47	93	107	212	467	608	924	8.6	15.9	7.1	
Hydro (pumping excluded)	33	34	34	34	34	35	47	0.3	0.0	3.3	
Wind	14	35	44	58	302	288	392	12.1	21.2	2.6	
Solar	0	24	29	120	131	285	485	0.0	16.2	14.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	116	481	490	490	504	496	485	15.5	0.3	-0.4	
of which cogeneration units	63	101	121	229	182	164	115	6.7	4.2	-4.5	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0	
Gas fired	103	468	469	469	469	457	442	16.4	0.0	-0.6	
Oil fired	5	5	4	1	2	2	2	-2.3	-7.8	0.0	
Biomass-waste fired	9	9	17	20	34	37	41	7.1	7.1	2.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.9	66.2	61.4	44.1	37.9	39.3	32.5				
Efficiency of gross thermal power generation (%)	24.3	47.5	47.4	50.5	50.0	48.7	48.4				
% of gross electricity from CHP	17.7	10.1	9.6	23.3	16.0	10.1	5.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	49.1	7.2	9.7	16.6	27.7	28.1	36.2				
Fuel Inputs to Thermal Power Generation (ktoe)	96	576	553	419	437	525	499	19.1	-2.3	1.3	
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0	
Oil (including refinery gas)	1	0	0	0	0	0	0	-100.0	0.0	0.0	
Gas (including derived gases)	66	544	520	383	392	468	434	22.8	-2.8	1.0	
Biomass & Waste	29	32	33	36	46	57	66	1.5	3.2	3.7	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	1	3	46	113	152	152	178	57.2	12.7	1.6	
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0	
Biofuels and hydrogen production	0	1	42	108	147	146	172	0.0	13.4	1.6	
District heating	1	2	4	5	5	5	5	23.1	2.3	-0.8	
Derived gases, cokeries etc.	0	0	0	0	0	1	2	0.0	0.0	16.6	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Luxembourg: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	7	8	9	9	10	12	13	1.6	2.0	2.2
Public road transport	1	1	1	1	1	1	1	4.2	1.7	1.3
Private cars and motorcycles	6	6	7	7	8	9	10	1.5	2.0	2.2
Rail	0	0	0	0	0	1	1	0.4	3.1	2.8
Aviation ⁽³⁾	1	1	1	1	1	1	1	-0.5	2.4	2.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	3	3	3	3	4	5	5	0.8	3.6	1.9
Heavy goods and light commercial vehicles	2	2	2	3	3	4	4	2.8	4.1	1.7
Rail	1	0	0	0	0	0	1	-6.5	2.0	3.2
Inland navigation	0	0	0	0	0	0	0	-0.5	0.9	1.7
Energy demand in transport (ktoe) ⁽⁴⁾	1914	2781	2604	2697	2759	2726	2825	3.1	0.6	0.2
Public road transport	60	92	106	115	122	123	127	5.9	1.4	0.4
Private cars and motorcycles	1153	1521	1341	1311	1216	1125	1170	1.5	-1.0	-0.4
Heavy goods and light commercial vehicles	364	721	709	818	956	975	985	6.9	3.0	0.3
Rail	12	11	13	14	16	18	20	0.8	1.9	2.2
Aviation	321	432	431	435	445	482	520	3.0	0.3	1.6
Inland navigation	4	3	4	3	3	3	3	-1.0	-1.8	1.5
<i>By transport activity</i>										
Passenger transport	1535	2046	1880	1863	1785	1732	1819	2.0	-0.5	0.2
Freight transport	379	735	724	834	974	994	1006	6.7	3.0	0.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.6	1.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.6	4.0	5.4	5.4	5.7			
ENERGY EFFICIENCY										
Primary energy consumption	3599	4771	4609	4576	4683	4704	4677	2.5	0.2	0.0
Final Energy Demand	3505	4477	4327	4382	4468	4435	4399	2.1	0.3	-0.2
<i>by sector</i>										
Industry	714	754	739	585	590	560	495	0.4	-2.2	-1.7
Energy intensive industries	583	598	601	438	432	397	332	0.3	-3.2	-2.6
Other industrial sectors	130	156	139	148	158	163	163	0.6	1.3	0.4
Residential	468	525	508	498	521	545	504	0.8	0.3	-0.3
Tertiary	409	418	477	601	599	604	575	1.5	2.3	-0.4
Transport ⁽⁵⁾	1914	2781	2604	2697	2759	2726	2825	3.1	0.6	0.2
<i>by fuel</i>										
Solids	108	77	66	51	44	31	15	-4.8	-4.0	-10.0
Oil	2261	3106	2835	2869	2820	2750	2777	2.3	-0.1	-0.2
Gas	605	631	675	645	652	638	545	1.1	-0.4	-1.8
Electricity	497	529	568	557	599	645	673	1.4	0.5	1.2
Heat (from CHP and District Heating)	13	75	74	80	75	78	70	19.2	0.2	-0.7
Renewable energy forms	22	59	108	181	277	291	306	17.2	9.9	1.0
Other	0	0	0	0	1	3	13	0.0	0.0	35.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	115	126	113	103	91	80	69	-0.1	-2.1	-2.7
Industry (Energy on Value added, index 2000=100)	100	101	133	100	92	78	63	2.9	-3.7	-3.7
Residential (Energy on Private Income, index 2000=100)	100	103	93	90	83	76	61	-0.7	-1.1	-3.1
Tertiary (Energy on Value added, index 2000=100)	100	85	86	98	84	73	60	-1.5	-0.1	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	204	244	209	188	161	139	131	0.3	-2.5	-2.0
Freight transport (toe/Mtkm)	139	268	247	245	234	218	201	5.9	-0.5	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	10.7	14.1	13.3	12.9	12.8	12.6	12.3	2.2	-0.4	-0.4
of which ETS sectors (2013 scope) GHG emissions		4.2	3.8	3.5	3.4	3.6	3.4		-1.0	-0.1
of which ESD sectors (2013 scope) GHG emissions		9.9	9.5	9.5	9.4	9.1	8.9		-0.2	-0.5
CO₂ Emissions (energy related)	8.9	12.6	11.8	11.4	11.3	11.1	10.9	2.9	-0.4	-0.4
Power generation/District heating	0.2	1.3	1.2	0.9	0.9	1.1	1.0	22.6	-2.8	1.0
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	1.2	1.1	1.0	0.8	0.8	0.6	0.4	-2.0	-2.8	-5.1
Residential	1.1	1.2	1.1	1.1	1.0	1.0	0.9	0.5	-1.1	-0.9
Tertiary	0.6	0.5	0.6	0.7	0.6	0.6	0.5	-0.6	0.7	-2.8
Transport	5.8	8.4	7.8	7.9	7.9	7.8	8.0	3.1	0.2	0.1
CO₂ Emissions (non energy and non land use related)	0.7	0.7	0.6	0.5	0.5	0.5	0.4	-2.1	-1.1	-1.7
Non-CO₂ GHG emissions	1.1	0.9	1.0	1.0	1.0	1.0	1.0	-0.9	0.1	-0.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	80.3	106.5	100.3	97.4	96.3	95.0	92.3	2.2	-0.4	-0.4
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.28	0.30	0.30	0.25	0.22	0.23	0.21	0.7	-2.9	-0.6
Final energy demand (t of CO ₂ /toe)	2.49	2.52	2.43	2.40	2.32	2.27	2.24	-0.2	-0.5	-0.3
Industry	1.71	1.47	1.36	1.39	1.28	1.14	0.90	-2.3	-0.6	-3.4
Residential	2.29	2.28	2.22	2.14	1.93	1.86	1.82	-0.3	-1.4	-0.6
Tertiary	1.59	1.25	1.28	1.23	1.08	0.98	0.85	-2.1	-1.6	-2.4
Transport	3.01	3.04	2.99	2.92	2.88	2.86	2.83	-0.1	-0.4	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.8	1.4	2.9	5.0	8.2	9.2	10.8			
RES-H&C share	1.4	3.6	4.8	6.4	12.3	14.7	18.8			
RES-E share	2.1	3.2	3.8	6.1	12.0	13.4	17.3			
RES-T share (based on ILUC formula)	0.0	0.0	1.9	7.5	10.1	10.9	12.6			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	87	63	78	82	96	97	103	-1.1	2.1	0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	108	119	110	116	122	134	140	0.1	1.1	1.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.0	4.4	4.6	4.7	5.9	6.5	7.5	4.3	2.5	2.4
as % of GDP	9.5	11.5	11.2	10.4	11.4	10.8	10.9			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Malta: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
											Annual % Change	
Population (in million)	0	0	0	0	0	0	0	0.9	0.6	0.4		
GDP (in 000 M€13)	6	6	7	8	8	9	10	1.8	2.1	1.9		
Gross Inland Consumption (ktoe)	802	972	908	675	744	721	666	1.3	-2.0	-1.1		
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.7		
Oil	802	972	903	579	342	332	309	1.2	-9.3	-1.0		
Natural gas	0	0	0	0	337	317	268	0.0	0.0	-2.3		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Renewable energy forms	0	1	5	21	49	56	74	0.0	25.7	4.2		
Energy Branch Consumption	10	2	10	6	5	4	3	0.5	-7.2	-3.8		
Non-Energy Uses	0	20	9	11	12	12	12	0.0	3.4	-0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	0	1	4	16	38	45	67	0.0	24.3	5.9		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	0	0	0	0	0	0	0	0.0	0.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	0	1	4	16	38	45	67	0.0	24.3	5.9		
Hydro	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biomass & Waste	0	0	1	3	1	2	5	0.0	9.5	12.8		
Wind	0	0	0	0	0	0	1	0.0	0.0	0.0		
Solar and others	0	1	4	13	36	43	61	0.0	25.6	5.3		
Geothermal	0	0	0	0	0	0	0	0.0	0.0	4.3		
Net Imports (ktoe)	1458	1630	2362	2099	2095	2099	2075	4.9	-1.2	-0.1		
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.7		
Oil	1458	1630	2361	2019	1719	1730	1665	4.9	-3.1	-0.3		
Crude oil and Feedstocks	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil products	1458	1630	2361	2019	1719	1730	1665	4.9	-3.1	-0.3		
Natural gas	0	0	0	0	349	342	385	0.0	0.0	1.0		
Electricity	0	0	0	75	16	16	17	0.0	0.0	0.8		
Import Dependency (%)	100.3	100.0	99.0	99.2	98.2	97.9	96.9					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	1917	2240	2115	1402	2477	2601	2451	1.0	1.6	-0.1		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	1917	2240	2113	1293	0	0	0	1.0	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	2143	2240	1899	0.0	0.0	-1.2		
Biomass-waste	0	0	0	6	8	11	18	0.0	0.0	8.7		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	11	0.0	0.0	0.0		
Solar	0	0	0	103	326	350	523	0.0	0.0	4.8		
Geothermal and other renewables	0	0	2	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	577	577	579	541	786	933	929	0.0	3.1	1.7		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	0	0	2	60	185	200	304	0.0	57.2	5.1		
Hydro (pumping excluded)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Wind	0	0	0	0	0	0	7	0.0	0.0	0.0		
Solar	0	0	2	60	185	200	296	0.0	57.2	4.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	577	577	577	481	601	733	626	0.0	0.4	0.4		
of which cogeneration units	0	0	0	1	1	1	1	0.0	0.0	-5.2		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	0	0	0	0	0	0	0	0.0	0.0	0.0		
Gas fired	0	0	0	0	238	478	478	0.0	0.0	7.2		
Oil fired	577	577	577	479	361	253	144	0.0	-4.6	-8.8		
Biomass-waste fired	0	0	0	2	2	2	3	0.0	0.0	5.0		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	35.6	43.8	39.3	28.2	35.1	31.3	29.6					
Efficiency of gross thermal power generation (%)	35.4	29.3	31.7	45.4	54.6	60.9	61.3					
% of gross electricity from CHP	0.0	0.0	0.0	0.4	0.3	0.3	0.1					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	0.0	0.0	0.1	7.7	13.5	13.9	22.5					
Fuel Inputs to Thermal Power Generation (ktoe)	465	658	573	246	339	318	269	2.1	-5.1	-2.3		
Solids	0	0	0	0	0	0	0	0.0	0.0	0.0		
Oil (including refinery gas)	465	658	573	245	0	0	0	2.1	-100.0	0.0		
Gas (including derived gases)	0	0	0	0	337	316	268	0.0	0.0	-2.3		
Biomass & Waste	0	0	0	1	1	1	1	0.0	0.0	1.8		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	0	0	1	3	7	7	6	0.0	23.3	-1.8		
Refineries	0	0	0	0	0	0	0	0.0	0.0	0.0		
Biofuels and hydrogen production	0	0	1	3	7	7	6	0.0	23.3	-1.8		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	0	0	0	0	0	0	0	0.0	0.0	21.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Malta: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	5	5	5	6	7	7	8	1.2	2.2	1.2
Public road transport	0	0	1	1	1	1	1	0.8	0.5	0.4
Private cars and motorcycles	2	2	2	2	2	2	2	2.0	0.5	0.3
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation ⁽³⁾	2	2	3	3	4	4	5	0.7	3.8	1.8
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	0	0	0	0	0	0	0	0.3	1.3	1.6
Heavy goods and light commercial vehicles	0	0	0	0	0	0	0	0.3	1.3	1.6
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	268	242	255	256	270	268	264	-0.5	0.6	-0.2
Public road transport	12	13	12	12	12	11	11	-0.3	-0.2	-0.7
Private cars and motorcycles	97	105	110	109	102	90	83	1.2	-0.7	-2.1
Heavy goods and light commercial vehicles	36	37	31	31	34	35	37	-1.5	0.7	0.9
Rail	0	0	0	0	0	0	0	0.0	0.0	0.0
Aviation	122	87	102	105	122	131	134	-1.8	1.8	0.9
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
<i>By transport activity</i>										
Passenger transport	232	205	224	225	236	233	227	-0.4	0.5	-0.4
Freight transport	36	37	31	31	34	35	37	-1.5	0.7	0.9
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.8	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	0.4	1.2	2.7	2.6	2.3			
ENERGY EFFICIENCY										
Primary energy consumption	802	952	899	664	732	708	656	1.2	-2.0	-1.1
Final Energy Demand	483	478	476	501	546	551	522	-0.1	1.4	-0.5
<i>by sector</i>										
Industry	83	74	48	51	52	52	47	-5.4	0.8	-0.9
Energy intensive industries	13	19	8	8	8	8	7	-4.8	-0.1	-1.2
Other industrial sectors	70	55	40	44	44	44	40	-5.5	0.9	-0.8
Residential	76	77	80	85	101	103	96	0.5	2.4	-0.5
Tertiary	55	85	94	108	124	128	115	5.4	2.8	-0.7
Transport ⁽⁵⁾	268	242	255	256	270	268	264	-0.5	0.6	-0.2
<i>by fuel</i>										
Solids	0	0	0	0	0	0	0	0.0	0.0	-11.7
Oil	348	309	316	323	330	320	297	-1.0	0.4	-1.0
Gas	0	0	0	0	0	0	0	0.0	0.0	7.2
Electricity	135	168	155	166	196	207	197	1.4	2.4	0.1
Heat (from CHP and District Heating)	0	0	0	0	0	0	0	0.0	0.0	-0.8
Renewable energy forms	0	1	5	11	20	24	27	0.0	14.2	2.9
Other	0	0	0	0	0	0	0	0.0	0.0	32.6
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	142	162	134	89	89	78	66	-0.6	-4.0	-2.9
Industry (Energy on Value added, index 2000=100)	100	116	74	73	67	63	53	-2.9	-1.0	-2.3
Residential (Energy on Private Income, index 2000=100)	100	93	89	91	97	88	74	-1.1	0.9	-2.7
Tertiary (Energy on Value added, index 2000=100)	100	137	123	125	130	121	98	2.1	0.5	-2.8
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	40	39	37	33	30	28	-1.3	-1.8	-1.6
Freight transport (toe/Mtkm)	139	135	116	113	110	107	102	-1.7	-0.6	-0.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	2.8	3.3	3.1	2.1	2.1	2.0	1.7	1.0	-3.9	-1.8
of which ETS sectors (2013 scope) GHG emissions	2.4	2.1	1.1	1.1	1.2	1.1	1.0		-6.0	-1.2
of which ESD sectors (2013 scope) GHG emissions	1.0	1.0	1.0	0.9	0.8	0.7	0.7		-0.4	-2.6
CO₂ Emissions (energy related)	2.5	3.0	2.8	1.8	1.8	1.7	1.5	0.9	-4.4	-1.6
Power generation/District heating	1.5	2.1	1.8	0.8	0.8	0.7	0.6	2.1	-8.1	-2.3
Energy Branch	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Industry	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-9.7	0.4	-9.5
Residential	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-1.2	2.4	-3.8
Tertiary	0.0	0.0	0.1	0.1	0.1	0.1	0.0	6.2	-0.7	-2.6
Transport	0.8	0.7	0.8	0.8	0.8	0.8	0.8	-0.5	0.3	-0.3
CO₂ Emissions (non energy and non land use related)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	-17.5	1.7
Non-CO₂ GHG emissions	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.6	-0.5	-3.3
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	127.9	150.8	141.1	95.1	94.6	89.2	78.9	1.0	-3.9	-1.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.78	0.95	0.87	0.56	0.32	0.29	0.26	1.1	-9.6	-2.2
Final energy demand (t of CO ₂ /toe)	2.17	1.94	1.99	1.93	1.80	1.74	1.71	-0.9	-1.0	-0.6
Industry	1.55	1.43	0.97	1.00	0.94	0.83	0.38	-4.6	-0.4	-8.7
Residential	1.02	0.80	0.86	0.91	0.86	0.71	0.61	-1.7	0.0	-3.3
Tertiary	0.67	0.40	0.72	0.73	0.51	0.46	0.42	0.7	-3.4	-1.9
Transport	3.00	3.00	2.99	2.96	2.92	2.92	2.90	0.0	-0.2	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.0	0.1	1.0	6.0	11.7	13.3	18.0			
RES-H&C share	0.0	1.0	7.0	17.5	23.9	30.7	38.5			
RES-E share	0.0	0.0	0.1	4.8	12.5	12.9	20.8			
RES-T share (based on ILUC formula)	0.0	0.0	0.5	4.2	10.0	10.6	11.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	78	111	173	117	90	96	99	8.4	-6.3	1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	75	84	201	177	170	165	151	10.4	-1.7	-1.1
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	0.4	0.5	0.8	0.8	1.1	1.2	1.3	8.2	2.3	1.8
as % of GDP	6.8	8.9	12.5	11.2	12.7	13.0	12.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							Netherlands: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	16	16	17	17	17	17	18	0.4	0.3	0.2	
GDP (in 000 M€13)	537	573	613	620	668	706	738	1.3	0.9	1.0	
Gross Inland Consumption (ktoe)	75572	81469	86612	83760	83439	80969	74964	1.4	-0.4	-1.1	
Solids	7852	8195	7596	9274	7905	8009	6020	-0.3	0.4	-2.7	
Oil	28245	32464	34649	34892	34336	33319	31747	2.1	-0.1	-0.8	
Natural gas	35009	35334	39309	33859	30928	30317	25654	1.2	-2.4	-1.9	
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4	
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0	
Renewable energy forms	1827	2872	3796	3906	9236	8980	11133	7.6	9.3	1.9	
Energy Branch Consumption	5353	6336	5088	5607	5434	4999	4739	-0.5	0.7	-1.4	
Non-Energy Uses	10491	13013	17582	13895	14823	15341	15345	5.3	-1.7	0.3	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	57555	62220	70219	51471	52977	45740	39834	2.0	-2.8	-2.8	
Solids	7	8	6	0	0	0	0	-2.0	-100.0	0.0	
Oil	2405	2328	1985	1381	1414	956	738	-1.9	-3.3	-6.3	
Natural gas	52203	56276	63534	44126	40614	33874	25886	2.0	-4.4	-4.4	
Nuclear	1013	1031	1024	956	956	990	990	0.1	-0.7	0.4	
Renewable energy sources	1926	2577	3671	5009	9993	9920	12219	6.7	10.5	2.0	
Hydro	12	8	9	9	9	9	9	-3.0	-0.1	0.1	
Biomass & Waste	1831	2371	3282	4236	7003	6613	8045	6.0	7.9	1.4	
Wind	71	178	343	618	2394	2597	3202	17.0	21.4	3.0	
Solar and others	11	21	29	123	546	623	803	9.8	34.1	3.9	
Geothermal	0	0	8	24	41	77	161	0.0	18.2	14.8	
Net Imports (ktoe)	33759	37076	30549	47678	45840	61297	52297	-1.0	4.1	1.3	
Solids	7998	8312	9228	9274	7905	8009	6020	1.4	-1.5	-2.7	
Oil	41425	47836	45167	48901	48021	47837	46753	0.9	0.6	-0.3	
Crude oil and Feedstocks	61018	61724	60676	53468	50689	48101	45551	-0.1	-1.8	-1.1	
Oil products	-19594	-13888	-15508	-4567	-2669	-264	1202	-2.3	-16.1	0.0	
Natural gas	-17191	-20941	-24211	-10267	-9406	-2964	1190	3.5	-9.0	0.0	
Electricity	1626	1573	239	872	77	-646	-579	-17.5	-10.7	0.0	
Import Dependency (%)	38.0	37.7	30.4	48.1	46.4	52.9	56.8				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	89631	100219	118140	107595	123367	133567	129301	2.8	0.4	0.5	
Nuclear energy	3926	3997	3969	3907	3907	4047	4047	0.1	-0.2	0.4	
Solids	24276	23500	22588	29437	23818	26325	20311	-0.7	0.5	-1.6	
Oil (including refinery gas)	2641	2262	1253	799	0	57	57	-7.2	-100.0	0.0	
Gas (including derived gases)	54606	61588	77566	56710	46789	55528	45872	3.6	-4.9	-0.2	
Biomass-waste	3203	6683	8606	8343	15904	12301	16164	10.4	6.3	0.2	
Hydro (pumping excluded)	142	88	105	100	104	105	105	-3.0	-0.1	0.1	
Wind	829	2067	3993	7185	27841	30201	37236	17.0	21.4	3.0	
Solar	8	34	60	1113	5003	5003	5509	22.2	55.5	1.0	
Geothermal and other renewables	0	0	0	0	0	0	0	12.8	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	21048	21728	25072	30866	38388	37304	36490	1.8	4.4	-0.5	
Nuclear energy	485	485	485	485	485	485	485	0.0	0.0	0.0	
Renewable energy	497	1312	2362	4706	15781	16490	19176	16.9	20.9	2.0	
Hydro (pumping excluded)	37	37	37	37	37	37	37	0.0	0.0	0.0	
Wind	447	1224	2237	3431	10158	10867	12968	17.5	16.3	2.5	
Solar	13	51	88	1238	5586	5586	6170	21.1	51.4	1.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	20066	19931	22225	25674	22122	20329	16829	1.0	0.0	-2.7	
of which cogeneration units	7372	7162	9300	8513	2414	4752	3738	2.4	-12.6	4.5	
of which CCS units	0	0	0	0	0	250	250	0.0	0.0	0.0	
Solids fired	4394	4394	4394	6975	5388	5054	4429	0.0	2.1	-1.9	
Gas fired	14667	14529	16575	17356	14403	12941	10078	1.2	-1.4	-3.5	
Oil fired	490	218	218	204	77	77	66	-7.8	-9.9	-1.6	
Biomass-waste fired	514	790	1037	1138	2254	2257	2257	7.3	8.1	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	50.5	52.1	38.3	35.5	39.4	39.1				
Efficiency of gross thermal power generation (%)	41.6	41.4	44.5	45.4	43.6	43.8	42.9				
% of gross electricity from CHP	37.6	29.4	33.2	37.8	16.9	21.0	21.3				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	1.4	1.6				
% of carbon free (RES, nuclear) gross electricity generation	9.0	12.8	14.2	19.2	42.8	38.7	48.8				
Fuel Inputs to Thermal Power Generation (ktoe)	17516	19517	21244	18047	17045	18515	16507	1.9	-2.2	-0.3	
Solids	4998	4958	4669	6490	4858	5360	4039	-0.7	0.4	-1.8	
Oil (including refinery gas)	634	553	342	177	0	20	20	-6.0	-80.0	276.4	
Gas (including derived gases)	10671	11953	13773	9489	7742	9523	7951	2.6	-5.6	0.3	
Biomass & Waste	1213	2052	2460	1892	4446	3612	4498	7.3	6.1	0.1	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	86454	91417	68924	63771	61703	59418	56740	-2.2	-1.1	-0.8	
Refineries	82233	86869	64188	58847	56691	55011	52635	-2.4	-1.2	-0.7	
Biofuels and hydrogen production	0	0	230	579	484	474	545	0.0	7.7	1.2	
District heating	398	436	499	366	338	320	319	2.3	-3.8	-0.6	
Derived gases, cokeries etc.	3824	4113	4007	3979	4190	3613	3241	0.5	0.4	-2.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Netherlands: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	184	195	183	191	200	210	219	-0.1	0.9	0.9
Public road transport	11	12	12	13	13	14	14	0.8	0.9	0.6
Private cars and motorcycles	143	152	138	141	146	152	157	-0.4	0.6	0.7
Rail	16	17	17	19	21	23	24	0.5	2.1	1.6
Aviation ⁽³⁾	13	14	15	17	18	21	22	1.1	2.4	1.9
Inland navigation	1	1	1	1	1	1	1	0.1	1.1	1.3
Freight transport activity (Gtkm)	94	100	106	111	121	129	135	1.3	1.3	1.1
Heavy goods and light commercial vehicles	48	51	54	55	61	64	66	1.2	1.3	0.8
Rail	5	6	6	6	7	8	8	2.7	1.5	1.8
Inland navigation	41	42	47	50	53	57	61	1.2	1.3	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	14297	15197	14986	14817	14205	13472	12807	0.5	-0.5	-1.0
Public road transport	212	224	260	267	270	267	261	2.1	0.4	-0.4
Private cars and motorcycles	8007	8288	8206	7708	6904	6166	5702	0.2	-1.7	-1.9
Heavy goods and light commercial vehicles	2184	2594	2715	2594	2740	2740	2700	2.2	0.1	-0.1
Rail	184	172	182	189	204	216	224	-0.1	1.1	0.9
Aviation	3382	3712	3463	3821	3834	3812	3633	0.2	1.0	-0.5
Inland navigation	328	207	159	239	253	271	287	-7.0	4.8	1.3
<i>By transport activity</i>										
Passenger transport	11703	12265	11985	11861	11077	10319	9674	0.2	-0.8	-1.3
Freight transport	2594	2933	3001	2957	3128	3153	3133	1.5	0.4	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	0.9	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	1.5	4.0	3.6	4.0	4.7			
ENERGY EFFICIENCY										
Primary energy consumption	65081	68457	69030	69864	68616	65628	59619	0.6	-0.1	-1.4
Final Energy Demand	50505	51654	51835	50854	50343	47288	42871	0.3	-0.3	-1.6
<i>by sector</i>										
Industry	14804	14814	12208	12815	13595	12601	11859	-1.9	1.1	-1.4
Energy intensive industries	10277	10532	8224	8734	9314	8643	8170	-2.2	1.3	-1.3
Other industrial sectors	4527	4281	3984	4082	4281	3957	3689	-1.3	0.7	-1.5
Residential	10299	10143	11518	10892	10520	10258	8911	1.1	-0.9	-1.6
Tertiary	11104	11499	13124	12329	12022	10957	9294	1.7	-0.9	-2.5
Transport ⁽⁵⁾	14297	15198	14985	14817	14205	13472	12807	0.5	-0.5	-1.0
<i>by fuel</i>										
Solids	1330	1515	1270	1402	1577	1543	964	-0.5	2.2	-4.8
Oil	16505	17382	16113	15746	14870	13631	12385	-0.2	-0.8	-1.8
Gas	21011	20346	22378	21405	20315	17951	15136	0.6	-1.0	-2.9
Electricity	8408	8986	9189	9034	9568	9673	9384	0.9	0.4	-0.2
Heat (from CHP and District Heating)	2893	2981	2106	2038	2150	2270	2301	-3.1	0.2	0.7
Renewable energy forms	358	444	780	1223	1836	2123	2531	8.1	8.9	3.3
Other	0	0	0	8	27	95	169	-100.0	0.0	20.0
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	141	142	141	135	125	115	102	0.0	-1.2	-2.1
Industry (Energy on Value added, index 2000=100)	100	96	75	75	74	65	58	-2.9	-0.2	-2.3
Residential (Energy on Private Income, index 2000=100)	100	94	106	98	87	79	64	0.6	-1.9	-3.0
Tertiary (Energy on Value added, index 2000=100)	100	96	101	94	85	73	59	0.1	-1.7	-3.6
Passenger transport (toe/Mpkm) ⁽⁶⁾	42	41	40	37	32	27	24	-0.4	-2.4	-2.7
Freight transport (toe/Mtkm)	28	29	28	27	26	25	23	0.2	-0.9	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	222.8	221.6	216.9	209.7	192.8	184.0	160.1	-0.3	-1.2	-1.8
of which ETS sectors (2013 scope) GHG emissions	103.3	95.6	95.8	95.8	84.9	84.4	70.1		-1.2	-1.9
of which ESD sectors (2013 scope) GHG emissions	118.2	121.4	113.8	107.9	99.5	99.0	90.0		-1.2	-1.8
CO₂ Emissions (energy related)	168.5	175.7	175.0	171.3	155.6	147.6	124.1	0.4	-1.2	-2.2
Power generation/District heating	51.9	55.5	57.7	54.3	43.5	47.4	37.5	1.1	-2.8	-1.5
Energy Branch	11.1	12.3	8.8	10.4	9.9	8.7	8.0	-2.3	1.2	-2.1
Industry	26.6	26.5	22.9	26.6	27.5	22.9	18.3	-1.5	1.9	-4.0
Residential	18.9	17.9	20.6	19.1	17.5	16.5	13.4	0.9	-1.6	-2.6
Tertiary	17.5	18.3	21.1	18.7	16.6	14.1	11.3	1.9	-2.4	-3.7
Transport	42.4	45.3	43.9	42.3	40.6	38.1	35.5	0.4	-0.8	-1.3
CO₂ Emissions (non energy and non land use related)	7.1	8.8	8.6	8.5	8.8	8.9	8.8	2.0	0.3	0.0
Non-CO₂ GHG emissions	47.3	37.0	33.3	29.9	28.3	27.5	27.2	-3.4	-1.6	-0.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	99.0	98.4	96.4	93.2	85.6	81.7	71.1	-0.3	-1.2	-1.8
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.40	0.38	0.37	0.38	0.27	0.28	0.23	-0.6	-3.0	-1.9
Final energy demand (t of CO ₂ /toe)	2.09	2.09	2.09	2.10	2.03	1.94	1.83	0.0	-0.3	-1.0
Industry	1.80	1.79	1.87	2.07	2.02	1.82	1.55	0.4	0.8	-2.7
Residential	1.84	1.77	1.79	1.75	1.66	1.61	1.50	-0.2	-0.8	-1.0
Tertiary	1.58	1.59	1.61	1.51	1.38	1.28	1.22	0.2	-1.5	-1.2
Transport	2.97	2.98	2.93	2.86	2.86	2.83	2.77	-0.1	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	1.3	2.3	3.9	5.2	13.1	14.3	18.9			
RES-H&C share	1.5	2.1	2.9	2.9	7.8	9.4	12.4			
RES-E share	2.6	6.3	9.7	12.9	38.1	36.5	46.9			
RES-T share (based on ILUC formula)	0.1	0.2	3.1	9.3	10.8	13.3	18.9			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	50	58	65	73	84	90	95	2.7	2.5	1.3
Average Price of Electricity in Final demand sectors (€13/MWh)	118	130	129	120	137	145	155	0.9	0.6	1.2
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	47.8	60.9	67.3	65.0	77.8	83.6	91.5	3.5	1.5	1.6
as % of GDP	8.9	10.6	11.0	10.5	11.6	11.8	12.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)											Poland: EUC03030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	Annual % Change		
Population (in million)	38	38	38	38	38	38	37	0.0	0.1	-0.2			
GDP (in 000 M€13)	253	294	371	425	492	559	623	3.9	2.9	2.4			
Gross Inland Consumption (ktoe)	88648	92226	100730	101934	105437	104158	99217	1.3	0.5	-0.6			
Solids	56291	54612	54808	53011	50200	45897	38146	-0.3	-0.8	-2.7			
Oil	19037	21696	25747	25895	26610	25399	24017	3.1	0.3	-1.0			
Natural gas	9964	12237	12807	13159	16183	17637	17355	2.5	2.4	0.7			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Electricity	-548	-962	-116	6	63	167	81	-14.4	0.0	2.4			
Renewable energy forms	3905	4643	7684	9863	12381	15058	19617	7.0	4.9	4.7			
Energy Branch Consumption	6664	6104	6095	6243	6140	5451	5105	-0.9	0.1	-1.5			
Non-Energy Uses	4357	4573	4961	5545	6359	7000	7377	1.3	2.5	1.5			
SECURITY OF SUPPLY													
Production (incl.recovery of products) (ktoe)	79590	78592	67394	70900	70286	65980	62829	-1.6	0.4	-1.1			
Solids	71299	68857	55381	55586	51961	44576	34988	-2.5	-0.6	-3.9			
Oil	1062	1143	1063	1539	1581	1535	1488	0.0	4.0	-0.6			
Natural gas	3317	3887	3696	3947	4583	4891	6845	1.1	2.2	4.1			
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy sources	3912	4705	7254	9828	12161	14979	19507	6.4	5.3	4.8			
Hydro	181	189	251	206	209	217	259	3.3	-1.8	2.2			
Biomass & Waste	3728	4493	6838	8749	10849	12481	15241	6.3	4.7	3.5			
Wind	0	12	143	832	984	2030	2802	80.0	21.3	11.0			
Solar and others	0	0	8	22	82	203	865	0.0	25.5	26.6			
Geothermal	3	11	13	21	38	48	340	16.1	11.0	24.5			
Net Imports (ktoe)	8773	15932	31567	31285	35442	38497	36730	13.7	1.2	0.4			
Solids	-16353	-13039	-2814	-2575	-1761	1321	3158	-16.1	-4.6	0.0			
Oil	19067	21466	25187	24607	25316	24175	22848	2.8	0.1	-1.0			
Crude oil and Feedstocks	17616	17893	22965	24633	24825	23370	21722	2.7	0.8	-1.3			
Oil products	1451	3573	2222	-26	491	805	1126	4.4	-14.0	8.6			
Natural gas	6607	8531	8874	9213	11603	12755	10534	3.0	2.7	-1.0			
Electricity	-548	-962	-116	6	63	167	81	-14.4	0.0	2.4			
Import Dependency (%)	9.9	17.2	31.3	30.6	33.5	36.8	36.9						
ELECTRICITY													
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	143174	155359	157089	162367	177106	187361	193157	0.9	1.2	0.9			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids	135888	142161	136592	137628	141946	131968	118051	0.1	0.4	-1.8			
Oil (including refinery gas)	1916	2757	2892	9	0	470	470	4.2	-100.0	0.0			
Gas (including derived gases)	2961	6573	6689	2968	9780	16161	14775	8.5	3.9	4.2			
Biomass-waste	298	1532	6332	9667	11449	12567	18132	35.7	6.1	4.7			
Hydro (pumping excluded)	2106	2201	2920	2397	2427	2523	3010	3.3	-1.8	2.2			
Wind	5	135	1664	9669	11437	23605	32584	78.7	21.3	11.0			
Solar	0	0	0	29	67	67	6136	0.0	0.0	57.1			
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0			
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Net Generation Capacity (MW _e)	30310	31721	33411	38260	33666	37964	48290	1.0	0.1	3.7			
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0			
Renewable energy	821	1036	2044	6084	6756	12300	22995	9.6	12.7	13.0			
Hydro (pumping excluded)	817	915	936	949	949	981	1099	1.4	0.1	1.5			
Wind	4	121	1108	5100	5728	11240	14791	75.5	17.9	10.0			
Solar	0	0	0	35	79	79	7105	0.0	0.0	56.8			
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0			
Thermal power	29489	30685	31367	32176	26910	25664	25295	0.6	-1.5	-0.6			
of which cogeneration units	9354	8313	8693	6564	6344	7878	6758	-0.7	-3.1	0.6			
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0			
Solids fired	28214	28608	29158	28543	23050	20767	19339	0.3	-2.3	-1.7			
Gas fired	764	1548	1592	1659	1710	2652	2811	7.6	0.7	5.1			
Oil fired	396	396	396	398	171	162	155	0.0	-8.1	-0.9			
Biomass-waste fired	115	133	221	1574	1980	2083	2990	6.8	24.5	4.2			
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.0	51.1	48.8	44.3	55.2	52.2	42.7						
Efficiency of gross thermal power generation (%)	33.1	33.9	34.2	35.2	37.4	37.1	36.5						
% of gross electricity from CHP	16.1	16.8	17.6	18.2	20.8	18.9	17.5						
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
% of carbon free (RES, nuclear) gross electricity generation	1.7	2.5	6.9	13.4	14.3	20.7	31.0						
Fuel Inputs to Thermal Power Generation (ktoe)	36625	38771	38341	36695	37525	37333	35646	0.5	-0.2	-0.5			
Solids	35247	36349	34345	33735	33104	31245	27536	-0.3	-0.4	-1.8			
Oil (including refinery gas)	245	184	171	2	0	154	154	-3.5	-74.4	286.6			
Gas (including derived gases)	1032	1805	2179	913	1961	2997	2736	7.8	-1.0	3.4			
Biomass & Waste	102	434	1645	2046	2460	2937	5220	32.1	4.1	7.8			
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0			
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0			
Fuel Input to other conversion processes	32964	31279	38693	40301	40613	37744	33870	1.6	0.5	-1.8			
Refineries	18969	18975	24192	27120	27438	25987	24303	2.5	1.3	-1.2			
Biofuels and hydrogen production	0	49	887	1100	1396	1380	1357	0.0	4.6	-0.3			
District heating	4179	3465	3716	3183	3579	3269	3113	-1.2	-0.4	-1.4			
Derived gases, cokeries etc.	9816	8789	9899	8898	8201	7107	5097	0.1	-1.9	-4.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Poland: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	225	233	268	302	344	373	406	1.7	2.6	1.7
Public road transport	59	49	42	44	46	48	49	-3.4	1.1	0.7
Private cars and motorcycles	134	156	194	223	254	270	290	3.8	2.7	1.3
Rail	29	23	22	24	31	38	46	-2.5	3.2	4.3
Aviation ⁽³⁾	3	5	9	11	13	16	20	12.8	3.6	4.3
Inland navigation	0	0	0	0	0	0	0	-0.9	2.0	2.0
Freight transport activity (Gtkm)	114	140	170	201	228	258	287	4.0	3.0	2.4
Heavy goods and light commercial vehicles	59	90	121	150	167	188	208	7.4	3.3	2.3
Rail	54	50	49	51	61	70	79	-1.0	2.2	2.6
Inland navigation	1	0	0	0	0	0	0	-16.7	2.7	3.1
Energy demand in transport (ktoe) ⁽⁴⁾	9830	12265	17459	18691	19785	19373	19219	5.9	1.3	-0.3
Public road transport	654	581	610	632	668	681	674	-0.7	0.9	0.1
Private cars and motorcycles	6314	7213	9660	10120	10620	9780	9367	4.3	1.0	-1.2
Heavy goods and light commercial vehicles	2041	3678	6307	6957	7373	7667	7767	11.9	1.6	0.5
Rail	541	469	372	366	426	470	523	-3.7	1.4	2.1
Aviation	274	319	508	613	693	771	884	6.4	3.1	2.5
Inland navigation	6	5	3	3	4	4	4	-7.4	2.3	2.3
<i>By transport activity</i>										
Passenger transport	7317	8170	10823	11407	12035	11298	11003	4.0	1.1	-0.9
Freight transport	2514	4095	6636	7283	7750	8075	8216	10.2	1.6	0.6
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.3	0.9			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.4	5.2	6.0	7.2	7.3	7.1			
ENERGY EFFICIENCY										
Primary energy consumption	84291	87654	95769	96389	99077	97158	91840	1.3	0.3	-0.8
Final Energy Demand	55260	58986	67070	68144	71612	70426	66644	2.0	0.7	-0.7
<i>by sector</i>										
Industry	18504	16147	14193	16600	17397	18068	17473	-2.6	2.1	0.0
Energy intensive industries	13031	10951	9372	10814	11094	11127	10255	-3.2	1.7	-0.8
Other industrial sectors	5473	5196	4821	5786	6303	6940	7218	-1.3	2.7	1.4
Residential	17193	19454	22501	20556	21377	20470	18441	2.7	-0.5	-1.5
Tertiary	9644	10846	12664	12057	12781	12242	11250	2.8	0.1	-1.3
Transport ⁽⁵⁾	9919	12539	17712	18930	20058	19647	19480	6.0	1.3	-0.3
<i>by fuel</i>										
Solids	13215	12285	14494	13387	11188	9617	6861	0.9	-2.6	-4.8
Oil	15500	17844	20727	21289	21509	19985	18565	2.9	0.4	-1.5
Gas	7574	8780	9468	9673	11124	11265	10811	2.3	1.6	-0.3
Electricity	8482	9064	10238	11011	12265	13355	13817	1.9	1.8	1.2
Heat (from CHP and District Heating)	6886	7056	6547	6063	6917	6627	6677	-0.5	0.6	-0.4
Renewable energy forms	3602	3957	5596	6721	8607	9566	9862	4.5	4.4	1.4
Other	0	0	0	1	1	11	53	0.0	0.0	44.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	350	313	272	240	214	186	159	-2.5	-2.4	-2.9
Industry (Energy on Value added, index 2000=100)	100	64	36	36	32	29	24	-9.7	-1.3	-2.6
Residential (Energy on Private Income, index 2000=100)	100	98	93	74	66	55	44	-0.8	-3.4	-3.9
Tertiary (Energy on Value added, index 2000=100)	100	100	100	83	76	64	53	0.0	-2.7	-3.5
Passenger transport (toe/Mpkm) ⁽⁶⁾	32	34	39	36	34	29	26	2.0	-1.5	-2.6
Freight transport (toe/Mtkm)	22	29	39	36	34	31	29	5.9	-1.4	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	400.5	403.1	411.9	407.8	399.6	377.5	338.0	0.3	-0.3	-1.7
of which ETS sectors (2013 scope) GHG emissions	222.2	210.3	208.8	205.9	195.4	169.0		-0.2	-2.0	
of which ESD sectors (2013 scope) GHG emissions	180.9	201.6	199.0	193.8	182.0	168.9		-0.4	-1.4	
CO₂ Emissions (energy related)	303.3	307.5	320.7	311.8	306.7	286.7	249.2	0.6	-0.4	-2.1
Power generation/District heating	167.4	171.0	165.6	157.9	158.2	151.8	131.9	-0.1	-0.5	-1.8
Energy Branch	10.2	7.7	8.5	9.7	9.1	7.8	7.4	-1.8	0.7	-2.1
Industry	51.9	36.9	30.4	34.9	31.8	28.5	20.5	-5.2	0.4	-4.3
Residential	27.4	35.5	44.9	37.8	34.7	30.6	25.5	5.1	-2.6	-3.0
Tertiary	18.4	20.7	21.9	19.1	18.1	14.7	11.7	1.7	-1.9	-4.3
Transport	28.0	35.8	49.3	52.4	54.8	53.3	52.1	5.8	1.1	-0.5
CO₂ Emissions (non energy and non land use related)	22.3	20.8	20.2	22.9	25.4	26.1	26.8	-1.0	2.3	0.5
Non-CO₂ GHG emissions	75.0	74.7	71.0	73.2	67.5	64.6	62.1	-0.5	-0.5	-0.8
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	84.4	84.9	86.8	85.9	84.2	79.5	71.2	0.3	-0.3	-1.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.71	0.69	0.67	0.65	0.59	0.55	0.47	-0.6	-1.2	-2.3
Final energy demand (t of CO ₂ /toe)	2.27	2.18	2.19	2.12	1.95	1.81	1.65	-0.4	-1.2	-1.6
Industry	2.81	2.28	2.14	2.10	1.83	1.58	1.18	-2.6	-1.6	-4.3
Residential	1.59	1.83	2.00	1.84	1.62	1.50	1.38	2.3	-2.1	-1.6
Tertiary	1.91	1.91	1.73	1.59	1.42	1.20	1.04	-1.0	-2.0	-3.1
Transport	2.82	2.85	2.79	2.77	2.73	2.71	2.68	-0.1	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	6.5	6.9	9.2	11.8	15.2	18.2	24.9			
RES-H&C share	9.6	10.2	11.6	13.8	19.2	22.5	31.2			
RES-E share	1.6	2.7	6.6	13.4	14.3	20.5	30.9			
RES-T share (based on ILUC formula)	0.2	0.7	6.1	7.5	10.1	10.7	12.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	38	40	49	67	73	82	91	2.6	4.1	2.3
Average Price of Electricity in Final demand sectors (€13/MWh)	77	93	128	121	132	142	152	5.2	0.3	1.5
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	34.0	46.3	66.0	71.1	92.9	108.4	124.7	6.9	3.5	3.0
as % of GDP	13.4	15.7	17.8	16.7	18.9	19.4	20.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)										Portugal: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	10	10	11	10	10	10	10	0.3	-0.4	-0.4		
GDP (in 000 ME13)	169	176	181	174	187	204	217	0.7	0.4	1.5		
Gross Inland Consumption (ktoe)	25285	27475	24205	22984	21352	20739	18672	-0.4	-1.2	-1.3		
Solids	3805	3349	1658	3347	809	9	4	-8.0	-6.9	-41.8		
Oil	15475	16174	12215	10669	10384	9923	9081	-2.3	-1.6	-1.3		
Natural gas	2078	3751	4489	3446	3420	3648	1706	8.0	-2.7	-6.7		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Renewable energy forms	3846	3615	5618	5328	6289	6658	7445	3.9	1.1	1.7		
Energy Branch Consumption	1028	1235	1195	1416	1210	1228	1228	1.5	0.1	0.2		
Non-Energy Uses	2393	2587	1728	1470	1485	1525	1509	-3.2	-1.5	0.2		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	3891	3615	5800	5216	6158	6535	7298	4.1	0.6	1.7		
Solids	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Oil	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Natural gas	45	0	0	0	0	0	0	-96.1	-100.0	0.0		
Nuclear	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy sources	3846	3615	5800	5216	6158	6535	7298	4.2	0.6	1.7		
Hydro	974	407	1389	820	1596	1563	1623	3.6	1.4	0.2		
Biomass & Waste	2770	2967	3375	3181	3275	3476	3509	2.0	-0.3	0.7		
Wind	14	153	790	1004	1012	1013	1498	49.2	2.5	4.0		
Solar and others	19	23	66	136	199	406	589	13.6	11.6	11.5		
Geothermal	70	66	181	76	76	77	79	10.0	-8.3	0.4		
Net Imports (ktoe)	22072	24845	18588	16330	15748	14743	11898	-1.7	-1.6	-2.8		
Solids	3914	3225	1629	3347	809	9	4	-8.4	-6.8	-41.8		
Oil	16039	17140	12436	11231	10932	10448	9572	-2.5	-1.3	-1.3		
Crude oil and Feedstocks	12316	13795	11875	14608	14070	13382	12385	-0.4	1.7	-1.3		
Oil products	3723	3345	561	-3376	-3138	-2934	-2813	-17.2	0.0	-1.1		
Natural gas	2039	3893	4505	3446	3426	3661	1739	8.2	-2.7	-6.6		
Electricity	80	587	226	195	451	501	437	10.9	7.2	-0.3		
Import Dependency (%)	85.1	88.6	75.1	77.8	71.9	69.3	62.0					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	43372	46188	53688	50195	48526	48023	45275	2.2	-1.0	-0.7		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids	14595	15226	7100	14862	3501	0	0	-7.0	-6.8	-100.0		
Oil (including refinery gas)	8421	8791	3008	770	1967	1252	499	-9.8	-4.2	-12.8		
Gas (including derived gases)	7231	13606	14900	9528	8659	9579	551	7.5	-5.3	-24.1		
Biomass-waste	1553	1987	2942	2936	3074	4032	3500	6.6	0.4	1.3		
Hydro (pumping excluded)	11323	4731	16148	9535	18562	18174	18868	3.6	1.4	0.2		
Wind	168	1773	9182	11676	11767	11781	17424	49.2	2.5	4.0		
Solar	1	3	212	680	789	2997	4225	68.3	14.1	18.3		
Geothermal and other renewables	80	71	196	208	208	208	208	9.4	0.6	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	10989	13461	18921	21094	21849	21680	24500	5.6	1.4	1.2		
Nuclear energy	0	0	0	0	0	0	0	0.0	0.0	0.0		
Renewable energy	4619	6083	9036	12611	14827	16153	19054	6.9	5.1	2.5		
Hydro (pumping excluded)	4535	5017	5106	7065	9183	9408	9971	1.2	6.0	0.8		
Wind	83	1064	3796	5079	5113	5113	6876	46.6	3.0	3.0		
Solar	1	2	134	467	531	1631	2207	63.2	14.8	15.3		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	6370	7378	9885	8484	7022	5527	5445	4.5	-3.4	-2.5		
of which cogeneration units	1676	1079	1310	1491	1783	1394	1110	-2.4	3.1	-4.6		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1774	1728	1728	1728	578	0	0	-0.3	-10.4	-100.0		
Gas fired	1542	2477	4799	5062	4989	4132	4056	12.0	0.4	-2.0		
Oil fired	2819	2915	2990	1144	783	695	669	0.6	-12.5	-1.6		
Biomass-waste fired	221	244	343	521	643	672	692	4.5	6.5	0.7		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	14	14	25	29	29	29	29	6.0	1.5	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	43.5	37.8	31.6	26.3	24.9	24.9	20.9					
Efficiency of gross thermal power generation (%)	42.0	43.1	41.8	42.2	43.6	40.9	28.9					
% of gross electricity from CHP	10.0	11.6	11.8	17.0	22.6	13.9	10.0					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	30.3	18.5	53.4	49.9	70.9	77.4	97.7					
Fuel Inputs to Thermal Power Generation (ktoe)	6520	7914	5787	5770	3431	3167	1417	-1.2	-5.1	-8.5		
Solids	3198	3319	1597	3329	794	0	0	-6.7	-6.8	-100.0		
Oil (including refinery gas)	1683	1793	574	185	466	296	118	-10.2	-2.1	-12.9		
Gas (including derived gases)	1215	2309	2775	1560	1432	1742	148	8.6	-6.4	-20.3		
Biomass & Waste	356	428	662	621	664	1054	1077	6.4	0.0	4.9		
Geothermal heat	69	65	180	75	75	75	75	10.1	-8.4	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	13004	13953	12457	15231	14687	13983	12972	-0.4	1.7	-1.2		
Refineries	12555	13953	12148	14807	14260	13564	12539	-0.3	1.6	-1.3		
Biofuels and hydrogen production	0	0	309	422	423	396	404	0.0	3.2	-0.4		
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0		
Derived gases, cokeries etc.	449	0	0	1	4	23	29	0.0	0.0	21.8		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Portugal: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	105	115	116	121	125	136	145	1.0	0.8	1.5
Public road transport	12	6	6	6	6	7	7	-6.4	0.5	1.1
Private cars and motorcycles	73	87	86	86	86	93	98	1.7	0.1	1.3
Rail	5	5	5	5	6	7	8	1.4	1.7	2.3
Aviation ⁽³⁾	16	17	18	23	26	29	31	1.6	3.3	2.0
Inland navigation	0	0	0	0	0	0	0	1.0	0.9	1.3
Freight transport activity (Gtkm)	26	32	27	28	30	32	34	0.5	0.9	1.4
Heavy goods and light commercial vehicles	20	25	20	20	21	23	24	-0.4	0.9	1.3
Rail	2	2	2	2	3	3	3	0.6	1.5	2.4
Inland navigation	4	5	5	6	6	6	7	4.6	0.6	1.3
Energy demand in transport (ktoe) ⁽⁴⁾	6636	7188	7226	6867	6637	6463	6302	0.9	-0.8	-0.5
Public road transport	237	135	129	129	128	133	142	-5.9	0.0	1.0
Private cars and motorcycles	4590	5056	5149	4730	4385	4040	3818	1.2	-1.6	-1.4
Heavy goods and light commercial vehicles	891	1026	835	797	844	877	872	-0.6	0.1	0.3
Rail	89	67	57	50	56	57	62	-4.3	-0.3	1.1
Aviation	784	888	1012	1124	1185	1314	1366	2.6	1.6	1.4
Inland navigation	45	18	45	37	39	41	43	0.1	-1.5	1.0
<i>By transport activity</i>										
Passenger transport	5689	6109	6318	6007	5725	5514	5353	1.1	-1.0	-0.7
Freight transport	947	1079	908	860	911	949	949	-0.4	0.0	0.4
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.6			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	4.3	6.2	6.5	6.5	6.9			
ENERGY EFFICIENCY										
Primary energy consumption	22892	24889	22477	21513	19867	19214	17163	-0.2	-1.2	-1.5
Final Energy Demand	17919	19009	18022	16789	16806	16158	15138	0.1	-0.7	-1.0
<i>by sector</i>										
Industry	6323	5796	5453	5066	5138	4948	4723	-1.5	-0.6	-0.8
Energy intensive industries	4179	3889	3634	3613	3665	3530	3342	-1.4	0.1	-0.9
Other industrial sectors	2144	1907	1819	1452	1474	1419	1381	-1.6	-2.1	-0.6
Residential	2804	3224	2976	2632	2764	2603	2319	0.6	-0.7	-1.7
Tertiary	2157	2801	2368	2224	2267	2143	1793	0.9	-0.4	-2.3
Transport ⁽⁵⁾	6636	7188	7226	6867	6637	6463	6302	0.9	-0.8	-0.5
<i>by fuel</i>										
Solids	466	17	50	17	15	9	4	-20.0	-11.4	-13.3
Oil	10713	10812	9199	8142	7703	7325	6737	-1.5	-1.8	-1.3
Gas	873	1307	1564	1691	1800	1729	1395	6.0	1.4	-2.5
Electricity	3300	3983	4290	3865	4051	4102	3811	2.7	-0.6	-0.6
Heat (from CHP and District Heating)	134	328	338	325	363	298	375	9.7	0.7	0.3
Renewable energy forms	2434	2563	2581	2748	2870	2672	2780	0.6	1.1	-0.3
Other	0	0	0	1	4	24	35	0.0	0.0	24.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	150	156	134	132	114	101	86	-1.1	-1.6	-2.8
Industry (Energy on Value added, index 2000=100)	100	93	89	85	82	74	68	-1.2	-0.8	-1.8
Residential (Energy on Private Income, index 2000=100)	100	108	94	87	86	74	61	-0.6	-0.9	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	120	94	91	86	74	58	-0.6	-0.9	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	48	47	46	41	37	32	29	-0.3	-2.2	-2.3
Freight transport (toe/Mtkm)	36	33	33	31	30	29	28	-0.9	-0.8	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	86.9	90.7	73.4	73.2	59.6	55.0	46.2	-1.7	-2.1	-2.5
of which ETS sectors (2013 scope) GHG emissions	40.6	27.7	32.3	32.3	22.0	19.3	14.0		-2.3	-4.4
of which ESD sectors (2013 scope) GHG emissions	50.1	45.7	40.9	40.9	37.7	35.6	32.2		-1.9	-1.6
CO₂ Emissions (energy related)	61.0	64.6	49.6	50.1	38.7	34.5	27.2	-2.1	-2.4	-3.5
Power generation/District heating	21.7	24.9	14.9	18.0	8.1	5.0	0.7	-3.6	-5.9	-21.4
Energy Branch	2.5	3.1	2.5	3.1	2.6	2.8	2.6	-0.2	0.6	-0.3
Industry	11.6	8.2	6.3	5.7	5.5	5.1	3.7	-5.9	-1.4	-3.8
Residential	2.0	2.3	2.6	2.0	2.0	1.8	1.6	2.5	-2.4	-2.4
Tertiary	3.4	4.4	2.4	2.0	1.7	1.5	1.2	-3.2	-3.3	-3.9
Transport	19.9	21.7	20.9	19.5	18.8	18.2	17.5	0.5	-1.1	-0.7
CO₂ Emissions (non energy and non land use related)	6.6	7.0	5.4	6.1	6.0	6.2	6.2	-2.0	1.1	0.2
Non-CO₂ GHG emissions	19.3	19.1	18.4	16.9	14.8	14.3	12.8	-0.4	-2.1	-1.4
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	139.7	145.8	118.0	117.7	95.9	88.4	74.3	-1.7	-2.1	-2.5
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.48	0.50	0.25	0.32	0.15	0.09	0.01	-6.3	-5.1	-21.0
Final energy demand (t of CO ₂ /toe)	2.05	1.92	1.78	1.73	1.66	1.65	1.58	-1.4	-0.7	-0.5
Industry	1.83	1.42	1.15	1.12	1.06	1.04	0.79	-4.5	-0.8	-3.0
Residential	0.71	0.72	0.86	0.75	0.73	0.67	0.68	1.9	-1.7	-0.7
Tertiary	1.55	1.56	1.02	0.88	0.76	0.72	0.64	-4.1	-2.9	-1.6
Transport	3.00	3.01	2.89	2.84	2.83	2.62	2.78	-0.4	-0.2	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	19.1	19.4	24.3	25.3	33.4	35.8	43.3			
RES-H&C share	30.4	32.1	33.9	36.8	38.7	39.8	45.9			
RES-E share	28.3	27.7	40.7	47.4	63.7	68.8	89.0			
RES-T share (based on ILUC formula)	0.4	0.4	5.7	1.3	10.9	13.4	20.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	67	76	79	98	113	117	105	1.6	3.7	-0.7
Average Price of Electricity in Final demand sectors (€13/MWh)	118	120	104	128	140	145	149	-1.3	3.0	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	16.8	22.3	24.4	23.5	28.5	30.9	33.9	3.8	1.6	1.7
as % of GDP	10.0	12.7	13.5	13.5	15.3	15.1	15.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Romania: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	22	21	20	20	20	19	19	-1.0	-0.3	-0.4
GDP (in 000 M€13)	87	114	130	145	163	181	195	4.1	2.3	1.8
Gross Inland Consumption (ktoe)	36650	39207	35800	33091	34987	35531	32251	-0.2	-0.2	-0.8
Solids	7493	8788	7008	6207	6463	5014	2851	-0.7	-0.8	-7.9
Oil	9992	10286	9310	8775	8532	8389	7885	-0.7	-0.9	-0.8
Natural gas	13680	13923	10788	9688	10755	10210	7499	-2.3	0.0	-3.5
Nuclear	1407	1433	2998	2838	2846	5749	5289	7.9	-0.5	6.4
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1
Renewable energy forms	4137	5026	5891	6299	6968	7063	9675	3.6	1.7	3.3
Energy Branch Consumption	3675	4105	2839	2480	2444	2325	2062	-2.5	-1.5	-1.7
Non-Energy Uses	1883	2467	1473	1754	2001	2202	2347	-2.4	3.1	1.6
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	28465	28224	27824	26642	28342	30084	30161	-0.2	0.2	0.6
Solids	5604	5795	5904	5042	5112	3839	2057	0.5	-1.4	-8.7
Oil	6355	6226	4565	3643	3646	3656	3651	-3.3	-2.2	0.0
Natural gas	10968	9701	8619	8848	9954	9942	9672	-2.4	1.5	-0.3
Nuclear	1407	1433	2998	2838	2846	5749	5289	7.9	-0.5	6.4
Renewable energy sources	4131	5070	5739	6271	6784	6898	9491	3.3	1.7	3.4
Hydro	1271	1738	1710	1386	1438	1443	1443	3.0	-1.7	0.0
Biomass & Waste	2854	3314	3980	4135	4558	4575	5795	3.4	1.4	2.4
Wind	0	0	26	557	560	560	1593	0.0	35.8	11.0
Solar and others	0	0	0	163	183	250	455	0.0	111.9	9.6
Geothermal	7	18	23	30	45	70	205	13.1	7.1	16.3
Net Imports (ktoe)	8009	10867	7827	6473	6677	5484	2131	-0.2	-1.6	-10.8
Solids	1920	2939	1234	1165	1351	1175	794	-4.3	0.9	-5.2
Oil	3437	3988	4838	5156	4917	4768	4273	3.5	0.2	-1.4
Crude oil and Feedstocks	4801	8857	6233	5504	4996	4622	4065	2.6	-2.2	-2.0
Oil products	-1364	-4870	-1395	-348	-79	146	208	0.2	-25.0	0.0
Natural gas	2712	4190	1816	839	802	268	-2171	-3.9	-7.8	0.0
Electricity	-60	-250	-196	-716	-578	-893	-949	12.6	11.4	5.1
Import Dependency (%)	21.8	27.7	21.9	19.5	19.1	15.4	6.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	51560	59413	60619	67527	70578	75058	73508	1.6	1.5	0.4
Nuclear energy	5456	5555	11623	11890	11922	23792	21728	7.9	0.3	6.2
Solids	18926	21916	20681	21982	22414	16312	8020	0.9	0.8	-9.8
Oil (including refinery gas)	3399	1894	692	625	406	230	205	-14.7	-5.2	-6.6
Gas (including derived gases)	9001	9834	7323	8032	9888	8008	440	-2.0	3.0	-26.7
Biomass-waste	0	7	111	522	763	974	3506	0.0	21.3	16.5
Hydro (pumping excluded)	14778	20207	19883	16112	16723	16778	16779	3.0	-1.7	0.0
Wind	0	0	306	6473	6512	6512	18518	0.0	35.8	11.0
Solar	0	0	0	1891	1950	2452	4311	0.0	0.0	8.3
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	0.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	20197	19163	20120	24896	23878	22628	26525	0.0	1.7	1.1
Nuclear energy	672	672	1344	1414	1414	2828	2828	7.2	0.5	7.2
Renewable energy	6242	6289	6863	11413	11457	11707	16693	1.0	5.3	3.8
Hydro (pumping excluded)	6242	6289	6474	6645	6645	6645	6645	0.4	0.3	0.0
Wind	0	0	389	2976	2989	2989	6740	0.0	22.6	8.5
Solar	0	0	0	1792	1824	2074	3308	0.0	0.0	6.1
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	13283	12192	11913	12070	11007	8093	7004	-1.1	-0.8	-4.4
of which cogeneration units	3431	5246	4582	4234	4098	2609	1806	2.9	-1.1	-7.9
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	7602	7057	6643	6441	5626	3094	1909	-1.3	-1.6	-10.2
Gas fired	3728	3439	3488	4173	4110	4059	3848	-0.7	1.7	-0.7
Oil fired	1806	1691	1759	1360	1132	771	676	-0.3	-4.3	-5.0
Biomass-waste fired	147	5	23	96	139	169	571	-16.9	19.7	15.1
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	27.5	33.1	31.5	28.5	31.2	35.4	30.3			
Efficiency of gross thermal power generation (%)	25.3	28.0	28.6	39.2	38.9	39.1	33.0			
% of gross electricity from CHP	32.3	26.2	10.8	12.0	12.4	10.0	6.8			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	39.2	43.4	52.7	54.6	53.7	67.3	88.2			
Fuel Inputs to Thermal Power Generation (ktoe)	10788	10329	8675	6836	7396	5611	3176	-2.2	-1.6	-8.1
Solids	5462	6085	5929	5216	5337	3980	1983	0.8	-1.0	-9.4
Oil (including refinery gas)	1736	799	327	176	130	73	66	-15.4	-8.8	-6.6
Gas (including derived gases)	3579	3437	2399	1331	1760	1338	104	-3.9	-3.0	-24.7
Biomass & Waste	12	9	21	113	169	219	1023	6.1	23.3	19.7
Geothermal heat	0	0	1	0	0	0	0	0.0	-100.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	16275	19666	15568	13664	13414	15834	14663	-0.4	-1.5	0.9
Refineries	11250	15219	11480	9680	9160	8772	8204	0.2	-2.2	-1.1
Biofuels and hydrogen production	0	0	115	273	558	521	507	0.0	17.1	-0.9
District heating	1738	825	749	702	679	622	495	-8.1	-1.0	-3.1
Derived gases, cokeries etc.	3287	3621	3223	3009	3017	5920	5457	-0.2	-0.7	6.1

