Council of the European Union

Brussels, 22 October 2021
(OR. en)

13103/21

COMPET 731
MI 764
IND 293

NOTE

From:	Trio Presidency
To:	Working Party on COMPETITIVENESS and GROWTH (High Level)
Subject:	Background paper on the Commission's Fit for 55 package and Recovery and Resilience Facility

Delegations will find in Annex a Trio Presidency background paper on the Commission's Fit for 55 Package and Recovery and Resilience Facility in view of the informal meeting of the members of the Working Party on Competitiveness and Growth (High Level) on 4 November 2021.

ANNEX

Fit for 55 and