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Romania: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	85	93	110	118	130	144	159	2.6	1.7	2.0
Public road transport	12	12	12	12	13	13	14	0.0	0.8	0.7
Private cars and motorcycles	54	63	78	85	92	102	112	3.9	1.7	2.0
Rail	18	15	13	13	15	16	17	-3.3	1.6	1.6
Aviation ⁽³⁾	2	3	7	8	10	12	15	15.1	3.4	4.7
Inland navigation	0	0	0	0	0	0	0	-2.5	2.1	2.6
Freight transport activity (Gtkm)	27	56	43	51	61	70	77	4.7	3.5	2.3
Heavy goods and light commercial vehicles	8	31	16	20	25	29	32	7.2	4.4	2.4
Rail	16	17	12	15	18	21	23	-2.7	3.9	2.6
Inland navigation	3	8	14	15	18	20	21	18.4	2.1	2.0
Energy demand in transport (ktoe) ⁽⁴⁾	3336	4186	5073	5448	5725	5854	5886	4.3	1.2	0.3
Public road transport	293	260	359	373	378	379	377	2.0	0.5	0.0
Private cars and motorcycles	2082	2416	3214	3381	3371	3277	3181	4.4	0.5	-0.6
Heavy goods and light commercial vehicles	363	1182	946	1142	1356	1481	1524	10.1	3.7	1.2
Rail	357	159	222	245	274	303	322	-4.6	2.1	1.6
Aviation	128	128	272	265	298	362	426	7.8	0.9	3.6
Inland navigation	113	42	59	42	47	52	56	-6.2	-2.2	1.8
<i>By transport activity</i>										
Passenger transport	2648	2855	3921	4091	4130	4110	4079	4.0	0.5	-0.1
Freight transport	689	1331	1152	1356	1595	1744	1807	5.3	3.3	1.3
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.0	0.4	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.3	5.1	10.0	9.2	9.0			
ENERGY EFFICIENCY										
Primary energy consumption	34767	36740	34326	31337	32986	33329	29904	-0.1	-0.4	-1.0
Final Energy Demand	22772	24714	22591	23117	24598	24474	22964	-0.1	0.9	-0.7
<i>by sector</i>										
Industry	9296	10007	6876	7316	8143	8284	7760	-3.0	1.7	-0.5
Energy intensive industries	6510	7208	4759	4794	5394	5359	4811	-3.1	1.3	-1.1
Other industrial sectors	2787	2799	2117	2522	2749	2925	2949	-2.7	2.6	0.7
Residential	8409	7990	8102	7825	8138	7787	7046	-0.4	0.0	-1.4
Tertiary	1606	2441	2489	2468	2529	2482	2205	4.5	0.2	-1.4
Transport ⁽⁵⁾	3460	4276	5124	5507	5788	5921	5953	4.0	1.2	0.3
<i>by fuel</i>										
Solids	1046	1611	939	815	940	849	687	-1.1	0.0	-3.1
Oil	5526	6628	6184	6765	6598	6521	6068	1.1	0.7	-0.8
Gas	6910	7754	6189	6337	6834	6746	5563	-1.1	1.0	-2.0
Electricity	2918	3341	3553	3683	4073	4242	4286	2.0	1.4	0.5
Heat (from CHP and District Heating)	3570	2136	1650	1493	1622	1688	1554	-7.4	-0.2	-0.4
Renewable energy forms	2802	3244	4077	4023	4530	4423	4796	3.8	1.1	0.6
Other	0	0	0	0	1	4	10	-100.0	0.0	27.2
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	423	343	275	229	215	197	165	-4.2	-2.5	-2.6
Industry (Energy on Value added, index 2000=100)	100	78	44	41	40	37	32	-7.8	-1.0	-2.3
Residential (Energy on Private Income, index 2000=100)	100	59	49	43	39	34	28	-6.9	-2.1	-3.3
Tertiary (Energy on Value added, index 2000=100)	100	119	114	102	92	81	66	1.4	-2.1	-3.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	31	31	35	34	32	28	25	1.3	-1.2	-2.1
Freight transport (toe/Mtkm)	25	24	27	27	26	25	24	0.5	-0.2	-1.1
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	145.9	151.3	125.5	118.7	118.5	109.6	90.6	-1.5	-0.6	-2.6
of which ETS sectors (2013 scope) GHG emissions	74.8	55.8	46.9	48.7	40.6	26.3		-1.3	-6.0	
of which ESD sectors (2013 scope) GHG emissions	76.5	69.6	71.8	69.7	69.0	64.3		0.0	-0.8	
CO₂ Emissions (energy related)	88.8	95.8	77.4	71.5	73.8	65.5	48.2	-1.4	-0.5	-4.2
Power generation/District heating	42.0	39.0	33.6	27.2	28.6	21.3	9.1	-2.2	-1.6	-10.8
Energy Branch	6.8	7.7	5.1	4.0	3.8	3.6	3.4	-2.8	-2.9	-1.1
Industry	21.6	25.2	14.4	14.7	15.7	14.7	11.5	-4.0	0.9	-3.0
Residential	6.6	7.3	5.8	6.5	6.9	6.8	5.9	-1.2	1.7	-1.5
Tertiary	1.9	4.2	3.6	3.5	3.5	3.3	2.6	6.7	-0.4	-3.0
Transport	9.9	12.4	14.8	15.5	15.4	15.8	15.7	4.1	0.4	0.2
CO₂ Emissions (non energy and non land use related)	13.4	8.7	7.1	7.4	7.8	7.6	7.5	-6.1	0.8	-0.4
Non-CO₂ GHG emissions	43.8	46.7	40.9	39.8	36.9	36.5	34.9	-0.7	-1.0	-0.5
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	57.4	59.5	49.4	46.7	46.6	43.1	35.7	-1.5	-0.6	-2.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.41	0.42	0.39	0.30	0.30	0.21	0.10	-0.6	-2.5	-11.0
Final energy demand (t of CO ₂ /toe)	1.76	1.99	1.71	1.74	1.68	1.66	1.55	-0.3	-0.1	-0.8
Industry	2.33	2.52	2.09	2.01	1.92	1.77	1.49	-1.1	-0.8	-2.5
Residential	0.79	0.92	0.72	0.83	0.85	0.88	0.84	-0.8	1.6	-0.1
Tertiary	1.17	1.70	1.44	1.42	1.37	1.31	1.16	2.2	-0.5	-1.7
Transport	2.86	2.90	2.89	2.81	2.67	2.67	2.64	0.1	-0.8	-0.1
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.9	17.6	23.3	25.1	26.2	26.9	38.3			
RES-H&C share	16.1	17.9	27.4	25.9	26.4	27.6	37.5			
RES-E share	30.2	28.8	30.4	42.3	40.7	41.4	69.2			
RES-T share (based on ILUC formula)	2.3	1.9	3.8	7.5	10.2	10.5	16.8			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	43	72	70	76	75	75	77	5.0	0.7	0.3
Average Price of Electricity in Final demand sectors (€13/MWh)	52	105	90	101	109	118	132	5.7	1.9	1.9
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	9.9	19.1	23.0	26.7	32.5	37.1	43.4	8.8	3.5	2.9
as % of GDP	11.5	16.8	17.7	18.4	19.9	20.5	22.2			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovakia: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30		
								Annual % Change				
Population (in million)	5	5	5	5	5	5	5	0.0	0.0	-0.2		
GDP (in 000 ME13)	43	55	69	76	89	102	117	4.8	2.6	2.7		
Gross Inland Consumption (ktoe)	18302	19029	17864	16867	18318	18516	17947	-0.2	0.3	-0.2		
Solids	4278	4231	3897	3247	3115	2787	1718	-0.9	-2.2	-5.8		
Oil	3415	3711	3692	3346	3438	3411	3419	0.8	-0.7	-0.1		
Natural gas	5777	5884	5007	4939	4980	5005	4192	-1.4	-0.1	-1.7		
Nuclear	4255	4626	3819	3569	4953	5375	6093	-1.1	2.6	2.1		
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6		
Renewable energy forms	810	859	1360	1551	2037	2167	2764	5.3	4.1	3.1		
Energy Branch Consumption	623	1297	963	942	937	851	804	4.5	-0.3	-1.5		
Non-Energy Uses	1365	1279	1053	1597	1738	1886	2026	-2.6	5.1	1.5		
SECURITY OF SUPPLY												
Production (incl.recovery of products) (ktoe)	6389	6684	6345	6192	7956	8122	9140	-0.1	2.3	1.4		
Solids	1018	637	613	593	512	431	120	-4.9	-1.8	-13.5		
Oil	165	383	387	297	264	0	0	8.9	-3.7	-100.0		
Natural gas	133	126	88	120	107	71	72	-4.0	1.9	-3.8		
Nuclear	4255	4626	3819	3569	4953	5375	6093	-1.1	2.6	2.1		
Renewable energy sources	818	912	1438	1613	2121	2244	2855	5.8	4.0	3.0		
Hydro	397	399	452	407	468	432	431	1.3	0.4	-0.8		
Biomass & Waste	421	505	972	1148	1574	1643	2214	8.7	4.9	3.5		
Wind	0	1	1	1	2	71	71	0.0	16.2	41.3		
Solar and others	0	0	6	51	63	70	84	0.0	26.8	3.0		
Geothermal	0	8	8	6	14	28	55	0.0	5.4	14.6		
Net Imports (ktoe)	11997	12428	11230	10675	10362	10394	8807	-0.7	-0.8	-1.6		
Solids	3432	3739	2951	2654	2603	2356	1598	-1.5	-1.2	-4.8		
Oil	3090	3274	3266	3048	3174	3411	3419	0.6	-0.3	0.7		
Crude oil and Feedstocks	5720	5429	5282	5716	5602	5623	5417	-0.8	0.6	-0.3		
Oil products	-2630	-2155	-2015	-2667	-2428	-2212	-1999	-2.6	1.9	-1.9		
Natural gas	5707	5735	5003	4819	4873	4934	4119	-1.3	-0.3	-1.7		
Electricity	-232	-281	90	215	-203	-230	-238	0.0	0.0	1.6		
Import Dependency (%)	65.5	65.3	62.9	63.3	56.6	56.1	49.1					
ELECTRICITY												
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	30798	31352	27464	27068	34024	36164	36086	-1.1	2.2	0.6		
Nuclear energy	16494	17727	14574	14662	20320	22049	26135	-1.2	3.4	2.5		
Solids	5584	5535	3570	4120	4615	3631	625	-4.4	2.6	-18.1		
Oil (including refinery gas)	202	741	600	164	8	91	91	11.5	-34.7	26.8		
Gas (including derived gases)	3871	2629	2716	1730	920	2201	347	-3.5	-10.3	-9.3		
Biomass-waste	32	76	726	1129	2154	1811	2424	36.6	11.5	1.2		
Hydro (pumping excluded)	4615	4638	5255	4738	5448	5021	5017	1.3	0.4	-0.8		
Wind	0	6	6	6	26	827	827	0.0	15.8	41.3		
Solar	0	0	17	520	532	532	619	0.0	40.8	1.5		
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	-100.0	0.0		
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Net Generation Capacity (MW _e)	6919	7103	6715	7497	7733	8297	9295	-0.3	1.4	1.9		
Nuclear energy	2707	2707	1845	1940	2820	2820	4020	-3.8	4.3	3.6		
Renewable energy	1685	1601	1624	2220	2357	2996	3056	-0.4	3.8	2.6		
Hydro (pumping excluded)	1685	1596	1600	1607	1719	1719	1719	-0.5	0.7	0.0		
Wind	0	5	5	5	19	657	657	0.0	14.3	42.4		
Solar	0	0	19	608	620	620	680	0.0	41.7	0.9		
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0		
Thermal power	2526	2795	3246	3337	2555	2482	2220	2.5	-2.4	-1.4		
of which cogeneration units	618	5411	2821	1020	871	908	664	16.4	-11.1	-2.7		
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0		
Solids fired	1618	1617	1313	1274	792	711	454	-2.1	-4.9	-5.4		
Gas fired	821	1067	1674	1738	1325	1327	1103	7.4	-2.3	-1.8		
Oil fired	81	81	81	84	84	84	84	0.0	0.4	0.0		
Biomass-waste fired	7	30	177	241	354	359	580	38.2	7.2	5.1		
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.2	46.9	42.6	38.8	47.3	47.1	42.2					
Efficiency of gross thermal power generation (%)	31.4	29.0	25.6	36.3	36.9	35.7	28.4					
% of gross electricity from CHP	18.4	15.3	15.9	25.6	21.9	19.6	9.5					
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
% of carbon free (RES, nuclear) gross electricity generation	68.6	71.6	74.9	77.8	83.7	83.6	97.1					
Fuel Inputs to Thermal Power Generation (ktoe)	2656	2664	2555	1692	1792	1862	1056	-0.4	-3.5	-5.2		
Solids	1619	1677	1205	1089	1132	981	154	-2.9	-0.6	-18.1		
Oil (including refinery gas)	31	100	293	34	3	30	30	25.4	-37.2	26.8		
Gas (including derived gases)	1002	847	793	314	173	410	101	-2.3	-14.1	-5.2		
Biomass & Waste	4	40	264	255	484	441	771	51.0	6.2	4.8		
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0		
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0		
Fuel Input to other conversion processes	12901	13989	12558	12416	13527	13502	13866	-0.3	0.7	0.2		
Refineries	5959	6398	6011	6450	6334	6120	5942	0.1	0.5	-0.6		
Biofuels and hydrogen production	0	11	98	118	176	170	189	0.0	6.0	0.8		
District heating	674	718	497	367	376	373	335	-3.0	-2.8	-1.1		
Derived gases, cokeries etc.	6268	6862	5952	5481	6642	6838	7400	-0.5	1.1	1.1		

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Slovakia: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT							Annual % Change			
Passenger transport activity (Gpkm)	37	39	36	38	45	51	57	-0.2	2.2	2.4
Public road transport	9	9	5	6	6	7	8	-5.5	2.0	2.2
Private cars and motorcycles	24	26	27	28	34	38	43	1.2	2.1	2.3
Rail	3	3	3	3	3	4	5	-2.1	2.9	3.2
Aviation ⁽³⁾	0	2	1	1	1	2	2	15.3	3.0	4.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	20	21	22	23	26	29	32	1.1	1.8	2.1
Heavy goods and light commercial vehicles	7	11	13	14	15	16	18	6.0	1.9	1.7
Rail	11	9	8	8	10	11	13	-3.2	1.8	2.9
Inland navigation	1	1	1	1	1	1	2	-1.5	1.1	1.5
Energy demand in transport (ktoe) ⁽⁴⁾	1455	1794	2241	2205	2346	2318	2370	4.4	0.5	0.1
Public road transport	193	185	132	141	154	165	174	-3.7	1.5	1.3
Private cars and motorcycles	830	992	1194	1155	1208	1143	1158	3.7	0.1	-0.4
Heavy goods and light commercial vehicles	308	527	821	814	872	883	892	10.3	0.6	0.2
Rail	83	42	40	41	48	54	61	-7.1	1.8	2.5
Aviation	27	39	41	44	53	62	71	4.5	2.5	3.0
Inland navigation	14	7	12	10	11	12	13	-2.0	-0.4	1.4
<i>By transport activity</i>										
Passenger transport	1064	1223	1374	1346	1423	1378	1413	2.6	0.4	-0.1
Freight transport	390	570	867	859	924	941	956	8.3	0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.5	1.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.6	4.4	5.5	7.7	7.9	8.7			
ENERGY EFFICIENCY										
Primary energy consumption	16937	17751	16811	15270	16580	16630	15921	-0.1	-0.1	-0.4
Final Energy Demand	10980	11561	11546	11225	11672	11471	10795	0.5	0.1	-0.8
<i>by sector</i>										
Industry	4532	4713	4361	4420	4567	4567	4422	-0.4	0.5	-0.3
Energy intensive industries	3678	3887	3637	3655	3737	3699	3522	-0.1	0.3	-0.6
Other industrial sectors	854	826	723	765	830	868	900	-1.7	1.4	0.8
Residential	2586	2540	2312	2176	2215	2171	1886	-1.1	-0.4	-1.6
Tertiary	2407	1916	2240	2038	2160	2036	1772	-0.7	-0.4	-2.0
Transport ⁽⁵⁾	1455	2392	2633	2591	2730	2697	2715	6.1	0.4	-0.1
<i>by fuel</i>										
Solids	1747	1572	1637	1294	1244	1179	999	-0.6	-2.7	-2.2
Oil	1703	2184	2301	2230	2287	2201	2150	3.1	-0.1	-0.6
Gas	4698	4540	4119	4011	4086	3794	3271	-1.3	-0.1	-2.2
Electricity	1893	1965	2075	2219	2346	2502	2520	0.9	1.2	0.7
Heat (from CHP and District Heating)	619	951	851	726	813	811	671	3.2	-0.5	-1.9
Renewable energy forms	320	349	562	745	894	976	1171	5.8	4.8	2.7
Other	0	0	0	0	2	8	13	0.0	0.0	23.9
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	424	347	259	221	206	182	154	-4.8	-2.3	-2.9
Industry (Energy on Value added, index 2000=100)	100	61	39	37	34	30	26	-8.9	-1.5	-2.7
Residential (Energy on Private Income, index 2000=100)	100	78	59	51	44	37	28	-5.1	-2.9	-4.5
Tertiary (Energy on Value added, index 2000=100)	100	72	68	54	49	40	30	-3.8	-3.2	-4.7
Passenger transport (toe/Mpkm) ⁽⁶⁾	29	31	37	35	31	27	24	2.7	-1.8	-2.5
Freight transport (toe/Mtkm)	20	27	40	37	35	32	30	7.2	-1.1	-1.7
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	54.1	54.7	50.8	45.0	42.3	39.5	32.3	-0.6	-1.8	-2.7
of which ETS sectors (2013 scope) GHG emissions	29.2	24.7	20.4	18.9	17.4	11.8		-2.6	-4.6	
of which ESD sectors (2013 scope) GHG emissions	25.5	26.1	24.6	23.4	22.1	20.5		-1.1	-1.3	
CO₂ Emissions (energy related)	38.7	41.6	38.7	33.6	32.3	29.7	22.8	0.0	-1.8	-3.4
Power generation/District heating	11.1	11.2	9.2	6.3	5.8	5.9	1.5	-1.8	-4.6	-12.4
Energy Branch	1.6	3.4	2.5	2.2	2.0	1.7	1.6	4.4	-2.0	-2.3
Industry	13.3	14.1	12.8	12.0	11.3	9.8	8.4	-0.4	-1.2	-3.0
Residential	4.1	3.6	3.4	2.8	2.7	2.5	2.1	-2.0	-2.2	-2.3
Tertiary	4.5	2.7	3.5	3.1	3.1	2.6	2.0	-2.5	-1.0	-4.5
Transport	4.1	6.6	7.3	7.1	7.3	7.2	7.1	5.9	0.1	-0.3
CO₂ Emissions (non energy and non land use related)	6.7	3.9	3.2	3.5	3.5	3.5	3.5	-7.0	0.9	0.0
Non-CO₂ GHG emissions	8.7	9.1	8.9	7.8	6.4	6.3	6.0	0.2	-3.2	-0.7
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	71.5	72.3	67.2	59.5	55.9	52.2	42.7	-0.6	-1.8	-2.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.27	0.25	0.23	0.17	0.13	0.12	0.03	-1.4	-5.9	-12.4
Final energy demand (t of CO ₂ /toe)	2.37	2.34	2.33	2.24	2.10	1.92	1.82	-0.2	-1.1	-1.4
Industry	2.94	2.99	2.94	2.72	2.48	2.14	1.90	0.0	-1.7	-2.7
Residential	1.60	1.40	1.47	1.30	1.22	1.17	1.14	-0.9	-1.8	-0.7
Tertiary	1.85	1.43	1.55	1.54	1.45	1.27	1.12	-1.8	-0.7	-2.6
Transport	2.82	2.77	2.77	2.74	2.69	2.67	2.62	-0.2	-0.3	-0.2
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	3.3	5.8	9.0	11.7	14.1	15.8	21.9			
RES-H&C share	1.2	4.9	7.8	10.3	12.2	15.4	25.7			
RES-E share	11.9	13.5	17.8	21.7	25.9	24.5	26.8			
RES-T share (based on ILUC formula)	1.7	1.5	5.3	6.6	10.1	11.0	13.7			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	62	60	70	80	82	76	92	1.2	1.6	1.1
Average Price of Electricity in Final demand sectors (€13/MWh)	94	102	143	128	133	141	157	4.3	-0.7	1.7
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	7.1	8.5	11.5	11.2	13.7	15.6	18.1	4.9	1.8	2.8
as % of GDP	16.4	15.6	16.6	14.7	15.4	15.3	15.5			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Slovenia: EUC03030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	2	2	2	2	2	2	2	0.3	0.2	0.0
GDP (in 000 M€13)	28	34	37	38	41	45	48	2.7	1.0	1.6
Gross Inland Consumption (ktoe)	6451	7325	7226	6776	7001	6773	6626	1.1	-0.3	-0.5
Solids	1305	1539	1451	1268	1353	1071	1135	1.1	-0.7	-1.7
Oil	2419	2580	2579	2360	2275	2077	1824	0.6	-1.2	-2.2
Natural gas	826	929	863	681	689	747	626	0.4	-2.2	-1.0
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Renewable energy forms	788	787	1054	1182	1395	1497	1757	3.0	2.8	2.3
Energy Branch Consumption	107	100	112	99	105	86	100	0.5	-0.6	-0.5
Non-Energy Uses	238	310	209	114	120	126	126	-1.3	-5.4	0.5
SECURITY OF SUPPLY										
Production (incl. recovery of products) (ktoe)	3085	3492	3687	3441	3763	3639	4019	1.8	0.2	0.7
Solids	1062	1184	1196	1023	1127	840	991	1.2	-0.6	-1.3
Oil	1	0	0	0	0	0	0	-95.0	-100.0	0.0
Natural gas	6	3	6	3	4	11	15	0.0	-3.9	14.0
Nuclear	1228	1518	1459	1322	1373	1429	1429	1.7	-0.6	0.4
Renewable energy sources	788	787	1025	1094	1259	1359	1584	2.7	2.1	2.3
Hydro	330	298	388	380	391	407	415	1.6	0.1	0.6
Biomass & Waste	458	489	601	632	724	745	942	2.7	1.9	2.7
Wind	0	0	0	0	24	26	26	0.0	0.0	0.6
Solar and others	0	0	9	36	54	126	134	0.0	19.2	9.4
Geothermal	0	0	27	45	66	55	67	0.0	9.4	0.2
Net Imports (ktoe)	3415	3855	3581	3356	3258	3154	2629	0.5	-0.9	-2.1
Solids	244	323	279	245	226	231	144	1.4	-2.1	-4.4
Oil	2466	2634	2596	2380	2295	2097	1844	0.5	-1.2	-2.2
Crude oil and Feedstocks	152	0	0	0	0	0	0	-100.0	0.0	0.0
Oil products	2314	2634	2596	2380	2295	2097	1844	1.2	-1.2	-2.2
Natural gas	820	925	857	678	685	737	612	0.4	-2.2	-1.1
Electricity	-114	-28	-180	-36	-83	-49	-143	4.7	-7.4	5.6
Import Dependency (%)	52.9	52.5	49.4	49.4	46.4	46.4	39.5			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	13624	15117	16248	15126	16436	16774	18054	1.8	0.1	0.9
Nuclear energy	4761	5884	5657	5421	5628	5801	5801	1.7	-0.1	0.3
Solids	4611	5271	5288	4858	5182	3941	4325	1.4	-0.2	-1.8
Oil (including refinery gas)	55	42	8	0	0	0	0	-17.5	-100.0	0.0
Gas (including derived gases)	293	339	548	14	109	425	337	6.5	-14.9	11.9
Biomass-waste	70	120	222	111	300	423	1321	12.2	3.0	16.0
Hydro (pumping excluded)	3834	3461	4512	4423	4542	4735	4821	1.6	0.1	0.6
Wind	0	0	0	5	284	302	302	0.0	0.0	0.6
Solar	0	0	13	295	391	1148	1148	0.0	40.8	11.4
Geothermal and other renewables	0	0	0	0	0	0	0	0.0	0.0	-100.0
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	2955	3111	3186	3490	3886	4399	4223	0.8	2.0	0.8
Nuclear energy	700	700	700	700	700	700	700	0.0	0.0	0.0
Renewable energy	843	979	1086	1385	1773	2492	2513	2.6	5.0	3.6
Hydro (pumping excluded)	843	979	1074	1119	1220	1220	1240	2.5	1.3	0.2
Wind	0	0	0	4	200	212	212	0.0	0.0	0.6
Solar	0	0	12	262	352	1060	1060	0.0	40.2	11.6
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	1412	1432	1400	1405	1414	1206	1010	-0.1	0.1	-3.3
of which cogeneration units	648	336	333	228	213	242	197	-6.4	-4.4	-0.8
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	923	923	792	792	792	678	632	-1.5	0.0	-2.2
Gas fired	278	284	372	470	469	386	162	3.0	2.3	-10.1
Oil fired	176	190	185	92	29	16	16	0.5	-16.9	-5.7
Biomass-waste fired	35	35	51	51	124	126	199	3.9	9.3	4.9
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	49.4	51.9	54.5	46.4	45.3	41.6	46.5			
Efficiency of gross thermal power generation (%)	33.2	32.9	33.4	34.4	34.5	33.2	33.4			
% of gross electricity from CHP	6.4	7.3	6.9	8.9	8.5	6.1	4.4			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	63.6	62.6	64.0	67.8	67.8	74.0	74.2			
Fuel Inputs to Thermal Power Generation (ktoe)	1302	1508	1562	1247	1393	1241	1542	1.8	-1.1	1.0
Solids	1215	1412	1381	1217	1301	1029	1113	1.3	-0.6	-1.6
Oil (including refinery gas)	13	9	3	0	0	0	0	-13.3	-100.0	0.0
Gas (including derived gases)	59	58	113	3	19	91	73	6.7	-16.2	14.2
Biomass & Waste	15	30	65	27	73	121	357	15.5	1.2	17.2
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	1479	1607	1562	1481	1580	1627	1634	0.6	0.1	0.3
Refineries	171	0	0	0	0	0	0	-100.0	0.0	0.0
Biofuels and hydrogen production	0	0	46	98	145	141	157	0.0	12.3	0.8
District heating	80	89	57	61	62	56	46	-3.2	0.8	-2.9
Derived gases, cokeries etc.	1228	1518	1459	1322	1373	1431	1431	1.7	-0.6	0.4

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							Slovenia: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT							Annual % Change			
Passenger transport activity (Gpkm)	25	27	30	31	34	35	37	2.0	1.0	0.9
Public road transport	4	3	3	3	3	3	3	-1.0	0.2	0.3
Private cars and motorcycles	20	23	26	27	29	30	31	2.4	1.0	0.8
Rail	1	1	1	1	1	1	2	1.4	4.1	3.8
Aviation ⁽³⁾	0	0	0	0	0	1	1	2.0	3.3	3.0
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Freight transport activity (Gtkm)	6	11	11	12	15	18	20	5.6	3.3	2.8
Heavy goods and light commercial vehicles	4	8	8	8	10	12	13	7.9	3.1	2.1
Rail	3	3	3	4	5	6	7	1.8	3.6	4.2
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
Energy demand in transport (ktoe) ⁽⁴⁾	1249	1492	1806	1838	1906	1850	1772	3.8	0.5	-0.7
Public road transport	78	71	92	94	96	95	92	1.8	0.3	-0.4
Private cars and motorcycles	1025	1047	1304	1319	1300	1191	1090	2.4	0.0	-1.7
Heavy goods and light commercial vehicles	98	323	355	370	444	487	507	13.8	2.3	1.3
Rail	24	28	26	27	33	38	43	1.0	2.2	2.7
Aviation	25	23	28	28	34	38	41	1.3	2.1	1.7
Inland navigation	0	0	0	0	0	0	0	0.0	0.0	0.0
By transport activity										
Passenger transport	1132	1146	1430	1447	1437	1332	1232	2.4	0.1	-1.5
Freight transport	117	346	376	391	469	517	541	12.4	2.2	1.4
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	1.1	2.3			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.0	2.5	5.4	7.7	7.8	9.1			
ENERGY EFFICIENCY										
Primary energy consumption	6214	7016	7017	6662	6881	6647	6502	1.2	-0.2	-0.6
Final Energy Demand	4457	4897	4927	4954	5046	4876	4510	1.0	0.2	-1.1
by sector										
Industry	1424	1644	1273	1332	1411	1431	1335	-1.1	1.0	-0.6
Energy intensive industries	836	1028	788	890	944	947	849	-0.6	1.8	-1.1
Other industrial sectors	588	616	485	442	467	484	486	-1.9	-0.4	0.4
Residential	1077	1140	1191	1145	1100	1030	906	1.0	-0.8	-1.9
Tertiary	697	620	657	638	628	565	496	-0.6	-0.4	-2.3
Transport ⁽⁵⁾	1259	1493	1806	1839	1907	1851	1774	3.7	0.5	-0.7
by fuel										
Solids	90	80	47	51	52	42	22	-6.3	1.1	-8.2
Oil	2264	2409	2447	2239	2155	1952	1699	0.8	-1.3	-2.3
Gas	569	665	620	635	645	624	538	0.9	0.4	-1.8
Electricity	905	1096	1029	1098	1157	1243	1247	1.3	1.2	0.8
Heat (from CHP and District Heating)	195	196	192	197	204	204	185	-0.2	0.6	-1.0
Renewable energy forms	435	452	592	735	833	808	813	3.1	3.5	-0.2
Other	0	0	0	0	0	2	5	0.0	0.0	32.4
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	227	215	195	181	171	151	138	-1.5	-1.3	-2.1
Industry (Energy on Value added, index 2000=100)	100	93	70	74	71	66	57	-3.6	0.3	-2.3
Residential (Energy on Private Income, index 2000=100)	100	93	85	87	77	65	53	-1.6	-1.1	-3.7
Tertiary (Energy on Value added, index 2000=100)	100	74	70	66	59	48	40	-3.5	-1.6	-3.9
Passenger transport (toe/Mpkm) ⁽⁶⁾	45	42	46	46	42	37	33	0.3	-1.0	-2.4
Freight transport (toe/Mtkm)	18	32	34	33	31	29	27	6.4	-1.0	-1.4
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	19.0	20.2	19.2	17.5	17.4	15.6	14.7	0.1	-1.0	-1.7
of which ETS sectors (2013 scope) GHG emissions		8.9	8.2	7.2	7.5	6.4	6.3		-0.8	-1.8
of which ESD sectors (2013 scope) GHG emissions		11.3	11.0	10.2	9.8	9.2	8.3		-1.1	-1.6
CO2 Emissions (energy related)	14.1	15.5	15.3	13.8	13.9	12.2	11.4	0.9	-1.0	-1.9
Power generation/District heating	5.5	6.3	6.2	5.3	5.6	4.6	4.9	1.3	-1.1	-1.4
Energy Branch	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-14.9	-4.9	14.0
Industry	2.4	2.3	1.7	1.7	1.7	1.5	1.0	-3.0	-0.5	-4.7
Residential	1.3	1.5	1.2	0.9	0.8	0.7	0.5	-1.0	-4.0	-3.7
Tertiary	1.2	1.0	0.9	0.7	0.6	0.4	0.3	-3.0	-4.1	-6.2
Transport	3.7	4.4	5.3	5.2	5.3	5.0	4.7	3.8	0.0	-1.2
CO2 Emissions (non energy and non land use related)	1.0	1.2	0.8	0.7	0.7	0.8	0.8	-1.7	-1.1	0.2
Non-CO2 GHG emissions	3.9	3.5	3.0	3.0	2.7	2.6	2.5	-2.6	-1.0	-1.0
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	102.0	108.4	103.1	93.8	93.3	83.7	78.8	0.1	-1.0	-1.7
Carbon Intensity indicators										
Electricity and Steam production (t of CO2/MWh)	0.34	0.35	0.33	0.30	0.29	0.24	0.24	-0.3	-1.2	-2.0
Final energy demand (t of CO2/toe)	1.91	1.88	1.85	1.72	1.64	1.56	1.45	-0.4	-1.2	-1.3
Industry	1.66	1.41	1.37	1.29	1.18	1.02	0.77	-1.9	-1.5	-4.2
Residential	1.24	1.28	1.01	0.79	0.73	0.65	0.61	-2.0	-3.2	-1.8
Tertiary	1.68	1.63	1.32	1.03	0.91	0.77	0.61	-2.4	-3.6	-3.9
Transport	2.90	2.97	2.93	2.85	2.76	2.72	2.63	0.1	-0.6	-0.5
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	16.6	15.9	19.1	21.9	25.2	27.9	33.4			
RES-H&C share	18.9	19.0	25.5	29.8	34.4	37.7	47.6			
RES-E share	30.9	28.7	32.2	33.0	35.8	40.9	46.5			
RES-T share (based on ILUC formula)	1.0	0.8	3.2	6.1	10.1	12.3	18.5			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	49	47	45	67	70	60	64	-0.7	4.5	-1.0
Average Price of Electricity in Final demand sectors (€13/MWh)	109	86	111	106	108	114	114	0.2	-0.3	0.6
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	3.8	4.7	6.1	6.4	7.5	8.1	8.6	5.0	2.0	1.4
as % of GDP	13.3	13.8	16.5	17.1	18.4	18.2	18.0			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Spain: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
								Annual % Change		
Population (in million)	40	43	46	46	46	45	44	1.5	-0.2	-0.3
GDP (in 000 M€13)	893	1048	1093	1094	1207	1327	1447	2.0	1.0	1.8
Gross Inland Consumption (ktoe)	123642	144223	129868	124583	125125	114374	102374	0.5	-0.4	-2.0
Solids	20938	20566	7906	15768	15757	10162	1495	-9.3	7.1	-21.0
Oil	63967	70457	60436	53990	50053	46992	43257	-0.8	-1.9	-1.4
Natural gas	15305	29886	31162	25155	25415	18667	14678	7.4	-2.0	-5.3
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Renewable energy forms	7005	8587	15090	15611	19348	23835	28405	8.0	2.5	3.9
Energy Branch Consumption	6259	6666	7878	7994	7431	6466	5986	2.3	-0.6	-2.1
Non-Energy Uses	9407	8362	7046	5744	6094	6369	6379	-2.8	-1.4	0.5
SECURITY OF SUPPLY										
Production (incl.recovery of products) (ktoe)	31478	30047	34166	33100	36688	39295	42956	0.8	0.7	1.6
Solids	7966	6265	3296	2973	2891	1055	130	-8.4	-1.3	-26.6
Oil	228	167	124	377	365	345	360	-5.9	11.4	-0.1
Natural gas	234	185	78	42	47	53	57	-10.4	-4.9	1.9
Nuclear	16046	14842	15991	14173	14173	14173	14173	0.0	-1.2	0.0
Renewable energy sources	7005	8587	14677	15536	19212	23669	28236	7.7	2.7	3.9
Hydro	2430	1582	3638	2853	2861	2878	2882	4.1	-2.4	0.1
Biomass & Waste	4131	5113	6183	6934	9587	9504	9958	4.1	4.5	0.4
Wind	406	1821	3807	4443	4844	6125	9040	25.1	2.4	6.4
Solar and others	33	65	1035	1288	1895	5104	6269	41.3	6.2	12.7
Geothermal	5	7	16	18	24	58	87	11.5	4.3	13.7
Net Imports (ktoe)	99342	123832	106084	100729	97788	84412	68846	0.7	-0.8	-3.4
Solids	12840	14418	6726	12795	12865	9107	1365	-6.3	6.7	-20.1
Oil	70653	79281	68704	62860	58956	55798	51835	-0.3	-1.5	-1.3
Crude oil and Feedstocks	59023	60650	56496	66666	63006	59596	55627	-0.4	1.1	-1.2
Oil products	11631	18630	12208	-3806	-4050	-3798	-3792	0.5	0.0	-0.7
Natural gas	15467	30248	30950	25113	25451	18795	15112	7.2	-1.9	-5.1
Electricity	382	-116	-717	-114	380	546	366	0.0	0.0	-0.4
Import Dependency (%)	76.6	81.4	76.8	75.3	72.7	68.2	61.6			
ELECTRICITY										
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	220921	289445	298320	275293	284470	280624	276272	3.0	-0.5	-0.3
Nuclear energy	62206	57539	61990	58066	58066	57757	57521	0.0	-0.7	-0.1
Solids	79094	84047	25493	57621	57878	34089	0	-10.7	8.5	-100.0
Oil (including refinery gas)	22578	24420	16562	4988	566	1702	1600	-3.1	-28.7	10.9
Gas (including derived gases)	21942	80725	95840	53218	56383	22350	4440	15.9	-5.2	-22.4
Biomass-waste	2100	3104	4674	4514	5972	7978	9899	8.3	2.5	5.2
Hydro (pumping excluded)	28256	18393	42304	33175	33273	33461	33515	4.1	-2.4	0.1
Wind	4727	21176	44271	51665	56322	71226	105111	25.1	2.4	6.4
Solar	17	41	6423	12046	16011	52062	64186	80.6	9.6	14.9
Geothermal and other renewables	1	0	763	0	0	0	0	105.9	0.0	14.9
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0
Net Generation Capacity (MW _e)	52405	73568	99270	104515	104566	124042	134589	6.6	0.5	2.6
Nuclear energy	7869	7869	7845	7399	7399	7399	7399	0.0	-0.6	0.0
Renewable energy	17760	25774	41432	46783	51047	74248	90280	8.8	2.1	5.9
Hydro (pumping excluded)	15542	15796	16086	16632	16795	16795	16795	0.3	0.4	0.0
Wind	2206	9918	20693	23025	24977	29981	40570	25.1	1.9	5.0
Solar	12	60	4653	7126	9275	27472	32915	81.5	7.1	13.5
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0
Thermal power	26776	39924	49994	50333	46120	42395	36910	6.4	-0.8	-2.2
of which cogeneration units	4570	6597	3382	6442	3369	4695	4182	-3.0	0.0	2.2
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0
Solids fired	11556	11359	10389	10316	9332	7377	3967	-1.1	-1.1	-8.2
Gas fired	4713	17647	29569	31333	30271	29749	28078	20.2	0.2	-0.7
Oil fired	10028	10043	8964	7496	4752	3422	2951	-1.1	-6.1	-4.7
Biomass-waste fired	478	876	1072	1188	1765	1847	1914	8.4	5.1	0.8
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Avg. Load factor of net power capacity ⁽²⁾ (%)	45.9	43.1	33.1	28.9	29.9	25.1	23.1			
Efficiency of gross thermal power generation (%)	40.8	46.7	48.9	42.5	42.6	39.0	33.6			
% of gross electricity from CHP	9.2	4.0	7.4	9.8	5.2	5.7	5.7			
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
% of carbon free (RES, nuclear) gross electricity generation	44.0	34.6	53.8	57.9	59.6	79.3	97.8			
Fuel Inputs to Thermal Power Generation (ktoe)	26472	35403	25226	24328	24383	14593	4082	-0.5	-0.3	-16.4
Solids	18245	17623	5561	13703	13681	8128	0	-11.2	9.4	-100.0
Oil (including refinery gas)	4455	5249	3391	948	133	403	379	-2.7	-27.7	11.0
Gas (including derived gases)	3075	11140	14839	8684	9269	4107	1249	17.0	-4.6	-18.2
Biomass & Waste	697	1391	1435	994	1300	1955	2453	7.5	-1.0	6.6
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0
Fuel Input to other conversion processes	79871	79435	78129	80766	79042	75903	72142	-0.2	0.1	-0.9
Refineries	60685	61323	58480	63161	60961	58108	54536	-0.4	0.4	-1.1
Biofuels and hydrogen production	70	256	1412	1419	2062	1912	2041	35.0	3.9	-0.1
District heating	0	0	0	0	0	0	0	0.0	0.0	0.0
Derived gases, cokeries etc.	19115	17857	18237	16187	16019	15883	15565	-0.5	-1.3	-0.3

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Spain: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	476	535	542	561	609	661	714	1.3	1.2	1.6
Public road transport	50	53	51	52	53	55	56	0.1	0.5	0.4
Private cars and motorcycles	310	346	352	354	372	397	425	1.3	0.5	1.3
Rail	25	28	29	29	37	44	51	1.2	2.5	3.4
Aviation ⁽³⁾	89	106	109	124	145	164	180	2.1	2.9	2.2
Inland navigation	2	2	2	2	2	2	2	0.8	1.4	1.4
Freight transport activity (Gtkm)	180	265	227	228	247	264	281	2.3	0.9	1.3
Heavy goods and light commercial vehicles	138	217	190	191	206	219	232	3.2	0.8	1.2
Rail	12	12	9	10	12	13	15	-2.3	2.3	2.5
Inland navigation	31	36	28	28	30	32	34	-1.1	0.6	1.4
Energy demand in transport (ktoe) ⁽⁴⁾	33084	39797	37180	35033	34459	33256	32754	1.2	-0.8	-0.5
Public road transport	1354	1408	1319	1329	1326	1308	1280	-0.3	0.1	-0.3
Private cars and motorcycles	18655	20608	19876	18098	16536	14788	14107	0.6	-1.8	-1.6
Heavy goods and light commercial vehicles	6486	9874	8641	8122	8353	8319	8481	2.9	-0.3	0.2
Rail	708	1029	899	772	874	975	1049	2.4	-0.3	1.8
Aviation	4486	5323	5389	6005	6612	7052	6978	1.9	2.1	0.5
Inland navigation	1395	1555	1057	707	757	813	859	-2.7	-3.3	1.3
<i>By transport activity</i>										
Passenger transport	25151	27727	26960	25730	24830	23557	22812	0.7	-0.8	-0.8
Freight transport	7933	12069	10220	9303	9629	9698	9941	2.6	-0.6	0.3
Other indicators										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.1	0.7	2.0			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.2	0.6	3.8	4.1	6.1	6.0	6.4			
ENERGY EFFICIENCY										
Primary energy consumption	114235	135861	122822	118838	119032	108005	95994	0.7	-0.3	-2.1
Final Energy Demand	79885	97754	89072	85314	86250	81611	76744	1.1	-0.3	-1.2
<i>by sector</i>										
Industry	25368	30967	21435	21275	22243	21431	20634	-1.7	0.4	-0.7
Energy intensive industries	17349	20338	13379	13268	14012	13255	12492	-2.6	0.5	-1.1
Other industrial sectors	8020	10628	8056	8008	8232	8176	8142	0.0	0.2	-0.1
Residential	12000	15132	16920	15550	15515	14303	12401	3.5	-0.9	-2.2
Tertiary	9287	11712	13526	13441	14017	12604	10938	3.8	0.4	-2.4
Transport ⁽⁵⁾	33230	39944	37192	35048	34475	33273	32772	1.1	-0.8	-0.5
<i>by fuel</i>										
Solids	1775	1712	1261	1123	1312	1300	808	-3.4	0.4	-4.7
Oil	46297	53449	46775	43129	40252	37135	33725	0.1	-1.5	-1.8
Gas	12141	17978	14645	14743	14323	12984	11899	1.9	-0.2	-1.8
Electricity	16205	20827	21049	20057	21308	21517	21211	2.7	0.1	0.0
Heat (from CHP and District Heating)	0	0	0	8	117	296	560	0.0	0.0	16.9
Renewable energy forms	3469	3788	5343	6252	8926	8328	8409	4.4	5.3	-0.6
Other	0	0	0	3	10	50	132	0.0	1431.1	29.1
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	139	138	119	114	104	86	71	-1.5	-1.4	-3.7
Industry (Energy on Value added, index 2000=100)	100	114	87	87	83	74	66	-1.4	-0.5	-2.2
Residential (Energy on Private Income, index 2000=100)	100	106	115	103	94	78	62	1.4	-2.1	-4.0
Tertiary (Energy on Value added, index 2000=100)	100	108	110	107	101	82	65	1.0	-0.9	-4.3
Passenger transport (toe/Mpkm) ⁽⁶⁾	47	46	42	38	34	29	26	-1.1	-2.2	-2.6
Freight transport (toe/Mtkm)	44	46	45	41	39	37	35	0.3	-1.5	-1.0
DECARBONISATION										
TOTAL GHG emissions (Mt of CO₂ eq.)	398.8	447.7	364.3	356.5	341.6	289.2	228.9	-0.9	-0.6	-3.9
of which ETS sectors (2013 scope) GHG emissions	216.2	146.4	157.9	157.5	119.7	73.4		0.7	-7.3	
of which ESD sectors (2013 scope) GHG emissions	231.5	218.0	198.6	184.1	169.5	155.5		-1.7	-1.7	
CO₂ Emissions (energy related)	291.6	347.3	272.6	271.0	258.8	210.1	153.4	-0.7	-0.5	-5.1
Power generation/District heating	98.8	117.7	70.3	81.2	79.8	46.1	5.9	-3.4	1.3	-22.9
Energy Branch	13.4	13.5	16.2	16.1	14.3	12.5	11.6	1.9	-1.2	-2.0
Industry	50.4	59.2	42.3	39.8	39.5	35.5	29.2	-1.7	-0.7	-3.0
Residential	17.1	20.9	20.5	16.5	13.6	11.7	8.0	1.9	-4.0	-5.2
Tertiary	13.2	16.5	15.0	15.5	13.9	10.6	8.2	1.3	-0.7	-5.2
Transport	98.7	119.5	108.3	101.9	97.7	93.7	90.5	0.9	-1.0	-0.8
CO₂ Emissions (non energy and non land use related)	26.2	29.5	21.8	17.7	18.8	18.6	18.4	-1.8	-1.5	-0.2
Non-CO₂ GHG emissions	81.1	71.0	69.9	67.7	64.0	60.5	57.1	-1.5	-0.9	-1.1
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	134.6	151.1	123.0	120.3	115.3	97.6	77.2	-0.9	-0.6	-3.9
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.45	0.41	0.24	0.29	0.28	0.16	0.02	-6.2	1.7	-22.8
Final energy demand (t of CO ₂ /toe)	2.25	2.21	2.09	2.04	1.91	1.86	1.77	-0.7	-0.9	-0.8
Industry	1.99	1.91	1.97	1.87	1.78	1.66	1.42	-0.1	-1.1	-2.2
Residential	1.42	1.38	1.21	1.06	0.88	0.81	0.65	-1.6	-3.2	-3.0
Tertiary	1.43	1.41	1.11	1.15	0.99	0.84	0.75	-2.5	-1.1	-2.8
Transport	2.97	2.99	2.91	2.91	2.83	2.82	2.76	-0.2	-0.3	-0.3
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	8.1	8.4	13.8	15.4	21.0	27.4	35.0			
RES-H&C share	11.0	9.4	12.6	16.1	22.5	24.0	28.7			
RES-E share	16.6	19.1	29.8	36.9	38.5	57.4	76.3			
RES-T share (based on ILUC formula)	0.6	1.3	5.1	0.8	10.1	12.8	20.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	58	62	75	90	98	90	81	2.5	2.7	-1.9
Average Price of Electricity in Final demand sectors (€13/MWh)	105	101	149	173	173	167	165	3.5	1.5	-0.4
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	74.3	101.3	120.1	122.7	144.8	151.9	165.5	4.9	1.9	1.3
as % of GDP	8.3	9.7	11.0	11.2	12.0	11.5	11.4			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)								Sweden: EUCO3030			
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	9	9	9	10	10	11	11	0.5	0.9	0.8	
GDP (in 000 ME13)	296	337	366	404	448	497	552	2.2	2.1	2.1	
Gross Inland Consumption (ktoe)	48898	50993	50783	47002	45899	45061	43846	0.4	-1.0	-0.5	
Solids	2452	2629	2492	2263	1968	1741	1105	0.2	-2.3	-5.6	
Oil	15377	14136	14199	11663	10827	9706	8610	-0.8	-2.7	-2.3	
Natural gas	816	886	1484	679	3062	2496	981	6.2	7.5	-10.8	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Renewable energy forms	15066	15308	17512	19146	19606	20640	22889	1.5	1.1	1.6	
Energy Branch Consumption	1141	1326	1469	1414	1365	1316	1329	2.6	-0.7	-0.3	
Non-Energy Uses	3143	2460	2113	2183	2281	2398	2436	-3.9	0.8	0.7	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	30052	34233	32685	33372	31493	32458	34548	0.8	-0.4	0.9	
Solids	162	211	238	210	86	93	0	4.0	-9.7	-100.0	
Oil	0	0	0	0	0	0	0	7.8	-100.0	0.0	
Natural gas	40	44	18	0	0	0	0	-7.6	-100.0	0.0	
Nuclear	14785	18670	14917	14362	12192	12192	12192	0.1	-2.0	0.0	
Renewable energy sources	15066	15308	17512	18801	19215	20174	22356	1.5	0.9	1.5	
Hydro	6757	6260	5709	6203	6158	6083	6079	-1.7	0.8	-0.1	
Biomass & Waste	8264	8961	11490	11434	11777	11648	12415	3.4	0.2	0.5	
Wind	39	81	301	1147	1249	2387	3348	22.6	15.3	10.4	
Solar and others	5	6	11	17	31	54	121	7.4	10.9	14.6	
Geothermal	0	0	0	0	0	2	393	0.0	0.0	103.6	
Net Imports (ktoe)	20436	19460	19294	15820	16724	15032	11850	-0.6	-1.4	-3.4	
Solids	2409	2556	2548	2054	1882	1648	1105	0.6	-3.0	-5.2	
Oil	16849	16698	15102	13853	13097	12028	10780	-1.1	-1.4	-1.9	
Crude oil and Feedstocks	21606	19369	19139	15905	15014	13862	12702	-1.2	-2.4	-1.7	
Oil products	-4757	-2671	-4038	-2052	-1917	-1834	-1922	-1.6	-7.2	0.0	
Natural gas	776	843	1466	679	3110	2604	1360	6.6	7.8	-7.9	
Electricity	402	-636	179	-1111	-1756	-1714	-1928	-7.8	0.0	0.9	
Import Dependency (%)	40.7	36.8	36.6	32.2	34.7	31.7	25.5				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	145231	158365	148460	160491	173114	178785	183880	0.2	1.5	0.6	
Nuclear energy	57316	72377	57828	57851	49379	49379	49738	0.1	-1.6	0.1	
Solids	1706	1169	1770	1540	1118	739	218	0.4	-4.5	-15.1	
Oil (including refinery gas)	1533	1379	1774	249	326	189	46	1.5	-15.6	-17.8	
Gas (including derived gases)	1292	1342	3782	471	15525	11240	2297	11.3	15.2	-17.4	
Biomass-waste	4342	8357	13397	14846	20563	18673	21891	11.9	4.4	0.6	
Hydro (pumping excluded)	78584	72803	66398	72128	71601	70735	70687	-1.7	0.8	-0.1	
Wind	457	936	3502	13335	14526	27756	38928	22.6	15.3	10.4	
Solar	1	2	8	69	75	75	75	21.5	24.9	0.0	
Geothermal and other renewables	0	0	1	0	0	0	0	0.0	-100.0	0.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	34594	33587	36947	39676	37489	41951	45563	0.7	0.1	2.0	
Nuclear energy	10122	9532	9532	9532	6949	6949	6949	-0.6	-3.1	0.0	
Renewable energy	16718	16799	18654	22501	23533	27839	31329	1.1	2.4	2.9	
Hydro (pumping excluded)	16506	16302	16624	16395	16938	16938	16938	0.1	0.2	0.0	
Wind	209	493	2019	6025	6507	10813	14303	25.5	12.4	8.2	
Solar	3	4	11	81	88	88	88	13.9	23.1	0.0	
Other renewables (tidal etc.)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Thermal power	7754	7256	8761	7643	7007	7163	7284	1.2	-2.2	0.4	
of which cogeneration units	4940	3488	5100	4504	6272	6047	2631	0.3	2.1	-8.3	
of which CCS units	0	0	0	0	0	0	0	0.0	0.0	0.0	
Solids fired	337	348	356	356	136	136	128	0.5	-9.2	-0.6	
Gas fired	547	469	1168	1168	3222	3243	3243	7.9	10.7	0.1	
Oil fired	4472	3974	3963	2958	835	835	835	-1.2	-14.4	0.0	
Biomass-waste fired	2398	2465	3274	3161	2814	2949	3078	3.2	-1.5	0.9	
Hydrogen plants	0	0	0	0	0	0	0	0.0	0.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	46.7	52.5	44.9	45.1	51.4	47.5	44.9				
Efficiency of gross thermal power generation (%)	21.3	23.0	27.3	25.6	41.0	37.4	33.2				
% of gross electricity from CHP	5.9	6.7	12.5	10.7	21.3	15.5	10.1				
% of electricity from CCS	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
% of carbon free (RES, nuclear) gross electricity generation	96.9	97.5	95.1	98.6	90.2	93.2	98.6				
Fuel Inputs to Thermal Power Generation (ktoe)	3582	4575	6518	5747	7865	7087	6328	6.2	1.9	-2.2	
Solids	462	508	597	566	266	189	50	2.6	-7.8	-15.4	
Oil (including refinery gas)	530	317	431	70	93	61	12	-2.0	-14.3	-18.6	
Gas (including derived gases)	508	591	998	225	2488	1861	423	7.0	9.6	-16.2	
Biomass & Waste	2084	3158	4491	4886	5019	4977	5843	8.0	1.1	1.5	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	40980	42243	39786	34628	31685	30731	29849	-0.3	-2.3	-0.6	
Refineries	22901	20082	21039	16927	16153	15217	14118	-0.8	-2.6	-1.3	
Biofuels and hydrogen production	0	134	376	733	816	874	1116	0.0	8.1	3.2	
District heating	1564	1525	1735	1424	1349	1250	1397	1.0	-2.5	0.3	
Derived gases, cokeries etc.	16516	20501	16636	15543	13367	13389	13219	0.1	-2.2	-0.1	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)								Sweden: EUCO3030		
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30
TRANSPORT								Annual % Change		
Passenger transport activity (Gpkm)	142	148	151	160	167	175	186	0.7	1.0	1.1
Public road transport	9	9	9	9	9	10	11	-1.0	0.9	1.2
Private cars and motorcycles	102	108	109	114	116	119	125	0.7	0.7	0.7
Rail	10	11	13	15	16	18	20	2.8	2.1	1.9
Aviation ⁽³⁾	14	13	15	17	18	20	23	0.3	2.2	2.4
Inland navigation	6	6	6	5	6	7	7	-0.3	0.2	1.4
Freight transport activity (Gtkm)	70	78	81	81	90	98	105	1.5	1.1	1.6
Heavy goods and light commercial vehicles	43	47	45	46	49	52	54	0.4	1.1	1.0
Rail	19	22	23	24	28	31	35	1.9	1.6	2.3
Inland navigation	7	9	13	11	13	15	16	5.6	0.4	2.1
Energy demand in transport (ktoe) ⁽⁴⁾	8192	8609	8620	8260	7890	7300	6941	0.5	-0.9	-1.3
Public road transport	189	179	184	187	193	204	211	-0.3	0.5	0.9
Private cars and motorcycles	4879	5236	5250	4890	4394	3727	3333	0.7	-1.8	-2.7
Heavy goods and light commercial vehicles	1740	1959	1951	1921	1939	1901	1893	1.2	-0.1	-0.2
Rail	299	246	208	232	264	286	310	-3.6	2.4	1.6
Aviation	928	846	840	945	1001	1077	1080	-1.0	1.8	0.8
Inland navigation	156	142	188	85	98	106	115	1.8	-6.3	1.6
<i>By transport activity</i>										
Passenger transport	6165	6361	6387	6089	5666	5090	4711	0.4	-1.2	-1.8
Freight transport	2027	2248	2234	2171	2225	2210	2231	1.0	0.0	0.0
<i>Other indicators</i>										
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.3	0.6	2.2			
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	1.6	4.7	9.2	10.7	12.4	15.7			
ENERGY EFFICIENCY										
Primary energy consumption	45755	48533	48670	44819	43618	42663	41412	0.6	-1.1	-0.5
Final Energy Demand	33561	33492	34077	31885	31903	30929	28918	0.2	-0.7	-1.0
<i>by sector</i>										
Industry	12854	12464	12205	11531	12055	12042	11460	-0.5	-0.1	-0.5
Energy intensive industries	9198	9252	9141	8370	8726	8571	7933	-0.1	-0.5	-0.9
Other industrial sectors	3656	3212	3064	3161	3329	3471	3527	-1.8	0.8	0.6
Residential	7300	7305	7557	7197	7049	6785	6066	0.3	-0.7	-1.5
Tertiary	5214	5114	5720	4897	4908	4802	4451	0.9	-1.5	-1.0
Transport ⁽⁵⁾	8192	8609	8595	8260	7890	7300	6941	0.5	-0.9	-1.3
<i>by fuel</i>										
Solids	1114	1346	1202	1122	1120	934	507	0.8	-0.7	-7.6
Oil	11861	11256	10038	8856	7998	6826	5762	-1.7	-2.2	-3.2
Gas	673	765	728	677	795	884	815	0.8	0.9	0.2
Electricity	11068	11238	11283	11102	11598	12111	12238	0.2	0.3	0.5
Heat (from CHP and District Heating)	3550	4174	5141	4420	4453	4125	3299	3.8	-1.4	-3.0
Renewable energy forms	5294	4714	5685	5705	5935	6036	6205	0.7	0.4	0.4
Other	0	0	0	3	3	13	92	0.0	0.0	39.5
Energy intensity indicators										
Gross Inl. Cons./GDP (toe/M€13)	165	151	139	116	102	91	80	-1.7	-3.0	-2.5
Industry (Energy on Value added, index 2000=100)	100	76	70	62	59	54	47	-3.5	-1.7	-2.2
Residential (Energy on Private Income, index 2000=100)	100	90	84	71	62	53	42	-1.7	-3.0	-3.8
Tertiary (Energy on Value added, index 2000=100)	100	89	91	70	63	55	45	-0.9	-3.7	-3.2
Passenger transport (toe/Mpkm) ⁽⁶⁾	41	41	39	35	31	26	23	-0.5	-2.2	-3.0
Freight transport (toe/Mtkm)	29	29	28	27	25	23	21	-0.5	-1.2	-1.5
DECARBONISATION										
TOTAL GHG emissions (Mt of CO2 eq.)	71.6	69.0	65.1	55.7	56.6	49.6	39.3	-0.9	-1.4	-3.6
of which ETS sectors (2013 scope) GHG emissions	25.9	25.6	19.9	23.6	20.6	13.7			-0.8	-5.3
of which ESD sectors (2013 scope) GHG emissions	43.0	39.5	35.8	33.0	29.1	25.7			-1.8	-2.5
CO₂ Emissions (energy related)	52.2	52.1	49.0	40.6	42.1	35.9	26.1	-0.6	-1.5	-4.7
Power generation/District heating	7.7	7.7	9.1	4.4	8.6	7.0	2.6	1.7	-0.5	-11.2
Energy Branch	2.0	1.9	2.0	2.2	1.8	1.8	1.7	0.4	-1.0	-0.6
Industry	11.9	13.3	10.5	10.0	9.5	7.6	4.6	-1.2	-1.0	-7.0
Residential	3.0	1.5	0.4	0.2	0.2	0.2	0.1	-17.9	-6.6	-5.7
Tertiary	4.5	3.2	2.9	1.7	1.4	0.8	0.6	-4.2	-6.8	-7.9
Transport	23.2	24.6	24.1	22.0	20.5	18.5	16.4	0.4	-1.6	-2.2
CO₂ Emissions (non energy and non land use related)	3.2	3.2	3.7	3.4	3.4	3.3	3.2	1.5	-0.8	-0.7
Non-CO₂ GHG emissions	16.2	13.6	12.3	11.7	11.1	10.5	10.1	-2.7	-1.1	-0.9
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	97.8	94.2	89.0	76.1	77.4	67.9	53.8	-0.9	-1.4	-3.6
Carbon Intensity indicators										
Electricity and Steam production (t of CO ₂ /MWh)	0.04	0.04	0.04	0.02	0.04	0.03	0.01	0.6	-1.2	-11.0
Final energy demand (t of CO ₂ /toe)	1.27	1.27	1.11	1.07	0.99	0.88	0.75	-1.3	-1.1	-2.7
Industry	0.93	1.07	0.86	0.87	0.79	0.63	0.40	-0.7	-0.9	-6.5
Residential	0.41	0.20	0.05	0.03	0.03	0.02	0.02	-18.2	-5.9	-4.3
Tertiary	0.86	0.62	0.51	0.35	0.29	0.17	0.14	-5.1	-5.4	-7.0
Transport	2.83	2.86	2.80	2.66	2.60	2.53	2.36	-0.1	-0.7	-1.0
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	38.6	40.3	46.8	56.8	56.7	61.7	70.1			
RES-H&C share	48.7	52.4	60.9	72.7	69.0	74.7	85.9			
RES-E share	51.7	51.6	56.6	67.3	69.2	73.2	80.9			
RES-T share (based on ILUC formula)	4.8	5.7	8.9	18.7	22.3	27.2	41.2			
MARKETS AND COMPETITIVENESS										
Average Cost of Gross Electricity Generation (€13/MWh)	57	51	57	63	62	56	59	-0.1	0.9	-0.5
Average Price of Electricity in Final demand sectors (€13/MWh)	83	107	144	142	141	142	145	5.7	-0.2	0.3
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	31.7	39.3	46.2	43.5	49.1	52.6	58.4	3.9	0.6	1.7
as % of GDP	10.7	11.6	12.6	10.8	11.0	10.6	10.6			

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (A)							United Kingdom: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
Population (in million)	59	60	63	65	67	69	71	0.6	0.7	0.5	
GDP (in 000 M€13)	1538	1780	1810	1976	2120	2247	2423	1.6	1.6	1.3	
Gross Inland Consumption (ktoe)	230560	233992	212234	199641	186103	175711	163062	-0.8	-1.3	-1.3	
Solids	36516	37737	30761	30896	13007	8226	4731	-1.7	-8.2	-9.6	
Oil	81031	84449	72986	71030	65581	59879	54363	-1.0	-1.1	-1.9	
Natural gas	87399	85473	85050	67578	64711	60971	43057	-0.3	-2.7	-4.0	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Renewable energy forms	2453	4564	7179	12764	26090	31608	36117	11.3	13.8	3.3	
Energy Branch Consumption	14909	16092	13761	10879	9613	8697	7860	-0.8	-3.5	-2.0	
Non-Energy Uses	11330	11213	7524	8461	8861	8961	8839	-4.0	1.6	0.0	
SECURITY OF SUPPLY											
Production (incl.recovery of products) (ktoe)	268546	204420	147634	115064	108549	98686	97992	-5.8	-3.0	-1.0	
Solids	18658	11899	10751	6067	3605	3114	1953	-5.4	-10.4	-5.9	
Oil	127939	87930	63788	48199	40955	32876	26184	-6.7	-4.3	-4.4	
Natural gas	97554	79397	51468	34247	26824	22630	15615	-6.2	-6.3	-5.3	
Nuclear	21942	21054	16029	15793	15374	13860	23774	-3.1	-0.4	4.5	
Renewable energy sources	2453	4141	5598	10758	21790	26205	30466	8.6	14.6	3.4	
Hydro	437	423	307	477	453	457	460	-3.5	4.0	0.1	
Biomass & Waste	1922	3437	4314	6434	11789	15303	17036	8.4	10.6	3.8	
Wind	81	250	875	2969	8204	8822	11303	26.8	25.1	3.3	
Solar and others	11	30	101	878	1341	1612	1635	24.5	29.5	2.0	
Geothermal	1	1	1	1	3	11	31	0.0	13.3	27.3	
Net Imports (ktoe)	-39220	31596	61239	87711	80758	80187	68226	0.0	2.8	-1.7	
Solids	14454	27222	16045	24829	9402	5112	2777	1.0	-5.2	-11.5	
Oil	-45582	-2738	11181	25966	27794	30088	31137	0.0	9.5	1.1	
Crude oil and Feedstocks	-39093	4558	13213	20985	23617	26384	28138	0.0	6.0	1.8	
Oil products	-6489	-7296	-2032	4981	4177	3704	2999	-11.0	0.0	-3.3	
Natural gas	-9311	5973	32205	33331	37922	38418	27641	0.0	1.6	-3.1	
Electricity	1219	716	229	1580	1341	1166	1019	-15.4	19.3	-2.7	
Import Dependency (%)	-16.9	13.4	28.5	43.3	42.7	44.8	41.0				
ELECTRICITY											
Gross Electricity generation by source ⁽¹⁾ (GWh _e)	374375	395425	378558	357130	371987	380469	388478	0.1	-0.2	0.4	
Nuclear energy	85063	81618	62140	64689	62974	59946	107051	-3.1	0.1	5.4	
Solids	119950	134637	107694	96298	29358	12099	3676	-1.1	-12.2	-18.8	
Oil (including refinery gas)	8446	5339	4804	4252	3297	2497	2471	-5.5	-3.7	-2.8	
Gas (including derived gases)	150427	154339	176759	117631	115485	120426	57646	1.6	-4.2	-6.7	
Biomass-waste	4455	11658	13373	26283	51006	68361	71607	11.6	14.3	3.5	
Hydro (pumping excluded)	5086	4922	3568	5550	5273	5318	5348	-3.5	4.0	0.1	
Wind	947	2904	10180	34520	95394	102586	131436	26.8	25.1	3.3	
Solar	1	8	41	7899	8985	8985	8985	42.7	71.6	0.0	
Geothermal and other renewables	0	0	-1	8	212	252	258	15.7	0.0	2.0	
Other fuels (hydrogen, methanol)	0	0	0	0	0	0	0	0.0	0.0	0.0	
Net Generation Capacity (MW _e)	78130	82074	88395	92944	120145	111927	118839	1.2	3.1	-0.1	
Nuclear energy	12086	11376	10027	9374	8884	7811	13107	-1.9	-1.2	4.0	
Renewable energy	1900	3077	7128	25020	46309	48652	57676	14.1	20.6	2.2	
Hydro (pumping excluded)	1485	1501	1637	1693	1744	1744	1752	1.0	0.6	0.0	
Wind	412	1565	5396	13603	33421	35745	44759	29.3	20.0	3.0	
Solar	2	11	94	9721	11043	11043	11043	47.0	61.1	0.0	
Other renewables (tidal etc.)	1	0	1	4	102	119	122	0.0	58.7	1.9	
Thermal power	64144	67621	71240	58550	64952	55464	48057	1.1	-0.9	-3.0	
of which cogeneration units	5794	5440	6102	5052	5518	5384	10822	0.5	-1.0	7.0	
of which CCS units	0	0	0	0	833	833	1233	0.0	0.0	4.0	
Solids fired	27533	26230	25549	18735	11149	2323	501	-0.7	-8.0	-26.7	
Gas fired	24512	29106	33292	33953	35329	34762	29260	3.1	0.6	-1.9	
Oil fired	9696	9323	9064	2227	1235	1135	1091	-0.7	-18.1	-1.2	
Biomass-waste fired	2403	2961	3335	3634	17238	17244	17205	3.3	17.9	0.0	
Hydrogen plants	0	0	0	0	0	0	0	0.0	-100.0	0.0	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Avg. Load factor of net power capacity ⁽²⁾ (%)	52.3	52.5	46.8	41.7	34.0	37.3	35.8				
Efficiency of gross thermal power generation (%)	41.1	42.1	43.6	41.3	45.0	46.1	43.1				
% of gross electricity from CHP	6.1	6.8	6.2	5.4	4.0	4.2	4.2				
% of electricity from CCS	0.0	0.0	0.0	0.0	1.4	1.5	2.6				
% of carbon free (RES, nuclear) gross electricity generation	25.5	25.6	23.6	38.9	60.2	64.5	83.6				
Fuel Inputs to Thermal Power Generation (ktoe)	59321	62482	59738	50947	38069	37914	27027	0.1	-4.4	-3.4	
Solids	28425	29812	23816	23961	7141	2974	779	-1.8	-11.3	-19.9	
Oil (including refinery gas)	1453	1060	789	920	737	559	553	-5.9	-0.7	-2.8	
Gas (including derived gases)	28139	28415	31452	20339	19239	19570	9757	1.1	-4.8	-6.6	
Biomass & Waste	1305	3194	3681	5727	10952	14811	15938	10.9	11.5	3.8	
Geothermal heat	0	0	0	0	0	0	0	0.0	0.0	0.0	
Hydrogen - Methanol	0	0	0	0	0	0	0	0.0	0.0	0.0	
Fuel Input to other conversion processes	118459	115207	97492	88112	83351	77194	81998	-1.9	-1.6	-0.2	
Refineries	88821	88399	75162	65526	61254	56403	51765	-1.7	-2.0	-1.7	
Biofuels and hydrogen production	0	80	1130	1361	2131	1982	2081	0.0	6.6	-0.2	
District heating	15	14	13	13	11	15	9	-0.9	-2.2	-2.1	
Derived gases, cokeries etc.	29623	26714	21187	21212	19955	18794	28143	-3.3	-0.6	3.5	

Source: PRIMES

SUMMARY ENERGY BALANCE AND INDICATORS (B)							United Kingdom: EUCO3030				
	2000	2005	2010	2015	2020	2025	2030	'00-'10	'10-'20	'20-'30	
								Annual % Change			
TRANSPORT											
Passenger transport activity (Gpkm)	822	872	849	878	935	969	1017	0.3	1.0	0.8	
Public road transport	49	44	46	46	47	48	49	-0.5	0.2	0.3	
Private cars and motorcycles	644	673	649	659	702	722	754	0.1	0.8	0.7	
Rail	47	53	66	76	80	86	93	3.5	2.0	1.5	
Aviation ⁽³⁾	77	97	83	90	100	107	116	0.7	1.8	1.5	
Inland navigation	6	6	5	5	6	6	6	-0.3	0.8	1.0	
Freight transport activity (Gtkm)	237	248	216	242	252	263	275	-0.9	1.6	0.9	
Heavy goods and light commercial vehicles	183	183	164	187	194	203	211	-1.1	1.7	0.8	
Rail	18	21	19	22	23	24	26	0.3	2.1	1.3	
Inland navigation	36	43	33	34	35	37	39	-0.9	0.6	1.0	
Energy demand in transport (ktoe) ⁽⁴⁾	52386	55501	51470	52014	49572	46164	43908	-0.2	-0.4	-1.2	
Public road transport	559	499	515	511	505	495	478	-0.8	-0.2	-0.5	
Private cars and motorcycles	29150	30049	29058	27657	25099	21964	20524	0.0	-1.5	-2.0	
Heavy goods and light commercial vehicles	9809	9612	8396	9457	9021	8973	8667	-1.5	0.7	-0.4	
Rail	821	988	966	1108	1158	1212	1264	1.6	1.8	0.9	
Aviation	11115	13069	11650	12400	12874	12572	11986	0.5	1.0	-0.7	
Inland navigation	933	1282	884	881	916	949	988	-0.5	0.4	0.8	
By transport activity											
Passenger transport	41504	44033	41640	40984	38919	35481	33455	0.0	-0.7	-1.5	
Freight transport	10882	11467	9830	11030	10653	10682	10453	-1.0	0.8	-0.2	
Other indicators											
Electricity in road transport (%)	0.0	0.0	0.0	0.0	0.4	1.4	3.1				
Biofuels in total fuels (excl.hydrogen and electricity) (%)	0.0	0.1	2.2	2.7	4.5	5.3	6.0				
ENERGY EFFICIENCY											
Primary energy consumption	219230	222779	204710	191181	177242	166750	154223	-0.7	-1.4	-1.4	
Final Energy Demand	153236	152728	142723	138484	135275	127634	115388	-0.7	-0.5	-1.6	
by sector											
Industry	36930	33388	26923	25432	25502	23390	20709	-3.1	-0.5	-2.1	
Energy intensive industries	19392	16472	12350	11464	11271	9754	7832	-4.4	-0.9	-3.6	
Other industrial sectors	17537	16916	14573	13968	14231	13636	12877	-1.8	-0.2	-1.0	
Residential	43034	44151	44715	40936	39867	38872	33739	0.4	-1.1	-1.7	
Tertiary	20377	19686	19633	20101	20333	19209	17032	-0.4	0.4	-1.8	
Transport ⁽⁵⁾	52895	55503	51452	52014	49572	46164	43908	-0.3	-0.4	-1.2	
by fuel											
Solids	5954	4530	4133	4583	3842	3116	1927	-3.6	-0.7	-6.7	
Oil	63674	65851	59524	58175	53004	47780	42710	-0.7	-1.2	-2.1	
Gas	52180	50380	47246	43853	42434	39101	31822	-1.0	-1.1	-2.8	
Electricity	28360	29998	28286	27707	28976	29478	29761	0.0	0.2	0.3	
Heat (from CHP and District Heating)	2439	1268	1266	1255	1339	1425	1445	-6.3	0.6	0.8	
Renewable energy forms	630	702	2268	2885	5583	6281	7019	13.7	9.4	2.3	
Other	0	0	0	26	97	454	703	-100.0	0.0	21.9	
Energy intensity indicators											
Gross Inl. Cons./GDP (toe/M€13)	150	131	117	101	88	78	67	-2.4	-2.9	-2.6	
Industry (Energy on Value added, index 2000=100)	100	93	79	71	68	60	51	-2.3	-1.5	-2.8	
Residential (Energy on Private Income, index 2000=100)	100	87	87	75	68	63	50	-1.4	-2.4	-3.1	
Tertiary (Energy on Value added, index 2000=100)	100	81	77	71	67	59	48	-2.6	-1.5	-3.2	
Passenger transport (toe/Mpkm) ⁽⁶⁾	38	36	35	33	29	25	22	-0.8	-1.9	-2.6	
Freight transport (toe/Mtkm)	46	46	46	46	42	41	38	-0.1	-0.8	-1.1	
DECARBONISATION											
TOTAL GHG emissions (Mt of CO2 eq.)	720.6	727.6	636.4	585.9	475.7	423.2	335.9	-1.2	-2.9	-3.4	
of which ETS sectors (2013 scope) GHG emissions		314.0	273.9	244.9	164.7	140.9	92.2		-5.0	-5.6	
of which ESD sectors (2013 scope) GHG emissions		413.6	362.5	340.9	311.1	282.4	243.8		-1.5	-2.4	
CO2 Emissions (energy related)	568.2	573.4	518.3	477.6	376.2	331.0	253.5	-0.9	-3.2	-3.9	
Power generation/District heating	194.2	199.6	178.4	155.5	78.6	62.7	25.3	-0.8	-7.9	-10.7	
Energy Branch	31.3	35.2	29.4	20.9	18.4	16.2	13.8	-0.6	-4.5	-2.8	
Industry	77.4	67.5	52.1	49.5	46.1	38.3	26.3	-3.9	-1.2	-5.5	
Residential	82.6	80.4	83.1	74.7	68.8	65.3	52.9	0.1	-1.9	-2.6	
Tertiary	27.0	25.3	24.8	25.3	22.6	18.5	14.4	-0.9	-0.9	-4.4	
Transport	155.6	165.4	150.6	151.7	141.5	130.0	120.8	-0.3	-0.6	-1.6	
CO2 Emissions (non energy and non land use related)	20.8	21.0	15.6	17.7	18.7	17.9	16.8	-2.8	1.8	-1.1	
Non-CO2 GHG emissions	131.6	133.2	102.5	90.5	80.9	74.3	65.6	-2.5	-2.3	-2.1	
TOTAL GHG emissions (excl. LULUCF) Index (1990=100)	88.0	88.8	77.7	71.5	58.1	51.7	41.0	-1.2	-2.9	-3.4	
Carbon Intensity indicators											
Electricity and Steam production (t of CO2/MWh)	0.48	0.49	0.45	0.42	0.20	0.16	0.06	-0.6	-7.8	-11.1	
Final energy demand (t of CO2/toe)	2.24	2.22	2.18	2.18	2.06	1.98	1.86	-0.3	-0.5	-1.0	
Industry	2.10	2.02	1.93	1.95	1.81	1.64	1.27	-0.8	-0.7	-3.5	
Residential	1.92	1.82	1.86	1.82	1.73	1.68	1.57	-0.3	-0.7	-1.0	
Tertiary	1.32	1.29	1.26	1.26	1.11	0.96	0.85	-0.5	-1.3	-2.7	
Transport	2.94	2.98	2.93	2.92	2.86	2.82	2.75	-0.1	-0.2	-0.4	
RES in Gross Final Energy Consumption ⁽⁷⁾ (in%)	0.9	1.4	3.3	6.9	14.7	17.8	22.8				
RES-H&C share	0.8	0.8	1.8	3.4	7.0	8.4	12.0				
RES-E share	2.6	4.1	7.4	19.3	41.1	46.7	54.0				
RES-T share (based on ILUC formula)	0.1	0.2	3.0	6.0	11.4	16.9	24.1				
MARKETS AND COMPETITIVENESS											
Average Cost of Gross Electricity Generation (€13/MWh)	42	49	59	95	114	115	114	3.4	6.9	-0.1	
Average Price of Electricity in Final demand sectors (€13/MWh)	124	91	129	166	170	179	179	0.3	2.8	0.5	
Total energy-rel. and other mitigation costs ⁽⁸⁾ (in 000 M€13)	154.6	159.7	179.7	203.0	230.9	252.2	276.9	1.5	2.5	1.8	
as % of GDP	10.1	9.0	9.9	10.3	10.9	11.2	11.4				

Source: PRIMES

- (1) For years 2000 to 2010, total gross electricity by source as reported in this table and total gross electricity generation reported as part of the energy balances, slightly differ because of differences in the respective statistical sources
- (2) Electricity generated over maximum potential generation based on net power capacity
- (3) Excluding international extra-EU aviation.
- (4) Excluding pipeline transport and other non-specified transport.
- (5) Including pipeline transport and other non-specified transport.
- (6) Calculated by taking into account domestic, international intra-EU flights, and extra-EU flights for aviation.
- (7) Including the part of electricity and heat generated from renewables
- (8) Excluding payments for auctioned emission allowances (if applicable)

Disclaimer: Energy and transport statistics reported in this publication and used for the modelling are mainly based on EUROSTAT and on the publications "EU Energy in Figures" of the Directorate General for Energy and "EU Transport in Figures" of the Directorate General for Mobility and Transport. Energy and transport statistical concepts have developed differently in the past according to their individual purposes. Energy demand in transport reflects usually sales of fuels at the point of refuelling, which can differ from the region of consumption. These differences should be borne in mind when comparing energy and transport figures. This applies in particular to transport activity ratios, such as energy efficiency in freight or passenger transport, which are measured in tonnes of oil equivalent per million tonne-km and in tonnes of oil equivalent per million passenger-km, respectively. For modelling purposes, some assumptions had to be made for calculating air and maritime transport performance and allocating it by MS. The transport volumes (number of passengers and tonnes) and distance matrices have been used for this purpose. By assumption, 50% of the calculated transport performance is allocated to the origin country and 50% to the destination country. The same "50%-50%" principle allocation applies to the EFTA countries and the candidate countries. For the international extra-EU activity, where the corresponding partner is outside EU-28 and is not an EFTA or candidate country, 100% of transport performance is allocated to the declaring EU MS country. These assumptions are used only for modelling purposes and shall be considered as model estimates and not as official data.

Abbreviations

GIC: Gross Inland Consumption
CHP: combined heat and power

Units

toe: tonne of oil equivalent, or 10^7 kilocalories, or 41.86 GJ (Gigajoule)
ktoe: 1000 toe
MW: Megawatt or 10^6 watt
MWh: megawatt-hour or 10^9 watt-hours
GWh: gigawatt-hour or 10^9 watt-hours
t: metric tonnes, or 1000 kilogrammes
Mt: Million metric tonnes
km: kilometre
pkm: passenger-kilometre (one passenger transported a distance of one kilometre)
tkm: tonne-kilometre (one tonne transported a distance of one kilometre)
Gpkm: Giga passenger-kilometre, or 10^9 passenger-kilometre
Gtkm: Giga tonne-kilometre, or 10^9 tonne-kilometre

Appendix II.a: EUCO27 scenario - non-CO₂ GHG emissions

EU-28

Non-CO₂ GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		547.44	490.62	454.02	401.88	367.80	334.96
Total N ₂ O		304.12	264.06	262.73	255.54	254.27	241.25
Total F-gases		88.04	100.72	103.78	88.71	67.04	39.05
Agriculture	3A, 3B, 3C, 3D, 3F	443.28	432.58	439.69	434.01	423.75	407.33
Energy	1A, 1B	118.30	101.88	91.99	88.93	80.59	72.42
Industry	2B, 2C, 2E, 2G	68.75	27.03	19.63	12.27	12.72	13.17
Waste	5A, 5B, 5C	185.53	151.68	122.93	79.16	61.79	50.68
Wastewater	5D	39.42	37.37	37.44	37.94	38.20	31.27
Air conditioning & refrigeration	2F.1	52.84	73.61	77.67	64.86	45.65	23.61
Other sectors	2F, 2G	27.44	27.21	27.15	24.92	22.38	12.74
Calibration to UNFCCC 2005		4.04	4.04	4.04	4.04	4.04	4.04
whereof ETS sectors		54.97	19.06	12.15	4.50	4.71	4.91
whereof non-ETS sectors		884.63	836.35	808.38	741.63	684.41	610.35
Total non-CO ₂ GHGs		939.60	855.41	820.54	746.12	689.11	615.26

Austria

Non-CO₂ GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		7.57	6.42	6.00	5.63	5.42	5.07
Total N ₂ O		3.50	3.44	3.45	3.50	3.50	3.29
Total F-gases		2.08	2.22	2.29	1.97	1.56	0.82
Agriculture	3A, 3B, 3C, 3D, 3F	7.19	7.23	7.26	7.34	7.34	7.30
Energy	1A, 1B	1.64	1.79	1.62	1.54	1.42	1.34
Industry	2B, 2C, 2E, 2G	0.61	0.24	0.27	0.29	0.31	0.32
Waste	5A, 5B, 5C	2.97	1.77	1.47	1.12	1.01	0.75
Wastewater	5D	0.44	0.43	0.44	0.45	0.46	0.34
Air conditioning & refrigeration	2F.1	1.17	1.71	1.78	1.46	1.05	0.57
Other sectors	2F, 2G	0.68	0.46	0.46	0.45	0.44	0.12
Calibration to UNFCCC 2005		-1.55	-1.55	-1.55	-1.55	-1.55	-1.55
whereof ETS sectors		0.26	0.06	0.09	0.10	0.11	0.11
whereof non-ETS sectors		12.89	12.02	11.65	11.00	10.36	9.06
Total non-CO ₂ GHGs		13.15	12.08	11.74	11.10	10.47	9.17

Belgium

Non-CO₂ GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		9.81	9.23	9.15	8.36	7.92	7.12
Total N ₂ O		8.15	7.16	6.10	5.73	5.71	5.51
Total F-gases		2.89	3.85	4.03	3.43	2.59	1.51
Agriculture	3A, 3B, 3C, 3D, 3F	11.28	11.17	11.37	11.05	10.70	9.97
Energy	1A, 1B	1.17	1.35	1.35	1.48	1.44	1.47
Industry	2B, 2C, 2E, 2G	3.48	2.29	1.06	0.66	0.69	0.72
Waste	5A, 5B, 5C	2.73	2.21	2.07	1.47	1.33	1.23
Wastewater	5D	0.64	0.63	0.65	0.68	0.71	0.55
Air conditioning & refrigeration	2F.1	2.37	3.42	3.60	3.02	2.22	1.29
Other sectors	2F, 2G	0.47	0.46	0.48	0.46	0.44	0.20
Calibration to UNFCCC 2005		-1.30	-1.30	-1.30	-1.30	-1.30	-1.30
whereof ETS sectors		2.95	1.79	0.62	0.20	0.21	0.23
whereof non-ETS sectors		17.90	18.45	18.67	17.31	16.01	13.91
Total non-CO ₂ GHGs		20.85	20.24	19.29	17.52	16.22	14.14

Bulgaria

Non-CO₂ GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		9.23	8.29	8.10	5.34	4.32	4.12
Total N ₂ O		4.06	3.62	3.93	4.07	4.16	4.09
Total F-gases		0.66	0.44	0.49	0.43	0.30	0.14
Agriculture	3A, 3B, 3C, 3D, 3F	5.22	5.06	5.41	5.45	5.47	5.12
Energy	1A, 1B	1.29	1.35	1.23	1.30	1.15	0.98
Industry	2B, 2C, 2E, 2G	0.89	0.24	0.26	0.09	0.10	0.10
Waste	5A, 5B, 5C	4.23	3.69	3.59	1.04	0.23	0.65
Wastewater	5D	0.76	0.69	0.66	0.66	0.65	0.55
Air conditioning & refrigeration	2F.1	0.64	0.38	0.43	0.37	0.26	0.11
Other sectors	2F, 2G	0.13	0.16	0.16	0.15	0.13	0.07
Calibration to UNFCCC 2005		0.78	0.78	0.78	0.78	0.78	0.78
whereof ETS sectors		0.88	0.22	0.25	0.08	0.09	0.09
whereof non-ETS sectors		13.08	12.12	12.28	9.76	8.69	8.27
Total non-CO ₂ GHGs		13.95	12.35	12.52	9.84	8.78	8.36

Croatia

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		4.15	4.01	3.71	3.22	2.91	2.69
Total N ₂ O		2.42	2.37	1.75	1.76	1.76	1.66
Total F-gases		0.82	1.02	0.48	0.42	0.30	0.15
Agriculture	3A, 3B, 3C, 3D, 3F	2.96	2.63	2.68	2.72	2.74	2.64
Energy	1A, 1B	0.64	0.61	0.53	0.54	0.51	0.39
Industry	2B, 2C, 2E, 2G	0.65	0.77	0.10	0.04	0.04	0.04
Waste	5A, 5B, 5C	1.34	1.38	1.18	0.72	0.42	0.41
Wastewater	5D	0.31	0.30	0.30	0.29	0.28	0.22
Air conditioning & refrigeration	2F.1	0.79	0.99	0.45	0.39	0.28	0.13
Other sectors	2F, 2G	0.08	0.08	0.08	0.08	0.07	0.04
Calibration to UNFCCC 2005		0.62	0.62	0.62	0.62	0.62	0.62
whereof ETS sectors		0.64	0.76	0.09	0.03	0.03	0.03
whereof non-ETS sectors		6.76	6.63	5.84	5.37	4.94	4.47
Total non-CO ₂ GHGs		7.39	7.39	5.93	5.40	4.97	4.50

Cyprus

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.80	0.83	0.87	0.66	0.61	0.62
Total N ₂ O		0.56	0.57	0.53	0.54	0.54	0.53
Total F-gases		0.18	0.19	0.18	0.16	0.12	0.05
Agriculture	3A, 3B, 3C, 3D, 3F	0.68	0.70	0.63	0.69	0.59	0.58
Energy	1A, 1B	0.05	0.05	0.03	0.02	0.15	0.20
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.32	0.33	0.40	0.15	0.08	0.04
Wastewater	5D	0.09	0.10	0.10	0.11	0.11	0.09
Air conditioning & refrigeration	2F.1	0.16	0.17	0.17	0.15	0.11	0.05
Other sectors	2F, 2G	0.03	0.03	0.03	0.03	0.02	0.01
Calibration to UNFCCC 2005		0.21	0.21	0.21	0.21	0.21	0.21
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		1.54	1.59	1.58	1.36	1.27	1.20
Total non-CO ₂ GHGs		1.54	1.59	1.58	1.36	1.27	1.20

Czech Republic

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		12.86	12.23	10.65	8.12	7.77	6.89
Total N ₂ O		6.75	5.91	6.14	5.83	6.09	5.82
Total F-gases		1.47	3.37	3.67	3.15	2.40	1.46
Agriculture	3A, 3B, 3C, 3D, 3F	7.25	6.78	7.25	6.88	6.90	6.58
Energy	1A, 1B	6.98	6.37	5.05	5.13	5.41	5.00
Industry	2B, 2C, 2E, 2G	1.05	0.51	0.46	0.31	0.32	0.34
Waste	5A, 5B, 5C	3.87	4.04	3.58	1.16	0.76	0.53
Wastewater	5D	0.77	0.76	0.77	0.79	0.79	0.65
Air conditioning & refrigeration	2F.1	1.30	3.19	3.51	2.99	2.25	1.32
Other sectors	2F, 2G	0.23	0.23	0.21	0.20	0.19	0.10
Calibration to UNFCCC 2005		-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
whereof ETS sectors		0.89	0.33	0.25	0.08	0.09	0.09
whereof non-ETS sectors		20.19	21.18	20.21	17.01	16.16	14.07
Total non-CO ₂ GHGs		21.08	21.50	20.46	17.10	16.25	14.17

Denmark

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		7.62	7.29	7.09	6.89	5.58	5.04
Total N ₂ O		5.45	5.39	5.23	5.35	5.34	5.23
Total F-gases		0.94	0.97	0.96	0.87	0.65	0.39
Agriculture	3A, 3B, 3C, 3D, 3F	10.04	10.17	10.21	10.23	9.09	8.85
Energy	1A, 1B	1.72	1.40	0.97	1.01	0.89	0.78
Industry	2B, 2C, 2E, 2G	0.03	0.02	0.02	0.02	0.02	0.02
Waste	5A, 5B, 5C	1.28	1.08	1.10	0.96	0.89	0.71
Wastewater	5D	0.28	0.28	0.28	0.29	0.30	0.22
Air conditioning & refrigeration	2F.1	0.75	0.79	0.78	0.70	0.51	0.30
Other sectors	2F, 2G	0.24	0.24	0.24	0.23	0.20	0.12
Calibration to UNFCCC 2005		-0.33	-0.33	-0.33	-0.33	-0.33	-0.33
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		14.01	13.65	13.27	13.11	11.57	10.66
Total non-CO ₂ GHGs		14.01	13.65	13.27	13.11	11.57	10.66

Estonia**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		1.19	1.15	1.03	0.88	0.77	0.56
Total N ₂ O		0.63	0.70	0.76	0.78	0.79	0.75
Total F-gases		0.12	0.12	0.14	0.12	0.08	0.04
Agriculture	3A, 3B, 3C, 3D, 3F	1.15	1.17	1.31	1.29	1.25	1.21
Energy	1A, 1B	0.31	0.35	0.33	0.32	0.31	0.28
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.65	0.60	0.43	0.33	0.27	0.13
Wastewater	5D	0.07	0.08	0.08	0.08	0.08	0.06
Air conditioning & refrigeration	2F.1	0.07	0.11	0.12	0.11	0.07	0.04
Other sectors	2F, 2G	0.07	0.03	0.03	0.03	0.03	0.02
Calibration to UNFCCC 2005		-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		1.94	1.97	1.93	1.78	1.64	1.35
Total non-CO ₂ GHGs		1.94	1.97	1.93	1.78	1.64	1.35

Finland**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		5.66	5.28	4.97	3.89	3.72	3.48
Total N ₂ O		5.93	4.78	4.56	4.45	4.48	4.37
Total F-gases		0.58	0.70	0.73	0.62	0.41	0.20
Agriculture	3A, 3B, 3C, 3D, 3F	6.13	5.95	5.97	5.95	5.85	5.69
Energy	1A, 1B	1.54	1.87	1.56	1.56	1.63	1.66
Industry	2B, 2C, 2E, 2G	1.59	0.17	0.17	0.09	0.09	0.10
Waste	5A, 5B, 5C	2.77	2.53	2.30	1.19	1.08	0.96
Wastewater	5D	0.74	0.70	0.69	0.70	0.70	0.63
Air conditioning & refrigeration	2F.1	0.45	0.60	0.63	0.53	0.35	0.17
Other sectors	2F, 2G	0.18	0.18	0.17	0.16	0.14	0.07
Calibration to UNFCCC 2005		-1.23	-1.23	-1.23	-1.23	-1.23	-1.23
whereof ETS sectors		1.56	0.16	0.16	0.08	0.08	0.08
whereof non-ETS sectors		10.60	10.60	10.10	8.88	8.53	7.97
Total non-CO ₂ GHGs		12.17	10.76	10.26	8.96	8.61	8.06

France**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		64.07	63.86	60.99	50.45	49.25	46.68
Total N ₂ O		51.90	47.84	48.08	46.50	45.84	43.91
Total F-gases		13.27	14.62	15.00	13.14	9.76	6.02
Agriculture	3A, 3B, 3C, 3D, 3F	75.27	76.15	75.72	73.79	73.05	70.65
Energy	1A, 1B	5.72	5.36	4.88	5.52	4.89	4.47
Industry	2B, 2C, 2E, 2G	9.06	3.06	2.78	1.76	1.80	1.83
Waste	5A, 5B, 5C	18.30	17.92	16.30	6.41	5.84	5.46
Wastewater	5D	4.36	4.08	4.13	4.21	4.26	3.39
Air conditioning & refrigeration	2F.1	6.22	8.93	9.37	8.06	5.27	2.49
Other sectors	2F, 2G	4.79	5.30	5.37	4.82	4.21	2.78
Calibration to UNFCCC 2005		5.53	5.53	5.53	5.53	5.53	5.53
whereof ETS sectors		6.73	1.85	1.67	0.63	0.64	0.66
whereof non-ETS sectors		122.51	124.48	122.39	109.47	104.20	95.95
Total non-CO ₂ GHGs		129.24	126.33	124.07	110.09	104.84	96.61

Germany**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		69.83	60.03	54.44	50.75	45.87	41.58
Total N ₂ O		43.16	36.54	37.17	34.90	34.04	31.60
Total F-gases		15.93	17.13	17.47	14.79	11.72	6.43
Agriculture	3A, 3B, 3C, 3D, 3F	63.40	63.00	63.31	62.41	61.17	58.90
Energy	1A, 1B	21.87	17.24	15.57	14.74	11.43	10.34
Industry	2B, 2C, 2E, 2G	10.65	3.09	3.72	1.75	1.81	1.87
Waste	5A, 5B, 5C	19.05	13.66	9.45	7.09	5.82	4.06
Wastewater	5D	4.26	4.20	4.14	4.19	4.22	3.13
Air conditioning & refrigeration	2F.1	7.75	10.48	10.85	8.48	5.72	3.03
Other sectors	2F, 2G	6.76	6.85	6.86	6.61	6.28	3.10
Calibration to UNFCCC 2005		-4.82	-4.82	-4.82	-4.82	-4.82	-4.82
whereof ETS sectors		8.40	2.22	2.94	0.99	1.04	1.09
whereof non-ETS sectors		120.52	111.48	106.14	99.46	90.59	78.52
Total non-CO ₂ GHGs		128.92	113.70	109.08	100.44	91.62	79.61

Greece

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		12.16	12.47	10.29	8.76	7.80	6.94
Total N ₂ O		5.88	5.58	4.90	4.77	4.67	4.35
Total F-gases		5.59	4.60	4.14	3.41	2.45	1.47
Agriculture	3A, 3B, 3C, 3D, 3F	8.72	9.08	8.26	8.17	8.14	7.81
Energy	1A, 1B	3.21	2.69	2.34	2.02	1.71	1.13
Industry	2B, 2C, 2E, 2G	2.28	0.55	0.28	0.18	0.17	0.17
Waste	5A, 5B, 5C	3.95	4.40	3.07	1.94	1.22	1.16
Wastewater	5D	1.86	1.69	1.59	1.60	1.58	1.45
Air conditioning & refrigeration	2F.1	3.68	4.21	3.78	3.07	2.14	1.19
Other sectors	2F, 2G	0.32	0.43	0.39	0.37	0.34	0.25
Calibration to UNFCCC 2005		-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
whereof ETS sectors		0.58	0.45	0.18	0.08	0.08	0.07
whereof non-ETS sectors		23.05	22.20	19.15	16.86	14.85	12.69
Total non-CO ₂ GHGs		23.62	22.65	19.33	16.95	14.92	12.76

Hungary

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		8.76	8.52	8.14	5.12	4.42	3.79
Total N ₂ O		5.79	5.41	4.19	4.25	4.25	3.91
Total F-gases		1.05	1.06	1.16	1.03	0.80	0.47
Agriculture	3A, 3B, 3C, 3D, 3F	7.28	6.63	7.14	6.91	6.76	6.18
Energy	1A, 1B	1.78	1.61	1.40	1.26	1.02	0.97
Industry	2B, 2C, 2E, 2G	1.99	1.74	0.21	0.12	0.13	0.15
Waste	5A, 5B, 5C	3.58	3.90	3.51	1.03	0.73	0.58
Wastewater	5D	0.73	0.63	0.61	0.60	0.60	0.46
Air conditioning & refrigeration	2F.1	0.48	0.78	0.91	0.80	0.60	0.31
Other sectors	2F, 2G	0.40	0.34	0.34	0.31	0.27	0.15
Calibration to UNFCCC 2005		-0.63	-0.63	-0.63	-0.63	-0.63	-0.63
whereof ETS sectors		1.94	1.65	0.15	0.05	0.06	0.06
whereof non-ETS sectors		13.66	13.34	13.34	10.35	9.42	8.11
Total non-CO ₂ GHGs		15.60	14.99	13.50	10.41	9.48	8.17

Ireland

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		13.98	12.75	14.24	14.00	13.89	13.63
Total N ₂ O		8.13	7.94	8.31	8.40	8.56	8.60
Total F-gases		0.97	0.84	0.93	0.82	0.61	0.36
Agriculture	3A, 3B, 3C, 3D, 3F	19.01	18.13	19.75	20.37	20.68	20.45
Energy	1A, 1B	0.57	0.50	0.50	0.39	0.39	0.40
Industry	2B, 2C, 2E, 2G	0.30	0.08	0.09	0.10	0.10	0.11
Waste	5A, 5B, 5C	1.87	1.41	1.64	0.97	0.70	0.81
Wastewater	5D	0.36	0.34	0.35	0.36	0.36	0.29
Air conditioning & refrigeration	2F.1	0.41	0.53	0.60	0.53	0.37	0.18
Other sectors	2F, 2G	0.32	0.30	0.31	0.26	0.21	0.10
Calibration to UNFCCC 2005		0.24	0.24	0.24	0.24	0.24	0.24
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		23.09	21.53	23.48	23.23	23.06	22.60
Total non-CO ₂ GHGs		23.09	21.53	23.48	23.23	23.06	22.60

Italy

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		50.34	46.43	44.22	41.43	38.19	35.79
Total N ₂ O		28.40	19.28	20.79	20.51	20.07	18.41
Total F-gases		12.54	15.88	16.17	13.56	10.38	6.68
Agriculture	3A, 3B, 3C, 3D, 3F	32.38	29.92	31.65	30.61	30.04	28.99
Energy	1A, 1B	11.37	10.32	10.39	10.56	10.01	9.56
Industry	2B, 2C, 2E, 2G	9.87	2.52	2.38	1.99	2.01	2.04
Waste	5A, 5B, 5C	20.95	18.19	15.77	13.86	11.21	9.91
Wastewater	5D	4.11	4.14	4.15	4.24	4.30	3.48
Air conditioning & refrigeration	2F.1	8.43	11.90	12.26	9.87	6.91	3.52
Other sectors	2F, 2G	2.56	2.97	2.96	2.76	2.54	1.78
Calibration to UNFCCC 2005		1.61	1.61	1.61	1.61	1.61	1.61
whereof ETS sectors		7.66	0.73	0.61	0.18	0.19	0.20
whereof non-ETS sectors		83.60	80.86	80.56	75.32	68.45	60.68
Total non-CO ₂ GHGs		91.27	81.58	81.17	75.50	68.64	60.88

Latvia**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		2.00	1.95	1.88	1.45	1.35	1.27
Total N ₂ O		1.28	1.34	1.37	1.37	1.39	1.36
Total F-gases		0.05	0.14	0.19	0.18	0.12	0.06
Agriculture	3A, 3B, 3C, 3D, 3F	2.04	2.10	2.18	2.12	2.12	2.05
Energy	1A, 1B	0.28	0.24	0.24	0.22	0.20	0.20
Industry	2B, 2C, 2E, 2G	0.00	0.01	0.01	0.01	0.01	0.01
Waste	5A, 5B, 5C	0.63	0.69	0.56	0.22	0.16	0.16
Wastewater	5D	0.26	0.20	0.21	0.22	0.21	0.19
Air conditioning & refrigeration	2F.1	0.05	0.13	0.19	0.17	0.11	0.05
Other sectors	2F, 2G	0.04	0.03	0.03	0.03	0.03	0.01
Calibration to UNFCCC 2005		0.02	0.02	0.02	0.02	0.02	0.02
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		3.33	3.42	3.44	3.00	2.87	2.70
Total non-CO ₂ GHGs		3.33	3.42	3.44	3.00	2.87	2.70

Lithuania**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		3.97	4.05	3.64	2.99	2.41	2.34
Total N ₂ O		5.15	3.56	3.55	3.10	3.13	3.10
Total F-gases		0.16	0.32	0.37	0.33	0.23	0.11
Agriculture	3A, 3B, 3C, 3D, 3F	5.44	5.45	5.50	5.38	5.24	5.21
Energy	1A, 1B	0.49	0.49	0.44	0.40	0.37	0.28
Industry	2B, 2C, 2E, 2G	2.32	0.71	0.65	0.21	0.21	0.21
Waste	5A, 5B, 5C	1.27	1.39	1.03	0.53	0.18	0.28
Wastewater	5D	0.32	0.31	0.31	0.29	0.28	0.23
Air conditioning & refrigeration	2F.1	0.15	0.30	0.34	0.30	0.21	0.09
Other sectors	2F, 2G	0.06	0.07	0.06	0.06	0.05	0.02
Calibration to UNFCCC 2005		-0.77	-0.77	-0.77	-0.77	-0.77	-0.77
whereof ETS sectors		2.32	0.70	0.64	0.21	0.21	0.20
whereof non-ETS sectors		6.96	7.24	6.92	6.20	5.56	5.36
Total non-CO ₂ GHGs		9.28	7.94	7.56	6.41	5.77	5.55

Luxembourg**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.58	0.59	0.58	0.58	0.58	0.55
Total N ₂ O		0.30	0.32	0.32	0.32	0.34	0.33
Total F-gases		0.05	0.06	0.09	0.09	0.06	0.02
Agriculture	3A, 3B, 3C, 3D, 3F	0.64	0.71	0.69	0.66	0.67	0.64
Energy	1A, 1B	0.16	0.13	0.15	0.17	0.18	0.18
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.06	0.05	0.04	0.04	0.04	0.04
Wastewater	5D	0.02	0.02	0.03	0.03	0.03	0.02
Air conditioning & refrigeration	2F.1	0.04	0.05	0.08	0.08	0.05	0.02
Other sectors	2F, 2G	0.02	0.02	0.02	0.02	0.02	0.01
Calibration to UNFCCC 2005		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		0.92	0.98	0.99	0.99	0.98	0.90
Total non-CO ₂ GHGs		0.92	0.98	0.99	0.99	0.98	0.90

Malta**Non-CO2 GHG emissions EUCO27 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.17	0.15	0.15	0.13	0.06	0.08
Total N ₂ O		0.06	0.05	0.05	0.05	0.05	0.04
Total F-gases		0.06	0.12	0.15	0.14	0.10	0.05
Agriculture	3A, 3B, 3C, 3D, 3F	0.12	0.10	0.10	0.10	0.08	0.08
Energy	1A, 1B	0.02	0.01	0.01	0.01	0.01	0.01
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.08	0.08	0.08	0.06	0.01	0.04
Wastewater	5D	0.02	0.02	0.03	0.03	0.02	0.02
Air conditioning & refrigeration	2F.1	0.06	0.12	0.14	0.13	0.10	0.05
Other sectors	2F, 2G	0.01	0.01	0.01	0.01	0.01	0.00
Calibration to UNFCCC 2005		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		0.29	0.33	0.35	0.31	0.22	0.18
Total non-CO ₂ GHGs		0.29	0.33	0.35	0.31	0.22	0.18

Netherlands

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		20.48	21.05	17.30	16.96	16.88	15.17
Total N ₂ O		13.84	9.36	9.64	8.79	8.64	8.35
Total F-gases		2.70	2.89	2.93	2.57	1.93	1.30
Agriculture	3A, 3B, 3C, 3D, 3F	19.14	19.62	20.27	19.69	19.41	17.64
Energy	1A, 1B	1.84	1.76	1.62	1.71	1.62	1.62
Industry	2B, 2C, 2E, 2G	6.91	2.38	2.42	1.69	1.76	1.83
Waste	5A, 5B, 5C	6.92	6.96	2.84	2.87	2.95	3.02
Wastewater	5D	0.99	0.92	0.93	0.95	0.97	0.74
Air conditioning & refrigeration	2F.1	1.43	1.92	2.04	1.72	1.13	0.63
Other sectors	2F, 2G	0.72	0.68	0.68	0.62	0.54	0.27
Calibration to UNFCCC 2005		-0.93	-0.93	-0.93	-0.93	-0.93	-0.93
whereof ETS sectors		5.54	1.23	1.30	0.50	0.52	0.55
whereof non-ETS sectors		31.47	32.08	28.57	27.82	26.93	24.27
Total non-CO ₂ GHGs		37.02	33.31	29.86	28.31	27.45	24.82

Poland

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		46.98	43.56	43.47	38.68	35.46	34.15
Total N ₂ O		22.17	19.68	20.27	20.22	20.58	20.13
Total F-gases		5.59	7.81	9.42	8.60	6.67	3.48
Agriculture	3A, 3B, 3C, 3D, 3F	30.90	31.21	31.78	32.75	33.06	33.88
Energy	1A, 1B	17.69	14.94	14.87	14.27	12.36	11.18
Industry	2B, 2C, 2E, 2G	4.64	1.19	1.54	0.88	0.98	1.06
Waste	5A, 5B, 5C	10.31	10.11	9.70	5.12	3.75	3.05
Wastewater	5D	1.75	1.76	1.81	1.84	1.86	1.35
Air conditioning & refrigeration	2F.1	4.67	7.45	9.06	8.27	6.38	3.26
Other sectors	2F, 2G	1.29	0.88	0.88	0.85	0.80	0.46
Calibration to UNFCCC 2005		3.51	3.51	3.51	3.51	3.51	3.51
whereof ETS sectors		4.37	0.91	1.15	0.42	0.47	0.52
whereof non-ETS sectors		70.38	70.13	72.00	67.07	62.23	57.24
Total non-CO ₂ GHGs		74.74	71.04	73.15	67.49	62.70	57.76

Portugal

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		14.00	13.25	11.82	10.04	9.09	7.45
Total N ₂ O		4.21	3.79	3.71	3.58	3.60	3.41
Total F-gases		0.94	1.40	1.40	1.23	0.91	0.51
Agriculture	3A, 3B, 3C, 3D, 3F	7.56	7.24	7.54	7.67	7.17	7.01
Energy	1A, 1B	1.36	0.96	1.00	0.90	0.86	0.79
Industry	2B, 2C, 2E, 2G	0.57	0.38	0.16	0.08	0.09	0.09
Waste	5A, 5B, 5C	5.87	6.17	4.61	2.71	2.27	0.99
Wastewater	5D	3.17	2.64	2.56	2.60	2.65	2.40
Air conditioning & refrigeration	2F.1	0.84	1.29	1.30	1.13	0.81	0.41
Other sectors	2F, 2G	0.22	0.22	0.21	0.20	0.20	0.13
Calibration to UNFCCC 2005		-0.45	-0.45	-0.45	-0.45	-0.45	-0.45
whereof ETS sectors		0.54	0.33	0.11	0.04	0.04	0.04
whereof non-ETS sectors		18.60	18.11	16.82	14.81	13.56	11.32
Total non-CO ₂ GHGs		19.14	18.44	16.93	14.85	13.60	11.36

Romania

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		35.27	31.34	30.74	28.19	26.25	25.10
Total N ₂ O		10.41	8.82	8.13	7.79	7.90	7.33
Total F-gases		1.05	0.79	0.97	0.93	0.70	0.39
Agriculture	3A, 3B, 3C, 3D, 3F	20.11	17.90	18.27	16.14	16.25	14.62
Energy	1A, 1B	4.42	3.96	3.53	3.70	3.46	3.10
Industry	2B, 2C, 2E, 2G	3.09	1.93	0.56	0.29	0.31	0.32
Waste	5A, 5B, 5C	4.89	3.38	3.56	2.88	1.17	1.85
Wastewater	5D	2.49	2.34	2.32	2.34	2.34	2.07
Air conditioning & refrigeration	2F.1	0.91	0.60	0.78	0.74	0.52	0.23
Other sectors	2F, 2G	0.35	0.36	0.35	0.34	0.32	0.17
Calibration to UNFCCC 2005		10.47	10.47	10.47	10.47	10.47	10.47
whereof ETS sectors		3.08	1.87	0.49	0.22	0.24	0.25
whereof non-ETS sectors		43.65	39.07	39.35	36.69	34.61	32.58
Total non-CO ₂ GHGs		46.72	40.94	39.85	36.91	34.85	32.82

Slovakia

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		5.14	4.85	4.62	3.39	3.20	2.91
Total N ₂ O		3.70	3.54	2.64	2.52	2.50	2.38
Total F-gases		0.30	0.50	0.57	0.52	0.41	0.25
Agriculture	3A, 3B, 3C, 3D, 3F	3.00	2.62	2.60	2.49	2.43	2.36
Energy	1A, 1B	1.62	1.48	1.43	1.41	1.39	1.11
Industry	2B, 2C, 2E, 2G	1.30	1.34	0.30	0.15	0.16	0.17
Waste	5A, 5B, 5C	1.50	1.58	1.54	0.46	0.32	0.34
Wastewater	5D	0.83	0.79	0.80	0.81	0.83	0.77
Air conditioning & refrigeration	2F.1	0.21	0.40	0.48	0.44	0.32	0.16
Other sectors	2F, 2G	0.11	0.11	0.10	0.10	0.09	0.05
Calibration to UNFCCC 2005		0.57	0.57	0.57	0.57	0.57	0.57
whereof ETS sectors		1.28	1.32	0.28	0.13	0.14	0.14
whereof non-ETS sectors		7.86	7.57	7.54	6.31	5.98	5.39
Total non-CO ₂ GHGs		9.15	8.89	7.83	6.44	6.11	5.54

Slovenia

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		2.37	2.02	1.98	1.80	1.68	1.64
Total N ₂ O		0.83	0.80	0.72	0.72	0.69	0.64
Total F-gases		0.27	0.22	0.26	0.22	0.17	0.10
Agriculture	3A, 3B, 3C, 3D, 3F	1.80	1.75	1.68	1.64	1.60	1.62
Energy	1A, 1B	0.46	0.48	0.48	0.46	0.45	0.42
Industry	2B, 2C, 2E, 2G	0.16	0.03	0.04	0.04	0.04	0.04
Waste	5A, 5B, 5C	0.77	0.49	0.45	0.32	0.23	0.18
Wastewater	5D	0.34	0.25	0.25	0.26	0.26	0.23
Air conditioning & refrigeration	2F.1	0.10	0.18	0.21	0.17	0.12	0.05
Other sectors	2F, 2G	0.05	0.04	0.04	0.04	0.04	0.02
Calibration to UNFCCC 2005		-0.19	-0.19	-0.19	-0.19	-0.19	-0.19
whereof ETS sectors		0.14	0.01	0.03	0.03	0.03	0.03
whereof non-ETS sectors		3.33	3.02	2.94	2.71	2.52	2.36
Total non-CO ₂ GHGs		3.47	3.03	2.96	2.74	2.54	2.39

Spain

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		39.61	39.12	36.66	33.60	27.02	23.01
Total N ₂ O		25.03	23.56	23.91	24.68	24.59	23.18
Total F-gases		6.31	7.21	7.16	5.68	4.02	2.18
Agriculture	3A, 3B, 3C, 3D, 3F	36.66	35.30	35.79	37.79	33.27	30.71
Energy	1A, 1B	4.37	3.63	3.52	3.58	2.99	2.76
Industry	2B, 2C, 2E, 2G	2.25	1.11	0.84	0.67	0.69	0.73
Waste	5A, 5B, 5C	12.94	13.93	11.66	7.48	6.00	4.28
Wastewater	5D	3.38	3.38	3.36	3.37	3.26	2.64
Air conditioning & refrigeration	2F.1	4.17	5.28	5.46	4.36	3.12	1.47
Other sectors	2F, 2G	2.17	2.26	2.09	1.70	1.28	0.77
Calibration to UNFCCC 2005		5.01	5.01	5.01	5.01	5.01	5.01
whereof ETS sectors		1.56	0.59	0.37	0.16	0.17	0.17
whereof non-ETS sectors		69.40	69.31	67.37	63.79	55.46	48.20
Total non-CO ₂ GHGs		70.95	69.89	67.73	63.96	55.63	48.37

Sweden

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		6.58	5.43	5.07	4.76	4.55	4.21
Total N ₂ O		5.05	4.97	4.79	4.73	4.75	4.54
Total F-gases		1.95	1.95	1.88	1.57	1.16	0.87
Agriculture	3A, 3B, 3C, 3D, 3F	7.04	6.88	6.86	6.77	6.76	6.67
Energy	1A, 1B	1.82	1.91	1.81	1.82	1.81	1.79
Industry	2B, 2C, 2E, 2G	0.84	0.55	0.18	0.11	0.12	0.12
Waste	5A, 5B, 5C	2.83	1.78	1.53	1.29	1.09	0.85
Wastewater	5D	0.83	0.83	0.85	0.87	0.89	0.76
Air conditioning & refrigeration	2F.1	1.10	1.34	1.48	1.19	0.80	0.54
Other sectors	2F, 2G	0.57	0.50	0.47	0.46	0.44	0.34
Calibration to UNFCCC 2005		-1.45	-1.45	-1.45	-1.45	-1.45	-1.45
whereof ETS sectors		0.72	0.48	0.14	0.08	0.08	0.08
whereof non-ETS sectors		12.87	11.86	11.60	10.99	10.39	9.54
Total non-CO ₂ GHGs		13.59	12.35	11.74	11.06	10.47	9.62

United Kingdom

Non-CO2 GHG emissions EUCO27 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		92.26	64.48	52.22	45.81	40.85	33.07
Total N ₂ O		31.39	27.75	27.74	26.31	26.33	24.45
Total F-gases		9.52	10.30	10.56	8.75	6.41	3.50
Agriculture	3A, 3B, 3C, 3D, 3F	50.87	47.91	48.53	46.96	45.91	43.90
Energy	1A, 1B	23.94	19.03	15.14	12.88	12.55	10.02
Industry	2B, 2C, 2E, 2G	4.21	2.14	1.14	0.73	0.74	0.76
Waste	5A, 5B, 5C	49.60	27.98	19.45	15.71	12.02	8.21
Wastewater	5D	5.23	4.85	5.00	5.10	5.19	4.34
Air conditioning & refrigeration	2F.1	4.45	6.38	6.86	5.61	3.87	1.93
Other sectors	2F, 2G	4.59	3.98	4.13	3.61	3.04	1.58
Calibration to UNFCCC 2005		-9.73	-9.73	-9.73	-9.73	-9.73	-9.73
whereof ETS sectors		2.95	1.40	0.63	0.21	0.21	0.22
whereof non-ETS sectors		130.22	101.14	89.89	80.66	73.37	60.79
Total non-CO ₂ GHGs		133.16	102.54	90.52	80.87	73.58	61.01

Appendix II.b: EUCO30 scenario - non-CO₂ GHG emissions

EU-28

Non-CO₂ GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		547.44	490.62	454.02	401.88	384.86	369.06
Total N ₂ O		304.12	264.06	262.73	255.54	254.27	252.03
Total F-gases		88.04	100.72	103.78	88.71	67.79	42.49
Agriculture	3A, 3B, 3C, 3D, 3F	443.28	432.58	439.69	434.01	432.49	432.62
Energy	1A, 1B	118.30	101.88	91.99	88.93	82.70	75.84
Industry	2B, 2C, 2E, 2G	68.75	27.03	19.63	12.27	12.72	13.17
Waste	5A, 5B, 5C	185.53	151.68	122.93	79.16	67.87	55.79
Wastewater	5D	39.42	37.37	37.44	37.94	38.33	38.74
Air conditioning & refrigeration	2F.1	52.84	73.61	77.67	64.86	46.39	25.75
Other sectors	2F, 2G	27.44	27.21	27.15	24.92	22.40	17.63
Calibration to UNFCCC 2005		4.04	4.04	4.04	4.04	4.04	4.04
whereof ETS sectors		54.97	19.06	12.15	4.50	4.71	4.91
whereof non-ETS sectors		884.63	836.35	808.38	741.63	702.23	658.67
Total non-CO ₂ GHGs		939.60	855.41	820.54	746.12	706.93	663.58

Austria

Non-CO₂ GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		7.57	6.42	6.00	5.63	5.42	5.11
Total N ₂ O		3.50	3.44	3.45	3.50	3.50	3.48
Total F-gases		2.08	2.22	2.29	1.97	1.57	0.86
Agriculture	3A, 3B, 3C, 3D, 3F	7.19	7.23	7.26	7.34	7.34	7.34
Energy	1A, 1B	1.64	1.79	1.62	1.54	1.42	1.34
Industry	2B, 2C, 2E, 2G	0.61	0.24	0.27	0.29	0.31	0.32
Waste	5A, 5B, 5C	2.97	1.77	1.47	1.12	1.01	0.75
Wastewater	5D	0.44	0.43	0.44	0.45	0.46	0.47
Air conditioning & refrigeration	2F.1	1.17	1.71	1.78	1.46	1.06	0.61
Other sectors	2F, 2G	0.68	0.46	0.46	0.45	0.44	0.19
Calibration to UNFCCC 2005		-1.55	-1.55	-1.55	-1.55	-1.55	-1.55
whereof ETS sectors		0.26	0.06	0.09	0.10	0.11	0.11
whereof non-ETS sectors		12.89	12.02	11.65	11.00	10.38	9.35
Total non-CO ₂ GHGs		13.15	12.08	11.74	11.10	10.48	9.46

Belgium

Non-CO₂ GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		9.81	9.23	9.15	8.36	7.92	7.83
Total N ₂ O		8.15	7.16	6.10	5.73	5.71	5.78
Total F-gases		2.89	3.85	4.03	3.43	2.61	1.57
Agriculture	3A, 3B, 3C, 3D, 3F	11.28	11.17	11.37	11.05	10.70	10.68
Energy	1A, 1B	1.17	1.35	1.35	1.48	1.44	1.47
Industry	2B, 2C, 2E, 2G	3.48	2.29	1.06	0.66	0.69	0.72
Waste	5A, 5B, 5C	2.73	2.21	2.07	1.47	1.33	1.23
Wastewater	5D	0.64	0.63	0.65	0.68	0.71	0.73
Air conditioning & refrigeration	2F.1	2.37	3.42	3.60	3.02	2.23	1.33
Other sectors	2F, 2G	0.47	0.46	0.48	0.46	0.44	0.31
Calibration to UNFCCC 2005		-1.30	-1.30	-1.30	-1.30	-1.30	-1.30
whereof ETS sectors		2.95	1.79	0.62	0.20	0.21	0.23
whereof non-ETS sectors		17.90	18.45	18.67	17.31	16.03	14.95
Total non-CO ₂ GHGs		20.85	20.24	19.29	17.52	16.25	15.18

Bulgaria

Non-CO₂ GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		9.23	8.29	8.10	5.34	4.98	4.91
Total N ₂ O		4.06	3.62	3.93	4.07	4.16	4.23
Total F-gases		0.66	0.44	0.49	0.43	0.31	0.17
Agriculture	3A, 3B, 3C, 3D, 3F	5.22	5.06	5.41	5.45	5.49	5.53
Energy	1A, 1B	1.29	1.35	1.23	1.30	1.15	1.14
Industry	2B, 2C, 2E, 2G	0.89	0.24	0.26	0.09	0.10	0.10
Waste	5A, 5B, 5C	4.23	3.69	3.59	1.04	0.87	0.86
Wastewater	5D	0.76	0.69	0.66	0.66	0.65	0.64
Air conditioning & refrigeration	2F.1	0.64	0.38	0.43	0.37	0.26	0.13
Other sectors	2F, 2G	0.13	0.16	0.16	0.15	0.13	0.12
Calibration to UNFCCC 2005		0.78	0.78	0.78	0.78	0.78	0.78
whereof ETS sectors		0.88	0.22	0.25	0.08	0.09	0.09
whereof non-ETS sectors		13.08	12.12	12.28	9.76	9.36	9.22
Total non-CO ₂ GHGs		13.95	12.35	12.52	9.84	9.44	9.31

Croatia

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		4.15	4.01	3.71	3.22	3.09	3.08
Total N ₂ O		2.42	2.37	1.75	1.76	1.76	1.75
Total F-gases		0.82	1.02	0.48	0.42	0.31	0.17
Agriculture	3A, 3B, 3C, 3D, 3F	2.96	2.63	2.68	2.72	2.74	2.77
Energy	1A, 1B	0.64	0.61	0.53	0.54	0.51	0.47
Industry	2B, 2C, 2E, 2G	0.65	0.77	0.10	0.04	0.04	0.04
Waste	5A, 5B, 5C	1.34	1.38	1.18	0.72	0.59	0.59
Wastewater	5D	0.31	0.30	0.30	0.29	0.29	0.28
Air conditioning & refrigeration	2F.1	0.79	0.99	0.45	0.39	0.29	0.15
Other sectors	2F, 2G	0.08	0.08	0.08	0.08	0.07	0.07
Calibration to UNFCCC 2005		0.62	0.62	0.62	0.62	0.62	0.62
whereof ETS sectors		0.64	0.76	0.09	0.03	0.03	0.03
whereof non-ETS sectors		6.76	6.63	5.84	5.37	5.12	4.96
Total non-CO ₂ GHGs		7.39	7.39	5.93	5.40	5.16	5.00

Cyprus

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.80	0.83	0.87	0.66	0.78	0.86
Total N ₂ O		0.56	0.57	0.53	0.54	0.54	0.55
Total F-gases		0.18	0.19	0.18	0.16	0.12	0.07
Agriculture	3A, 3B, 3C, 3D, 3F	0.68	0.70	0.63	0.69	0.69	0.71
Energy	1A, 1B	0.05	0.05	0.03	0.02	0.15	0.20
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.32	0.33	0.40	0.15	0.15	0.16
Wastewater	5D	0.09	0.10	0.10	0.11	0.11	0.11
Air conditioning & refrigeration	2F.1	0.16	0.17	0.17	0.15	0.11	0.06
Other sectors	2F, 2G	0.03	0.03	0.03	0.03	0.02	0.02
Calibration to UNFCCC 2005		0.21	0.21	0.21	0.21	0.21	0.21
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		1.54	1.59	1.58	1.36	1.45	1.48
Total non-CO ₂ GHGs		1.54	1.59	1.58	1.36	1.45	1.48

Czech Republic

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		12.86	12.23	10.65	8.12	7.95	7.40
Total N ₂ O		6.75	5.91	6.14	5.83	6.09	6.05
Total F-gases		1.47	3.37	3.67	3.15	2.41	1.50
Agriculture	3A, 3B, 3C, 3D, 3F	7.25	6.78	7.25	6.88	6.93	6.87
Energy	1A, 1B	6.98	6.37	5.05	5.13	5.41	5.09
Industry	2B, 2C, 2E, 2G	1.05	0.51	0.46	0.31	0.32	0.34
Waste	5A, 5B, 5C	3.87	4.04	3.58	1.16	0.90	0.65
Wastewater	5D	0.77	0.76	0.77	0.79	0.80	0.82
Air conditioning & refrigeration	2F.1	1.30	3.19	3.51	2.99	2.26	1.35
Other sectors	2F, 2G	0.23	0.23	0.21	0.20	0.19	0.18
Calibration to UNFCCC 2005		-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
whereof ETS sectors		0.89	0.33	0.25	0.08	0.09	0.09
whereof non-ETS sectors		20.19	21.18	20.21	17.01	16.36	14.85
Total non-CO ₂ GHGs		21.08	21.50	20.46	17.10	16.45	14.94

Denmark

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		7.62	7.29	7.09	6.89	6.76	6.55
Total N ₂ O		5.45	5.39	5.23	5.35	5.34	5.35
Total F-gases		0.94	0.97	0.96	0.87	0.65	0.40
Agriculture	3A, 3B, 3C, 3D, 3F	10.04	10.17	10.21	10.23	10.26	10.36
Energy	1A, 1B	1.72	1.40	0.97	1.01	0.89	0.78
Industry	2B, 2C, 2E, 2G	0.03	0.02	0.02	0.02	0.02	0.02
Waste	5A, 5B, 5C	1.28	1.08	1.10	0.96	0.89	0.71
Wastewater	5D	0.28	0.28	0.28	0.29	0.30	0.31
Air conditioning & refrigeration	2F.1	0.75	0.79	0.78	0.70	0.51	0.31
Other sectors	2F, 2G	0.24	0.24	0.24	0.23	0.20	0.16
Calibration to UNFCCC 2005		-0.33	-0.33	-0.33	-0.33	-0.33	-0.33
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		14.01	13.65	13.27	13.11	12.75	12.31
Total non-CO ₂ GHGs		14.01	13.65	13.27	13.11	12.75	12.31

Estonia**Non-CO₂ GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		1.19	1.15	1.03	0.88	0.88	0.75
Total N ₂ O		0.63	0.70	0.76	0.78	0.79	0.77
Total F-gases		0.12	0.12	0.14	0.12	0.08	0.05
Agriculture	3A, 3B, 3C, 3D, 3F	1.15	1.17	1.31	1.29	1.26	1.30
Energy	1A, 1B	0.31	0.35	0.33	0.32	0.31	0.28
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.65	0.60	0.43	0.33	0.37	0.22
Wastewater	5D	0.07	0.08	0.08	0.08	0.08	0.08
Air conditioning & refrigeration	2F.1	0.07	0.11	0.12	0.11	0.07	0.04
Other sectors	2F, 2G	0.07	0.03	0.03	0.03	0.03	0.03
Calibration to UNFCCC 2005		-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		1.94	1.97	1.93	1.78	1.75	1.56
Total non-CO ₂ GHGs		1.94	1.97	1.93	1.78	1.75	1.56

Finland**Non-CO₂ GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		5.66	5.28	4.97	3.89	3.74	3.65
Total N ₂ O		5.93	4.78	4.56	4.45	4.48	4.50
Total F-gases		0.58	0.70	0.73	0.62	0.42	0.23
Agriculture	3A, 3B, 3C, 3D, 3F	6.13	5.95	5.97	5.95	5.85	5.84
Energy	1A, 1B	1.54	1.87	1.56	1.56	1.63	1.66
Industry	2B, 2C, 2E, 2G	1.59	0.17	0.17	0.09	0.09	0.10
Waste	5A, 5B, 5C	2.77	2.53	2.30	1.19	1.10	0.98
Wastewater	5D	0.74	0.70	0.69	0.70	0.70	0.71
Air conditioning & refrigeration	2F.1	0.45	0.60	0.63	0.53	0.35	0.18
Other sectors	2F, 2G	0.18	0.18	0.17	0.16	0.14	0.13
Calibration to UNFCCC 2005		-1.23	-1.23	-1.23	-1.23	-1.23	-1.23
whereof ETS sectors		1.56	0.16	0.16	0.08	0.08	0.08
whereof non-ETS sectors		10.60	10.60	10.10	8.88	8.56	8.29
Total non-CO ₂ GHGs		12.17	10.76	10.26	8.96	8.64	8.38

France**Non-CO₂ GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		64.07	63.86	60.99	50.45	49.27	48.84
Total N ₂ O		51.90	47.84	48.08	46.50	45.84	45.31
Total F-gases		13.27	14.62	15.00	13.14	9.99	6.85
Agriculture	3A, 3B, 3C, 3D, 3F	75.27	76.15	75.72	73.79	73.05	72.78
Energy	1A, 1B	5.72	5.36	4.88	5.52	4.90	4.47
Industry	2B, 2C, 2E, 2G	9.06	3.06	2.78	1.76	1.80	1.83
Waste	5A, 5B, 5C	18.30	17.92	16.30	6.41	5.84	5.48
Wastewater	5D	4.36	4.08	4.13	4.21	4.27	4.33
Air conditioning & refrigeration	2F.1	6.22	8.93	9.37	8.06	5.50	2.92
Other sectors	2F, 2G	4.79	5.30	5.37	4.82	4.21	3.65
Calibration to UNFCCC 2005		5.53	5.53	5.53	5.53	5.53	5.53
whereof ETS sectors		6.73	1.85	1.67	0.63	0.64	0.66
whereof non-ETS sectors		122.51	124.48	122.39	109.47	104.45	100.34
Total non-CO ₂ GHGs		129.24	126.33	124.07	110.09	105.09	100.99

Germany**Non-CO₂ GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		69.83	60.03	54.44	50.75	48.24	45.57
Total N ₂ O		43.16	36.54	37.17	34.90	34.04	33.26
Total F-gases		15.93	17.13	17.47	14.79	11.77	6.90
Agriculture	3A, 3B, 3C, 3D, 3F	63.40	63.00	63.31	62.41	61.53	60.94
Energy	1A, 1B	21.87	17.24	15.57	14.74	13.40	12.30
Industry	2B, 2C, 2E, 2G	10.65	3.09	3.72	1.75	1.81	1.87
Waste	5A, 5B, 5C	19.05	13.66	9.45	7.09	5.86	4.06
Wastewater	5D	4.26	4.20	4.14	4.19	4.22	4.24
Air conditioning & refrigeration	2F.1	7.75	10.48	10.85	8.48	5.77	3.34
Other sectors	2F, 2G	6.76	6.85	6.86	6.61	6.28	3.81
Calibration to UNFCCC 2005		-4.82	-4.82	-4.82	-4.82	-4.82	-4.82
whereof ETS sectors		8.40	2.22	2.94	0.99	1.04	1.09
whereof non-ETS sectors		120.52	111.48	106.14	99.46	93.01	84.65
Total non-CO ₂ GHGs		128.92	113.70	109.08	100.44	94.05	85.73

Greece

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		12.16	12.47	10.29	8.76	8.28	7.94
Total N ₂ O		5.88	5.58	4.90	4.77	4.67	4.56
Total F-gases		5.59	4.60	4.14	3.41	2.47	1.55
Agriculture	3A, 3B, 3C, 3D, 3F	8.72	9.08	8.26	8.17	8.14	8.17
Energy	1A, 1B	3.21	2.69	2.34	2.02	1.71	1.35
Industry	2B, 2C, 2E, 2G	2.28	0.55	0.28	0.18	0.17	0.17
Waste	5A, 5B, 5C	3.95	4.40	3.07	1.94	1.70	1.58
Wastewater	5D	1.86	1.69	1.59	1.60	1.58	1.59
Air conditioning & refrigeration	2F.1	3.68	4.21	3.78	3.07	2.16	1.26
Other sectors	2F, 2G	0.32	0.43	0.39	0.37	0.34	0.33
Calibration to UNFCCC 2005		-0.39	-0.39	-0.39	-0.39	-0.39	-0.39
whereof ETS sectors		0.58	0.45	0.18	0.08	0.08	0.07
whereof non-ETS sectors		23.05	22.20	19.15	16.86	15.35	13.98
Total non-CO ₂ GHGs		23.62	22.65	19.33	16.95	15.42	14.05

Hungary

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		8.76	8.52	8.14	5.12	4.58	4.25
Total N ₂ O		5.79	5.41	4.19	4.25	4.25	4.11
Total F-gases		1.05	1.06	1.16	1.03	0.81	0.53
Agriculture	3A, 3B, 3C, 3D, 3F	7.28	6.63	7.14	6.91	6.77	6.59
Energy	1A, 1B	1.78	1.61	1.40	1.26	1.02	0.98
Industry	2B, 2C, 2E, 2G	1.99	1.74	0.21	0.12	0.13	0.15
Waste	5A, 5B, 5C	3.58	3.90	3.51	1.03	0.87	0.61
Wastewater	5D	0.73	0.63	0.61	0.60	0.60	0.60
Air conditioning & refrigeration	2F.1	0.48	0.78	0.91	0.80	0.61	0.35
Other sectors	2F, 2G	0.40	0.34	0.34	0.31	0.27	0.23
Calibration to UNFCCC 2005		-0.63	-0.63	-0.63	-0.63	-0.63	-0.63
whereof ETS sectors		1.94	1.65	0.15	0.05	0.06	0.06
whereof non-ETS sectors		13.66	13.34	13.34	10.35	9.59	8.83
Total non-CO ₂ GHGs		15.60	14.99	13.50	10.41	9.65	8.89

Ireland

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		13.98	12.75	14.24	14.00	14.59	14.74
Total N ₂ O		8.13	7.94	8.31	8.40	8.56	8.69
Total F-gases		0.97	0.84	0.93	0.82	0.62	0.40
Agriculture	3A, 3B, 3C, 3D, 3F	19.01	18.13	19.75	20.37	20.96	21.48
Energy	1A, 1B	0.57	0.50	0.50	0.39	0.39	0.40
Industry	2B, 2C, 2E, 2G	0.30	0.08	0.09	0.10	0.10	0.11
Waste	5A, 5B, 5C	1.87	1.41	1.64	0.97	1.14	0.89
Wastewater	5D	0.36	0.34	0.35	0.36	0.36	0.36
Air conditioning & refrigeration	2F.1	0.41	0.53	0.60	0.53	0.37	0.19
Other sectors	2F, 2G	0.32	0.30	0.31	0.26	0.21	0.16
Calibration to UNFCCC 2005		0.24	0.24	0.24	0.24	0.24	0.24
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		23.09	21.53	23.48	23.23	23.77	23.84
Total non-CO ₂ GHGs		23.09	21.53	23.48	23.23	23.77	23.84

Italy

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		50.34	46.43	44.22	41.43	38.67	37.21
Total N ₂ O		28.40	19.28	20.79	20.51	20.07	19.76
Total F-gases		12.54	15.88	16.17	13.56	10.50	7.16
Agriculture	3A, 3B, 3C, 3D, 3F	32.38	29.92	31.65	30.61	30.26	29.97
Energy	1A, 1B	11.37	10.32	10.39	10.56	10.01	9.75
Industry	2B, 2C, 2E, 2G	9.87	2.52	2.38	1.99	2.01	2.04
Waste	5A, 5B, 5C	20.95	18.19	15.77	13.86	11.46	10.15
Wastewater	5D	4.11	4.14	4.15	4.24	4.31	4.38
Air conditioning & refrigeration	2F.1	8.43	11.90	12.26	9.87	7.04	3.89
Other sectors	2F, 2G	2.56	2.97	2.96	2.76	2.54	2.34
Calibration to UNFCCC 2005		1.61	1.61	1.61	1.61	1.61	1.61
whereof ETS sectors		7.66	0.73	0.61	0.18	0.19	0.20
whereof non-ETS sectors		83.60	80.86	80.56	75.32	69.04	63.92
Total non-CO ₂ GHGs		91.27	81.58	81.17	75.50	69.23	64.13

Latvia**Non-CO2 GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		2.00	1.95	1.88	1.45	1.41	1.38
Total N ₂ O		1.28	1.34	1.37	1.37	1.39	1.40
Total F-gases		0.05	0.14	0.19	0.18	0.12	0.07
Agriculture	3A, 3B, 3C, 3D, 3F	2.04	2.10	2.18	2.12	2.12	2.14
Energy	1A, 1B	0.28	0.24	0.24	0.22	0.20	0.20
Industry	2B, 2C, 2E, 2G	0.00	0.01	0.01	0.01	0.01	0.01
Waste	5A, 5B, 5C	0.63	0.69	0.56	0.22	0.21	0.18
Wastewater	5D	0.26	0.20	0.21	0.22	0.21	0.21
Air conditioning & refrigeration	2F.1	0.05	0.13	0.19	0.17	0.11	0.06
Other sectors	2F, 2G	0.04	0.03	0.03	0.03	0.03	0.03
Calibration to UNFCCC 2005		0.02	0.02	0.02	0.02	0.02	0.02
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		3.33	3.42	3.44	3.00	2.93	2.85
Total non-CO ₂ GHGs		3.33	3.42	3.44	3.00	2.93	2.85

Lithuania**Non-CO2 GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		3.97	4.05	3.64	2.99	2.81	2.71
Total N ₂ O		5.15	3.56	3.55	3.10	3.13	3.15
Total F-gases		0.16	0.32	0.37	0.33	0.23	0.12
Agriculture	3A, 3B, 3C, 3D, 3F	5.44	5.45	5.50	5.38	5.44	5.51
Energy	1A, 1B	0.49	0.49	0.44	0.40	0.37	0.32
Industry	2B, 2C, 2E, 2G	2.32	0.71	0.65	0.21	0.21	0.21
Waste	5A, 5B, 5C	1.27	1.39	1.03	0.53	0.38	0.30
Wastewater	5D	0.32	0.31	0.31	0.29	0.28	0.26
Air conditioning & refrigeration	2F.1	0.15	0.30	0.34	0.30	0.21	0.10
Other sectors	2F, 2G	0.06	0.07	0.06	0.06	0.05	0.04
Calibration to UNFCCC 2005		-0.77	-0.77	-0.77	-0.77	-0.77	-0.77
whereof ETS sectors		2.32	0.70	0.64	0.21	0.21	0.20
whereof non-ETS sectors		6.96	7.24	6.92	6.20	5.96	5.77
Total non-CO ₂ GHGs		9.28	7.94	7.56	6.41	6.17	5.97

Luxembourg**Non-CO2 GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.58	0.59	0.58	0.58	0.58	0.58
Total N ₂ O		0.30	0.32	0.32	0.32	0.34	0.35
Total F-gases		0.05	0.06	0.09	0.09	0.06	0.03
Agriculture	3A, 3B, 3C, 3D, 3F	0.64	0.71	0.69	0.66	0.67	0.67
Energy	1A, 1B	0.16	0.13	0.15	0.17	0.18	0.19
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.06	0.05	0.04	0.04	0.04	0.04
Wastewater	5D	0.02	0.02	0.03	0.03	0.03	0.04
Air conditioning & refrigeration	2F.1	0.04	0.05	0.08	0.08	0.05	0.03
Other sectors	2F, 2G	0.02	0.02	0.02	0.02	0.02	0.01
Calibration to UNFCCC 2005		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		0.92	0.98	0.99	0.99	0.98	0.96
Total non-CO ₂ GHGs		0.92	0.98	0.99	0.99	0.98	0.96

Malta**Non-CO2 GHG emissions EUCO30 scenario**

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		0.17	0.15	0.15	0.13	0.11	0.11
Total N ₂ O		0.06	0.05	0.05	0.05	0.05	0.05
Total F-gases		0.06	0.12	0.15	0.14	0.10	0.06
Agriculture	3A, 3B, 3C, 3D, 3F	0.12	0.10	0.10	0.10	0.09	0.09
Energy	1A, 1B	0.02	0.01	0.01	0.01	0.01	0.01
Industry	2B, 2C, 2E, 2G	0.00	0.00	0.00	0.00	0.00	0.00
Waste	5A, 5B, 5C	0.08	0.08	0.08	0.06	0.05	0.05
Wastewater	5D	0.02	0.02	0.03	0.03	0.03	0.03
Air conditioning & refrigeration	2F.1	0.06	0.12	0.14	0.13	0.10	0.06
Other sectors	2F, 2G	0.01	0.01	0.01	0.01	0.01	0.01
Calibration to UNFCCC 2005		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
whereof ETS sectors		0.00	0.00	0.00	0.00	0.00	0.00
whereof non-ETS sectors		0.29	0.33	0.35	0.31	0.27	0.22
Total non-CO ₂ GHGs		0.29	0.33	0.35	0.31	0.27	0.22

Netherlands

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		20.48	21.05	17.30	16.96	16.88	17.12
Total N ₂ O		13.84	9.36	9.64	8.79	8.64	8.71
Total F-gases		2.70	2.89	2.93	2.57	1.96	1.39
Agriculture	3A, 3B, 3C, 3D, 3F	19.14	19.62	20.27	19.69	19.41	19.59
Energy	1A, 1B	1.84	1.76	1.62	1.71	1.62	1.62
Industry	2B, 2C, 2E, 2G	6.91	2.38	2.42	1.69	1.76	1.83
Waste	5A, 5B, 5C	6.92	6.96	2.84	2.87	2.95	3.02
Wastewater	5D	0.99	0.92	0.93	0.95	0.97	0.99
Air conditioning & refrigeration	2F.1	1.43	1.92	2.04	1.72	1.15	0.68
Other sectors	2F, 2G	0.72	0.68	0.68	0.62	0.55	0.43
Calibration to UNFCCC 2005		-0.93	-0.93	-0.93	-0.93	-0.93	-0.93
whereof ETS sectors		5.54	1.23	1.30	0.50	0.52	0.55
whereof non-ETS sectors		31.47	32.08	28.57	27.82	26.96	26.68
Total non-CO ₂ GHGs		37.02	33.31	29.86	28.31	27.48	27.23

Poland

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		46.98	43.56	43.47	38.68	37.33	37.56
Total N ₂ O		22.17	19.68	20.27	20.22	20.58	20.92
Total F-gases		5.59	7.81	9.42	8.60	6.69	3.58
Agriculture	3A, 3B, 3C, 3D, 3F	30.90	31.21	31.78	32.75	33.52	34.55
Energy	1A, 1B	17.69	14.94	14.87	14.27	12.36	11.45
Industry	2B, 2C, 2E, 2G	4.64	1.19	1.54	0.88	0.98	1.06
Waste	5A, 5B, 5C	10.31	10.11	9.70	5.12	5.16	5.51
Wastewater	5D	1.75	1.76	1.81	1.84	1.86	1.87
Air conditioning & refrigeration	2F.1	4.67	7.45	9.06	8.27	6.41	3.35
Other sectors	2F, 2G	1.29	0.88	0.88	0.85	0.80	0.74
Calibration to UNFCCC 2005		3.51	3.51	3.51	3.51	3.51	3.51
whereof ETS sectors		4.37	0.91	1.15	0.42	0.47	0.52
whereof non-ETS sectors		70.38	70.13	72.00	67.07	64.12	61.54
Total non-CO ₂ GHGs		74.74	71.04	73.15	67.49	64.60	62.05

Portugal

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		14.00	13.25	11.82	10.04	9.81	8.68
Total N ₂ O		4.21	3.79	3.71	3.58	3.60	3.61
Total F-gases		0.94	1.40	1.40	1.23	0.92	0.55
Agriculture	3A, 3B, 3C, 3D, 3F	7.56	7.24	7.54	7.67	7.86	8.02
Energy	1A, 1B	1.36	0.96	1.00	0.90	0.89	0.82
Industry	2B, 2C, 2E, 2G	0.57	0.38	0.16	0.08	0.09	0.09
Waste	5A, 5B, 5C	5.87	6.17	4.61	2.71	2.28	1.05
Wastewater	5D	3.17	2.64	2.56	2.60	2.65	2.67
Air conditioning & refrigeration	2F.1	0.84	1.29	1.30	1.13	0.82	0.46
Other sectors	2F, 2G	0.22	0.22	0.21	0.20	0.20	0.20
Calibration to UNFCCC 2005		-0.45	-0.45	-0.45	-0.45	-0.45	-0.45
whereof ETS sectors		0.54	0.33	0.11	0.04	0.04	0.04
whereof non-ETS sectors		18.60	18.11	16.82	14.81	14.29	12.81
Total non-CO ₂ GHGs		19.14	18.44	16.93	14.85	14.33	12.85

Romania

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		35.27	31.34	30.74	28.19	27.85	26.77
Total N ₂ O		10.41	8.82	8.13	7.79	7.90	7.72
Total F-gases		1.05	0.79	0.97	0.93	0.72	0.45
Agriculture	3A, 3B, 3C, 3D, 3F	20.11	17.90	18.27	16.14	16.25	15.66
Energy	1A, 1B	4.42	3.96	3.53	3.70	3.54	3.24
Industry	2B, 2C, 2E, 2G	3.09	1.93	0.56	0.29	0.31	0.32
Waste	5A, 5B, 5C	4.89	3.38	3.56	2.88	2.70	2.33
Wastewater	5D	2.49	2.34	2.32	2.34	2.34	2.33
Air conditioning & refrigeration	2F.1	0.91	0.60	0.78	0.74	0.54	0.27
Other sectors	2F, 2G	0.35	0.36	0.35	0.34	0.32	0.30
Calibration to UNFCCC 2005		10.47	10.47	10.47	10.47	10.47	10.47
whereof ETS sectors		3.08	1.87	0.49	0.22	0.24	0.25
whereof non-ETS sectors		43.65	39.07	39.35	36.69	36.24	34.69
Total non-CO ₂ GHGs		46.72	40.94	39.85	36.91	36.47	34.94

Slovakia

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		5.14	4.85	4.62	3.39	3.35	3.23
Total N ₂ O		3.70	3.54	2.64	2.52	2.50	2.49
Total F-gases		0.30	0.50	0.57	0.52	0.41	0.27
Agriculture	3A, 3B, 3C, 3D, 3F	3.00	2.62	2.60	2.49	2.45	2.45
Energy	1A, 1B	1.62	1.48	1.43	1.41	1.39	1.29
Industry	2B, 2C, 2E, 2G	1.30	1.34	0.30	0.15	0.16	0.17
Waste	5A, 5B, 5C	1.50	1.58	1.54	0.46	0.45	0.39
Wastewater	5D	0.83	0.79	0.80	0.81	0.83	0.84
Air conditioning & refrigeration	2F.1	0.21	0.40	0.48	0.44	0.33	0.18
Other sectors	2F, 2G	0.11	0.11	0.10	0.10	0.09	0.09
Calibration to UNFCCC 2005		0.57	0.57	0.57	0.57	0.57	0.57
whereof ETS sectors		1.28	1.32	0.28	0.13	0.14	0.14
whereof non-ETS sectors		7.86	7.57	7.54	6.31	6.13	5.84
Total non-CO ₂ GHGs		9.15	8.89	7.83	6.44	6.27	5.99

Slovenia

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		2.37	2.02	1.98	1.80	1.73	1.68
Total N ₂ O		0.83	0.80	0.72	0.72	0.69	0.69
Total F-gases		0.27	0.22	0.26	0.22	0.17	0.11
Agriculture	3A, 3B, 3C, 3D, 3F	1.80	1.75	1.68	1.64	1.60	1.64
Energy	1A, 1B	0.46	0.48	0.48	0.46	0.45	0.43
Industry	2B, 2C, 2E, 2G	0.16	0.03	0.04	0.04	0.04	0.04
Waste	5A, 5B, 5C	0.77	0.49	0.45	0.32	0.27	0.20
Wastewater	5D	0.34	0.25	0.25	0.26	0.26	0.26
Air conditioning & refrigeration	2F.1	0.10	0.18	0.21	0.17	0.12	0.06
Other sectors	2F, 2G	0.05	0.04	0.04	0.04	0.04	0.03
Calibration to UNFCCC 2005		-0.19	-0.19	-0.19	-0.19	-0.19	-0.19
whereof ETS sectors		0.14	0.01	0.03	0.03	0.03	0.03
whereof non-ETS sectors		3.33	3.02	2.94	2.71	2.57	2.45
Total non-CO ₂ GHGs		3.47	3.03	2.96	2.74	2.59	2.47

Spain

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		39.61	39.12	36.66	33.60	31.79	30.49
Total N ₂ O		25.03	23.56	23.91	24.68	24.59	24.11
Total F-gases		6.31	7.21	7.16	5.68	4.12	2.50
Agriculture	3A, 3B, 3C, 3D, 3F	36.66	35.30	35.79	37.79	37.86	37.64
Energy	1A, 1B	4.37	3.63	3.52	3.58	2.99	2.78
Industry	2B, 2C, 2E, 2G	2.25	1.11	0.84	0.67	0.69	0.73
Waste	5A, 5B, 5C	12.94	13.93	11.66	7.48	6.11	4.72
Wastewater	5D	3.38	3.38	3.36	3.37	3.35	3.35
Air conditioning & refrigeration	2F.1	4.17	5.28	5.46	4.36	3.22	1.76
Other sectors	2F, 2G	2.17	2.26	2.09	1.70	1.28	1.11
Calibration to UNFCCC 2005		5.01	5.01	5.01	5.01	5.01	5.01
whereof ETS sectors		1.56	0.59	0.37	0.16	0.17	0.17
whereof non-ETS sectors		69.40	69.31	67.37	63.79	60.34	56.92
Total non-CO ₂ GHGs		70.95	69.89	67.73	63.96	60.50	57.09

Sweden

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		6.58	5.43	5.07	4.76	4.55	4.39
Total N ₂ O		5.05	4.97	4.79	4.73	4.75	4.77
Total F-gases		1.95	1.95	1.88	1.57	1.18	0.90
Agriculture	3A, 3B, 3C, 3D, 3F	7.04	6.88	6.86	6.77	6.76	6.85
Energy	1A, 1B	1.82	1.91	1.81	1.82	1.81	1.79
Industry	2B, 2C, 2E, 2G	0.84	0.55	0.18	0.11	0.12	0.12
Waste	5A, 5B, 5C	2.83	1.78	1.53	1.29	1.09	0.85
Wastewater	5D	0.83	0.83	0.85	0.87	0.89	0.91
Air conditioning & refrigeration	2F.1	1.10	1.34	1.48	1.19	0.81	0.55
Other sectors	2F, 2G	0.57	0.50	0.47	0.46	0.45	0.43
Calibration to UNFCCC 2005		-1.45	-1.45	-1.45	-1.45	-1.45	-1.45
whereof ETS sectors		0.72	0.48	0.14	0.08	0.08	0.08
whereof non-ETS sectors		12.87	11.86	11.60	10.99	10.40	9.97
Total non-CO ₂ GHGs		13.59	12.35	11.74	11.06	10.48	10.06

United Kingdom

Non-CO2 GHG emissions EUCO30 scenario

Non-CO ₂ GHG in Mt CO ₂ eq	UNFCCC CRF code 2015	2005	2010	2015	2020	2025	2030
Total CH ₄		92.26	64.48	52.22	45.81	41.51	35.67
Total N ₂ O		31.39	27.75	27.74	26.31	26.33	25.93
Total F-gases		9.52	10.30	10.56	8.75	6.45	4.05
Agriculture	3A, 3B, 3C, 3D, 3F	50.87	47.91	48.53	46.96	46.50	46.47
Energy	1A, 1B	23.94	19.03	15.14	12.88	12.55	10.02
Industry	2B, 2C, 2E, 2G	4.21	2.14	1.14	0.73	0.74	0.76
Waste	5A, 5B, 5C	49.60	27.98	19.45	15.71	12.10	8.24
Wastewater	5D	5.23	4.85	5.00	5.10	5.19	5.32
Air conditioning & refrigeration	2F.1	4.45	6.38	6.86	5.61	3.90	2.07
Other sectors	2F, 2G	4.59	3.98	4.13	3.61	3.04	2.49
Calibration to UNFCCC 2005		-9.73	-9.73	-9.73	-9.73	-9.73	-9.73
whereof ETS sectors		2.95	1.40	0.63	0.21	0.21	0.22
whereof non-ETS sectors		130.22	101.14	89.89	80.66	74.08	65.43
Total non-CO ₂ GHGs		133.16	102.54	90.52	80.87	74.29	65.65

Appendix II.c: EUCO+ scenarios and EUCO3030 sensitivity - non-CO₂ GHG emissions

As no policy incentives until 2030 are assumed for the EUCO+ and EUCO3030 scenarios, similarly to the case of the EUCO30 scenario, the results of all the former in terms of non-CO₂ GHG emissions are identical to the ones for EUCO30 presented in Appendix II.b.

Technical report on macroeconomic Member State results of the EUCO policy scenarios

By E3MLab, December 2016

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Introduction

In the context of the 2016 Impact Assessment work of the European Commission, a number of policy scenarios were prepared by a consortium led by E3MLab¹, hosted at the National Technical University of Athens (NTUA), and including the International Institute for Applied System Analysis (IIASA). This technical note briefly introduces these scenarios and presents the macroeconomic results of those.

Two core scenarios, EUCO27 and EUCO30 were built based on the EU Reference Scenario 2016² and designed to achieve the 2030 targets as agreed by the European Council³. The analysis of impacts of the two policy scenarios was the input⁴ to the Effort Sharing Regulation Impact Assessment⁵ and the Staff Working Document⁶ accompanying the Communication on low-emission mobility strategy

¹ <http://www.e3mlab.eu>

² https://ec.europa.eu/energy/sites/ener/files/documents/ref2016_report_final-web.pdf

³ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145397.pdf

⁴ The scenario runs in this document are those used for the Effort Sharing Regulation Impact Assessment and the Impact Assessment accompanying the proposal for a revised Energy Efficiency Directive. Some minor technical changes were performed for sector-specific modelling in other analytical documents.

⁵ http://ec.europa.eu/clima/policies/effort/proposal/index_en.htm

⁶ http://ec.europa.eu/transport/themes/strategies/news/2016-07-20-decarbonisation_en

published in July 2016, as well as the Impact Assessment accompanying the proposal for recast of the Directive on the promotion of energy from renewable sources⁷ and the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive⁸ published in November 2016⁹. Using two core scenarios ensures consistency of the proposals and increases the robustness of policy conclusions.

In addition, the EUCO+ scenarios and the EUCO3030 sensitivity were also prepared. The EUCO+ scenarios were presented only in the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive. The EUCO3030 sensitivity¹⁰ was presented both in the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive and the Impact Assessment accompanying the proposal for recast of the Directive on the promotion of energy from renewable sources.

All scenarios reflect the current EU policy design when modelling the cost-effective achievement of 2030 targets.

For the two Impact Assessments mentioned in the above paragraph, macro-economic modelling was also undertaken in order to estimate the impacts of the scenarios on macro-economic level (e.g. GDP growth and jobs). It is worth noting that distributional elements of proposals on the Effort Sharing Regulation or the EU ETS Revision are not taken into account in the scenarios.

⁷ <https://ec.europa.eu/energy/en/news/eu-leading-renewable-energy>

⁸ <https://ec.europa.eu/energy/en/news/commission-proposes-30-energy-efficiency-target>

⁹ The EUCO27 was also the starting point for the Impact Assessment accompanying the proposal for revised rules for the electricity market, risk preparedness and ACER.

¹⁰ It is reminded that this sensitivity used the same ETS carbon prices as the EUCO30 scenario.

Modelling the macro-economic impacts of the policy scenarios with the GEM-E3 model

For the modelling of the macro-economic impacts of all the policy scenarios, the GEM-E3 model was used by E3MLab, which took as input the key elements of the scenarios in terms of energy, GHG emissions and transport projections.

The GEM-E3 model is a multi-regional, multi-sectoral, dynamic computable general equilibrium (CGE) model which represents all kinds of interactions of the economy with the environment and the energy system. It has been frequently used for macroeconomic assessment of energy and climate policies.

The model allows for a consistent comparative analysis of policy scenarios since it ensures that in all scenarios, the economic system remains in general equilibrium. In addition, it incorporates micro-economic mechanisms and institutional features and is able to provide insights of the distributional aspects of long-term structural adjustments. The version of the GEM-E3 model used in this study is the latest one developed and maintained by E3MLab. This version includes a fully-fledged representation of the financial system, which is important for the macroeconomic impact assessment, as the reduction of GHG emissions implies increases in capital intensiveness in many energy-related sectors. The new power technologies, the vehicles with lower fuel consumption and the energy efficiency investments require higher upfront expenditures in exchange for lower operating costs. The increased capital requirements exert pressures on capital markets and lead to crowding out effects for households and firms.

Compared to previous impact assessment studies, the modelling has been further developed in order to assess different financing mechanisms for energy efficiency investments. Using the newly

developed financial mechanisms in GEM-E3, the macroeconomic study quantified several variants of model runs to evaluate the role of financing. Among those variants, two contrasted cases were presented in the Impact Assessment accompanying the proposal for revised Energy Efficiency Directive and are included in this note, namely those referred to as "*self-financing*" and "*loan-based financing*":

- In the "*self-financing*" case, no additional borrowing is possible, relative to baseline, and thus economic agents bear income limitations when funding investments in energy efficiency and renewables;

In the "*loan-based financing*" case, firms and households can borrow in capital markets without facing increasing unit costs of funding.

None of these contrasted cases are expected to be fully true in reality. Therefore, the analysis estimates a range of possibilities¹¹.

In both cases, the firms and households finance their investments in energy efficiency by spending less on other commodities and investment purposes ("crowding-out" effect). The crowding-out effect is higher in the former case than in the latter.

In modelling terms, the self-financing variant corresponds to the savings-investment closure used in standard computable general equilibrium models. In the loan-based variant, the agents can distribute capital costs over several years to alleviate crowding out effects. However, the agents are modelled to annually pay back interests and principal of the loans, at a level as required to meet a financial sustainability rule, based on a reasonable debt to income ratio.

¹¹ Please see more discussion on this topic in the Impact Assessment (SWD(2016) 405 final), where the Commission services express the view that "loan-based financing" variant is more realistic.

The general equilibrium perspective implies that the policy scenarios introduce additional goals or constraints (such as for GHG emissions reduction, RES shares and energy efficiency targets) compared to the reference projection¹² and thus the scenarios entail higher investment costs, which in some cases may lead to higher levelized unit costs of useful energy services¹³ during the transition period¹⁴. Technology progress, induced by the growing demand and hence mass production of new energy technologies, equipment, vehicles, appliances etc. in all sectors, is the main source of cost reduction. Also learning-by-doing¹⁵ effects can be observed. In addition, the policies included in the EUCO scenarios may remove non market barriers that were obstructing full uptake of the most efficiency technologies in the reference projection, while technology standards such as in the eco-design push new cost-efficient products closer to market acceptance. Thus, the EUCO scenario includes conditions enabling cost reductions relative to the Reference scenario 2016.

Consequently, in the long term, cost savings due to energy efficiency can, in some cases, over-

¹² The macroeconomic analysis draws on comparisons of model-based projections for two scenarios, usually a policy scenario, such as a EUCO/EUCO+ and a reference scenario (in this case, the EU Reference scenario 2016, see footnote 2).

¹³ Useful energy services are for example mobility, heating, steam uses in industry, etc.

¹⁴ The levelized unit cost of energy services includes fuel purchasing costs, maintenance and other operating costs, as well as annualized cost of purchasing energy equipment, appliances, vehicles, etc. and investment in energy efficiency (e.g. insulation of houses, control systems in industry, etc.).

¹⁵ The learning by doing mechanism is semi-endogenous in the model version used in this study. In general, the EUCO/EUCO+ scenarios assume that the new technologies, mainly those that are not yet fully mature today, reach high technology readiness levels in the long run and get close to floor costs, thanks to massive production.

compensate the increased equipment costs. However, the cost-reduction mechanisms, as described above, cannot always fully offset the cost effects in the policy scenarios and thus the economic agents may still bear cost increases, to some extent, relative to the reference case, at least during a transition period. These may, in turn, lead to slight reduction of private consumption in the policy scenarios compared to the reference scenario, and thus consumption of other commodities, not involved in the energy-related investment, may decrease relative to the reference case. This induces negative, albeit small in magnitude, effects on Gross Domestic Product (GDP), despite the significant increase of demand for energy efficiency related goods and services (equipment, materials, appliances, vehicles) supporting investment in the entire economy. The increase in demand for energy efficiency related goods and services exerts positive impacts on the economy, as it stimulates domestic production in several sectors and tends to increase employment.

Tightness in the capital market, hence increased cost of financing in the policy scenarios, implies higher costs of the energy services and thus aggravate the crowding out effects, which in turn reduce GDP compared to the reference case.

In contrast, easiness of financing diminishes the crowding out effects, eventually allowing activity benefits induced by energy-related investment to over-compensate the effects of increased energy service costs on GDP. In this case, positive effects on GDP and employment can be seen in some EUCO scenarios, relative to the Reference scenario 2016. These positive effects diminish with stringency of the energy efficiency policies for the following reasons: firstly, increasing financing requirements implied by the EUCO+ scenarios increase the demand for funding and hence increase lending interest rates, which in turn adversely impact other sectors of the economy. Secondly, very high ambition in energy efficiency implies high marginal investment costs for

incremental savings, hence diminishing expected returns on this investment.

Further information on modelling of macro-economic impacts is provided in the Impact Assessment accompanying the legislative proposal on the Energy Efficiency Directive¹⁶.

¹⁶ SWD(2016)405 final.

Appendix I.a: Macro-economic results of EUCO27 scenario in 2030

	GDP (€'13 billion)		Employment (million persons)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	409.23	409.87	4.27	4.28
Belgium	489.69	492.09	5.09	5.11
Bulgaria	55.09	55.41	2.53	2.55
Croatia	55.26	55.60	1.45	1.46
Cyprus	23.02	23.14	0.41	0.41
Czech Republic	222.12	223.13	4.67	4.68
Denmark	351.75	352.55	2.81	2.82
Estonia	24.67	24.83	0.51	0.52
Finland	230.39	231.29	2.45	2.45
France	2 646.62	2 654.57	27.85	27.90
Germany	3 291.02	3 301.41	35.16	35.22
Greece	226.64	227.15	3.95	3.96
Hungary	145.00	146.16	4.20	4.22
Ireland	251.39	251.66	1.79	1.79
Italy	1 900.94	1 906.79	23.57	23.64
Latvia	34.00	34.24	0.66	0.66
Lithuania	44.47	44.64	0.81	0.81
Luxembourg	71.80	71.89	0.35	0.35
Malta	10.29	10.30	0.19	0.19
Netherlands	752.57	755.39	8.24	8.25
Poland	616.86	621.15	15.13	15.24
Portugal	218.68	218.93	4.15	4.15
Romania	195.69	196.51	7.09	7.12
Slovakia	118.15	118.56	2.17	2.18
Slovenia	49.45	49.72	0.87	0.88
Spain	1 442.12	1 445.81	19.20	19.24
Sweden	587.43	589.07	5.14	5.15
United Kingdom	2 443.07	2 449.83	31.30	31.36
EU28	16 907.39	16 961.70	216.02	216.59

Appendix I.b: Macro-economic results of EUCO30 scenario in 2030

All figures show percentage changes of projections for the year 2030, relative to the EUCO27 scenario.

	GDP (% change from EUCO27)		Employment (% change from EUCO27)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	-0.13	0.20	0.00	0.20
Belgium	-0.33	0.23	-0.14	0.18
Bulgaria	-0.31	0.54	-0.61	0.13
Croatia	-0.64	0.28	-0.90	0.08
Cyprus	-0.16	0.10	-0.19	0.10
Czech Republic	-0.24	0.39	-0.45	0.05
Denmark	-0.24	0.12	-0.12	0.14
Estonia	-0.48	0.42	-0.24	0.31
Finland	-0.13	0.38	-0.06	0.25
France	-0.19	0.31	-0.05	0.23
Germany	-0.28	0.21	-0.05	0.21
Greece	-0.05	0.25	-0.04	0.24
Hungary	-0.30	0.80	-0.44	0.26
Ireland	0.06	0.25	0.09	0.26
Italy	-0.04	0.45	-0.10	0.30
Latvia	-0.80	0.19	-0.68	0.39
Lithuania	-0.57	0.05	-0.21	0.31
Luxembourg	-0.08	0.19	0.02	0.21
Malta	-0.58	-0.25	-0.35	-0.05
Netherlands	-0.16	0.34	0.01	0.17
Poland	-1.00	0.10	-1.01	0.10
Portugal	-0.09	0.38	-0.10	0.29
Romania	-0.41	0.22	-0.80	-0.08
Slovakia	-0.16	0.46	-0.38	0.14
Slovenia	-0.38	0.21	-0.23	0.16
Spain	-0.03	0.29	-0.03	0.25
Sweden	-0.22	0.17	-0.03	0.19
United Kingdom	-0.24	0.14	-0.04	0.19
EU28	-0.22	0.26	-0.18	0.20

Appendix I.c: Macroeconomic results of EUCO+33 scenario in 2030

All figures show percentage changes of projections for the year 2030, relative to the EUCO27 scenario.

	GDP (% change from EUCO27)		Employment (% change from EUCO27)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	-0.46	0.21	-0.02	0.39
Belgium	-1.06	0.13	-0.40	0.29
Bulgaria	-0.96	0.66	-1.40	-0.10
Croatia	-1.24	0.60	-1.86	0.10
Cyprus	-0.56	-0.09	-0.44	0.09
Czech Republic	-1.02	0.38	-1.31	-0.13
Denmark	-0.52	0.14	-0.25	0.24
Estonia	-1.79	0.36	-0.82	0.47
Finland	-0.93	0.60	-0.45	0.45
France	-0.86	0.19	-0.21	0.37
Germany	-0.73	0.29	-0.11	0.43
Greece	-0.49	-0.01	-0.18	0.30
Hungary	-1.33	0.99	-1.24	0.28
Ireland	-0.12	0.21	0.15	0.42
Italy	-0.38	0.52	-0.40	0.29
Latvia	-2.40	-0.12	-1.84	0.58
Lithuania	-1.84	-0.28	-0.64	0.53
Luxembourg	-0.29	0.19	0.02	0.34
Malta	-0.80	-0.37	-0.69	-0.23
Netherlands	-0.80	0.40	-0.11	0.32
Poland	-2.67	-0.25	-2.80	-0.30
Portugal	-0.74	0.04	-0.31	0.38
Romania	-1.22	0.11	-1.80	-0.32
Slovakia	-1.08	0.28	-1.27	-0.18
Slovenia	-1.43	0.10	-0.79	0.19
Spain	-0.41	0.19	-0.14	0.39
Sweden	-0.71	0.15	-0.12	0.36
United Kingdom	-0.85	-0.05	-0.14	0.31
EU28	-0.79	0.21	-0.51	0.28

Appendix I.d: Macro-economic results of EUCO+35 scenario in 2030

All figures show percentage changes of projections for the year 2030, relative to the EUCO27 scenario.

	GDP (% change from EUCO27)		Employment (% change from EUCO27)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	-0.71	0.29	-0.04	0.57
Belgium	-1.74	0.05	-0.68	0.38
Bulgaria	-1.71	0.89	-2.31	-0.24
Croatia	-1.61	1.00	-2.61	0.16
Cyprus	-1.01	-0.28	-0.75	0.09
Czech Republic	-1.82	0.37	-2.18	-0.26
Denmark	-0.81	0.10	-0.32	0.37
Estonia	-3.14	0.17	-1.42	0.61
Finland	-1.69	0.68	-0.83	0.59
France	-1.48	0.15	-0.36	0.52
Germany	-1.12	0.29	-0.15	0.62
Greece	-0.65	0.07	-0.23	0.47
Hungary	-2.29	1.14	-2.00	0.33
Ireland	-0.29	0.21	0.18	0.57
Italy	-0.75	0.58	-0.68	0.38
Latvia	-3.93	-0.47	-3.02	0.68
Lithuania	-3.07	-0.72	-1.10	0.62
Luxembourg	-0.43	0.25	0.06	0.51
Malta	-1.02	-0.43	-0.95	-0.29
Netherlands	-1.53	0.42	-0.33	0.47
Poland	-4.33	-0.68	-4.49	-0.66
Portugal	-1.30	-0.14	-0.55	0.46
Romania	-2.07	-0.04	-2.81	-0.58
Slovakia	-2.07	0.06	-2.06	-0.33
Slovenia	-1.93	0.29	-1.03	0.38
Spain	-0.87	0.08	-0.25	0.52
Sweden	-1.20	0.15	-0.24	0.51
United Kingdom	-1.49	-0.22	-0.32	0.42
EU28	-1.35	0.16	-0.84	0.36

Appendix I.e: Macro-economic results of EUCO+40 scenario in 2030

All figures show percentage changes of projections for the year 2030, relative to the EUCO27 scenario.

	GDP (% change from EUCO27)		Employment (% change from EUCO27)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	-1.47	0.33	-0.35	1.02
Belgium	-2.75	-0.16	-1.16	0.61
Bulgaria	-3.29	0.47	-3.86	-0.89
Croatia	-1.99	1.63	-3.61	0.13
Cyprus	-1.52	-0.73	-1.04	0.15
Czech Republic	-2.90	0.44	-3.63	-0.61
Denmark	-1.01	0.17	-0.36	0.75
Estonia	-5.56	-0.50	-2.72	0.86
Finland	-2.80	0.94	-1.51	0.93
France	-2.63	-0.15	-0.79	0.82
Germany	-1.60	0.58	-0.29	1.15
Greece	-0.89	-0.06	-0.34	0.74
Hungary	-3.50	1.67	-3.14	0.50
Ireland	-0.24	0.40	0.31	1.00
Italy	-1.05	0.74	-1.16	0.61
Latvia	-6.24	-1.24	-5.01	0.97
Lithuania	-4.53	-1.75	-1.71	0.88
Luxembourg	-0.63	0.32	0.14	0.88
Malta	-1.46	-0.71	-1.44	-0.48
Netherlands	-2.65	0.51	-0.80	0.87
Poland	-6.50	-1.58	-6.91	-1.55
Portugal	-1.89	-0.50	-0.83	0.75
Romania	-3.04	-0.52	-4.22	-1.35
Slovakia	-3.34	-0.52	-3.26	-0.76
Slovenia	-2.90	0.49	-1.69	0.66
Spain	-1.44	-0.19	-0.41	0.88
Sweden	-2.23	0.09	-0.67	0.85
United Kingdom	-2.23	-0.65	-0.52	0.69
EU28	-2.12	0.06	-1.36	0.56

Appendix I.f: Macro-economic results of EUCO3030 sensitivity in 2030

All figures show percentage changes of projections for the year 2030, relative to the EUCO27 scenario.

	GDP (% change from EUCO27)		Employment (% change from EUCO27)	
	Self-financing	Loan-based financing	Self-financing	Loan-based financing
Austria	-0.54	-0.04	-0.12	0.15
Belgium	-0.61	0.05	-0.24	0.11
Bulgaria	-0.99	0.24	-1.24	-0.23
Croatia	-0.73	0.25	-0.94	0.06
Cyprus	-0.30	0.01	-0.31	0.00
Czech Republic	-0.66	0.17	-0.71	-0.08
Denmark	-0.28	0.06	-0.07	0.16
Estonia	-1.47	0.28	-0.68	0.20
Finland	-0.98	0.23	-0.53	0.18
France	-0.45	0.16	-0.12	0.19
Germany	-0.56	0.09	-0.12	0.18
Greece	-0.26	0.18	-0.20	0.17
Hungary	-0.73	0.59	-0.65	0.18
Ireland	-0.14	0.31	-0.09	0.21
Italy	-0.18	0.40	-0.24	0.11
Latvia	-0.95	0.10	-0.71	0.35
Lithuania	-0.68	-0.04	-0.20	0.29
Luxembourg	-0.30	0.04	-0.08	0.15
Malta	-0.88	-0.45	-0.61	-0.24
Netherlands	-0.48	0.25	-0.06	0.16
Poland	-1.59	-0.25	-1.42	-0.16
Portugal	-0.25	0.27	-0.15	0.25
Romania	-0.56	0.08	-0.84	-0.15
Slovakia	-0.87	0.01	-0.77	-0.11
Slovenia	-0.61	0.03	-0.32	0.09
Spain	-0.21	0.17	-0.08	0.21
Sweden	-0.53	0.01	-0.11	0.17
United Kingdom	-0.47	0.00	-0.11	0.14
EU28	-0.49	0.13	-0.29	0.14

Summary of E3ME Modelling

Introduction

Under the contract *Study for a comprehensive assessment of the macro- level and sectoral impacts of Energy Efficiency policies*, led by Cambridge Econometrics (CE) and as part of the framework consortium led by EY, the macroeconomic E3ME model has been applied by CE to assess a range of scenarios related to the Energy Efficiency 2016 Impact Assessment (SWD(2016) 405 final). This note summarises the work that was done and presents the key results at Member State level.

The starting point for the E3ME analysis was the 2016 Reference Scenario that was developed with the PRIMES model. Inputs to E3ME, including both assumptions (e.g. energy prices, economic growth rates) and the full energy balances are taken from the detailed PRIMES model spreadsheets.

The same information is taken for each of the scenarios and thus the design of the scenarios in E3ME matches that from the PRIMES model as closely as possible:

- EUCO27
- EUCO30
- EUCO+33
- EUCO+35
- EUCO+40

E3ME was also used to assess a sensitivity, which had more of a focus on renewables:

- EUCO3030

In each case, two variants of the scenarios were considered, based on assumptions about the degree of 'crowding out' (the rate at which increases in one form of economic activity lead to reductions in economic activity elsewhere in the economy). This is a key assumption, as it can directly impact on the magnitude and even direction of results¹.

The first variant uses the default option in E3ME in which there is no crowding out due to financial conditions. The second variant assumes that there is partial crowding out, by limiting the amount that the construction sector can increase its output to 15% above the reference case in 2030². In this second variant, the degree of crowding out increases in line with the level of ambition in the scenario. This more nuanced assumption is considered more realistic.

The results reported here reflect a self-financing approach to the required investment, which is:

- Households pay for investment in energy products by reducing other spending
- Businesses pay for investment in energy products by raising prices

¹ It is worth noting that distributional elements of proposals on the Effort Sharing Regulation or the EU ETS Revision are not taken into account in the scenarios.

² Further details can be found in SWD(2016) 405 final.

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- Government pays for investment in energy products by raising income taxes

Brief description of E3ME

E3ME is a macro-econometric simulation model, based on post-Keynesian economic foundations. The model is used to estimate the impacts of policy interventions across a range of different policy areas. However, it tightly integrates the energy system with the economy and so is very suitable for assessing policies that affect energy demand and supply. E3ME has been used to provide inputs for several related Impact Assessments in the past, including for the 2030 climate and energy framework. In this exercise, the inputs to E3ME are (as described above) the energy balances, prices and investment results from PRIMES, while the outputs include a range of macroeconomic and sectoral economic indicators.

When interpreting results from the scenarios it is useful to consider the interaction between investment and the rest of the economy, and of international trade:

- Higher investment levels boost rates of economic activity and lead to the creation of jobs in the construction and engineering sectors. However, the investment must be paid for (as described above) which is liable to reduce rates of economic activity elsewhere in the economy, even in scenarios with limited 'crowding out'.
- Reduced levels of imported goods, for example of fossil fuels, will also boost domestic rates of economic activity. Scenarios that reduce fossil fuel imports to Europe are therefore more likely to yield positive results for GDP.
- There is also trade within Europe in the scenarios. Countries that export energy efficient or renewable equipment may be better placed to benefit from scenarios with higher ambition levels.

The approach used in E3ME to assess the scenarios is regarded as highly empirical. The model combines an accounting framework with 30 sets of behavioural equations, within which the parameters are determined by econometric estimation based on historical time-series data that cover the period 1970-2014. Within Europe Eurostat data are used for most economic indicators and IEA data are used for energy balances and prices.

Sectoral disaggregation is an important feature of E3ME. The model is global but provides an explicit representation of each of the EU's 28 Member States. Economic activity in each country is disaggregated into 70 sectors, and energy consumption is modelled for 20 different users of 12 fuel types.

Further information about E3ME, including the full technical manual, is available from the model website, www.e3me.com. More information on the assumptions and results can be found in SWD(2016) 405 final³.

³ <https://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition>.

Table 1 Macro-economic results EUC027, 2030

	GDP in €2013bn		Employment in thousand persons	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	506	506	4,974	4,974
2 Denmark (DK)	347	347	3,029	3,029
3 Germany (DE)	3,404	3,404	39,433	39,433
4 Greece (EL)	215	215	4,061	4,061
5 Spain (ES)	1,513	1,513	19,869	19,869
6 France (FR)	2,654	2,654	29,549	29,550
7 Ireland (IE)	229	229	2,234	2,234
8 Italy (IT)	1,971	1,971	25,836	25,836
9 Luxembourg (LX)	66	66	421	421
10 Netherlands (NL)	786	786	8,867	8,867
11 Austria (AT)	426	426	4,403	4,403
12 Portugal (PT)	220	220	4,915	4,915
13 Finland (FI)	242	242	2,625	2,625
14 Sweden (SW)	552	552	5,096	5,096
15 UK (UK)	3,287	3,287	32,942	32,942
16 Czech Rep. (CZ)	202	202	5,374	5,374
17 Estonia (EN)	24	24	602	602
18 Cyprus (CY)	24	24	424	424
19 Latvia (LV)	34	34	942	942
20 Lithuania (LT)	45	45	1,314	1,314
21 Hungary (HU)	179	179	3,803	3,803
22 Malta (MT)	9	9	185	185
23 Poland (PL)	645	645	15,267	15,267
24 Slovenia (SI)	49	49	926	926
25 Slovakia (SK)	103	103	2,311	2,311
26 Bulgaria (BG)	55	55	3,231	3,231
27 Romania (RO)	201	201	9,219	9,219
28 Croatia (HR)	57	57	1,688	1,688
EU28	18,045	18,045	233,542	233,542

Sources: E3ME

Table 2 Macro-economic results EUC030, 2030, % difference from EU2027

	GDP		Employment	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	0.5	0.5	0.2	0.2
2 Denmark (DK)	0.2	0.2	0.1	0.1
3 Germany (DE)	0.4	0.4	0.1	0.1
4 Greece (EL)	0.7	0.7	0.5	0.5
5 Spain (ES)	0.3	0.3	0.2	0.2
6 France (FR)	0.7	0.7	0.3	0.3
7 Ireland (IE)	0.3	0.3	0.2	0.2
8 Italy (IT)	0.5	0.5	0.1	0.1
9 Luxembourg (LX)	0.5	0.5	0.0	0.0
10 Netherlands (NL)	0.3	0.3	0.1	0.1
11 Austria (AT)	0.4	0.4	0.2	0.2
12 Portugal (PT)	0.6	0.6	0.5	0.5
13 Finland (FI)	0.6	0.6	0.3	0.3
14 Sweden (SW)	0.4	0.4	0.2	0.2
15 UK (UK)	0.1	0.1	0.1	0.1
16 Czech Rep. (CZ)	0.9	0.9	0.4	0.4
17 Estonia (EN)	0.3	0.3	0.2	0.2
18 Cyprus (CY)	0.3	0.3	0.0	0.0
19 Latvia (LV)	1.0	0.9	0.3	0.3
20 Lithuania (LT)	0.7	0.7	0.3	0.3
21 Hungary (HU)	0.9	0.9	0.4	0.4
22 Malta (MT)	0.5	0.5	0.5	0.5
23 Poland (PL)	0.1	0.1	0.2	0.2
24 Slovenia (SI)	0.5	0.5	0.1	0.1
25 Slovakia (SK)	0.7	0.7	0.1	0.1
26 Bulgaria (BG)	0.4	0.4	0.0	0.0
27 Romania (RO)	0.0	0.0	0.0	0.0
28 Croatia (HR)	0.2	0.2	0.1	0.1
EU28	0.4	0.4	0.2	0.2

Sources: E3ME

Table 3 Macro-economic results EUC033, 2030, % difference from EU2027

	GDP		Employment	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	1.7	1.5	0.8	0.7
2 Denmark (DK)	0.4	0.4	0.3	0.3
3 Germany (DE)	2.0	1.6	0.6	0.5
4 Greece (EL)	2.0	1.7	1.2	1.1
5 Spain (ES)	1.0	1.0	0.8	0.8
6 France (FR)	1.9	1.9	0.8	0.7
7 Ireland (IE)	1.1	1.0	0.5	0.5
8 Italy (IT)	1.6	1.5	0.7	0.6
9 Luxembourg (LX)	0.9	0.9	0.2	0.2
10 Netherlands (NL)	1.1	1.0	0.4	0.4
11 Austria (AT)	1.5	1.4	0.6	0.6
12 Portugal (PT)	1.3	1.3	1.5	1.5
13 Finland (FI)	2.1	2.1	1.2	1.2
14 Sweden (SW)	1.1	1.1	0.4	0.4
15 UK (UK)	0.7	0.7	0.5	0.5
16 Czech Rep. (CZ)	3.0	2.7	1.2	1.1
17 Estonia (EN)	1.2	1.1	0.8	0.8
18 Cyprus (CY)	0.9	0.8	0.2	0.2
19 Latvia (LV)	2.9	1.6	1.1	0.6
20 Lithuania (LT)	1.8	1.7	1.1	1.0
21 Hungary (HU)	2.5	1.8	1.2	1.0
22 Malta (MT)	0.5	0.5	0.5	0.5
23 Poland (PL)	0.8	0.6	1.0	0.9
24 Slovenia (SI)	1.8	1.7	0.6	0.6
25 Slovakia (SK)	2.5	2.2	0.3	0.2
26 Bulgaria (BG)	1.4	1.3	0.1	0.0
27 Romania (RO)	0.5	0.4	0.3	0.2
28 Croatia (HR)	0.8	0.7	0.4	0.4
EU28	1.5	1.3	0.7	0.6

Sources: E3ME

Table 4 Macro-economic results EUC035, 2030, % difference from EU2027

	GDP		Employment	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	2.3	1.8	1.2	0.9
2 Denmark (DK)	0.5	0.5	0.5	0.5
3 Germany (DE)	2.8	1.6	0.9	0.7
4 Greece (EL)	2.8	1.9	1.9	1.3
5 Spain (ES)	1.5	1.5	1.2	1.1
6 France (FR)	2.9	2.5	1.1	1.0
7 Ireland (IE)	1.6	1.4	0.9	0.9
8 Italy (IT)	2.2	1.7	1.0	0.8
9 Luxembourg (LX)	1.1	1.1	0.2	0.2
10 Netherlands (NL)	1.6	1.3	0.6	0.6
11 Austria (AT)	2.3	1.9	0.9	0.8
12 Portugal (PT)	1.3	1.3	2.0	1.8
13 Finland (FI)	3.5	3.4	1.8	1.8
14 Sweden (SW)	1.2	1.1	0.4	0.3
15 UK (UK)	1.2	1.0	0.8	0.7
16 Czech Rep. (CZ)	4.4	3.4	1.9	1.5
17 Estonia (EN)	1.8	1.6	1.2	1.2
18 Cyprus (CY)	1.3	1.1	0.5	0.5
19 Latvia (LV)	4.1	1.4	1.5	0.7
20 Lithuania (LT)	2.5	2.1	1.6	1.3
21 Hungary (HU)	3.7	2.0	1.8	1.2
22 Malta (MT)	1.2	0.9	0.5	0.5
23 Poland (PL)	1.3	0.6	1.6	1.2
24 Slovenia (SI)	2.6	2.0	1.1	0.9
25 Slovakia (SK)	3.8	2.9	0.5	0.2
26 Bulgaria (BG)	1.9	1.7	0.1	0.1
27 Romania (RO)	0.6	0.2	0.4	0.3
28 Croatia (HR)	1.2	1.1	0.6	0.5
EU28	2.1	1.6	1.0	0.9

Sources: E3ME

Table 5 Macro-economic results EUC040, 2030, % difference from EUCO27

	GDP		Employment	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	4.4	2.3	2.2	1.4
2 Denmark (DK)	0.7	0.4	1.3	0.9
3 Germany (DE)	5.9	2.2	1.8	1.0
4 Greece (EL)	4.9	2.2	3.6	1.9
5 Spain (ES)	3.2	3.0	2.7	2.5
6 France (FR)	5.2	3.5	2.2	1.6
7 Ireland (IE)	2.9	2.4	1.8	1.6
8 Italy (IT)	4.3	2.1	1.9	1.2
9 Luxembourg (LX)	1.6	1.5	0.5	0.5
10 Netherlands (NL)	3.0	1.6	1.3	0.9
11 Austria (AT)	4.5	2.6	1.6	1.1
12 Portugal (PT)	2.0	1.5	3.5	2.8
13 Finland (FI)	7.3	6.3	3.5	3.0
14 Sweden (SW)	2.2	1.5	0.8	0.6
15 UK (UK)	2.2	1.3	1.5	1.1
16 Czech Rep. (CZ)	8.3	4.6	3.8	2.5
17 Estonia (EN)	4.0	3.1	2.3	2.2
18 Cyprus (CY)	2.8	2.1	0.9	0.9
19 Latvia (LV)	8.3	0.0	3.0	0.8
20 Lithuania (LT)	4.7	2.7	3.1	2.0
21 Hungary (HU)	6.4	1.8	3.3	1.6
22 Malta (MT)	3.1	2.2	1.1	1.1
23 Poland (PL)	3.4	0.2	3.6	2.1
24 Slovenia (SI)	4.9	2.6	2.2	1.3
25 Slovakia (SK)	7.9	4.4	1.7	0.4
26 Bulgaria (BG)	3.8	3.2	0.2	0.1
27 Romania (RO)	0.6	-1.1	0.8	0.4
28 Croatia (HR)	1.8	1.5	1.2	1.1
EU28	4.1	2.2	2.1	1.4

Sources: E3ME

Table 6 Macro-economic results EUCO3030, 2030, % difference from EUCO27

	GDP		Employment	
	No crowding out	Partial crowding out	No crowding out	Partial crowding out
1 Belgium (BE)	1.3	1.3	0.4	0.4
2 Denmark (DK)	0.4	0.4	0.3	0.3
3 Germany (DE)	1.5	1.5	0.3	0.3
4 Greece (EL)	1.2	1.2	0.7	0.7
5 Spain (ES)	1.0	1.0	0.5	0.5
6 France (FR)	1.5	1.5	0.5	0.5
7 Ireland (IE)	1.1	1.1	0.4	0.4
8 Italy (IT)	1.1	1.1	0.2	0.2
9 Luxembourg (LX)	1.0	1.0	0.0	0.0
10 Netherlands (NL)	1.0	1.0	0.2	0.2
11 Austria (AT)	1.1	1.1	0.3	0.3
12 Portugal (PT)	1.2	1.2	0.7	0.7
13 Finland (FI)	1.2	1.2	0.6	0.6
14 Sweden (SW)	0.8	0.8	0.3	0.3
15 UK (UK)	0.9	0.9	0.4	0.4
16 Czech Rep. (CZ)	2.3	2.3	0.8	0.8
17 Estonia (EN)	2.5	2.5	0.5	0.5
18 Cyprus (CY)	0.8	0.8	0.2	0.2
19 Latvia (LV)	2.1	2.0	0.5	0.5
20 Lithuania (LT)	1.3	1.3	0.5	0.5
21 Hungary (HU)	1.7	1.6	0.6	0.5
22 Malta (MT)	2.3	2.3	0.5	0.5
23 Poland (PL)	0.8	0.8	0.3	0.3
24 Slovenia (SI)	0.6	0.6	0.4	0.4
25 Slovakia (SK)	1.3	1.3	0.2	0.2
26 Bulgaria (BG)	1.6	1.6	0.0	0.0
27 Romania (RO)	1.1	1.1	0.0	0.0
28 Croatia (HR)	0.8	0.8	0.2	0.2
EU28	1.2	1.2	0.4	0.4

Sources: E3ME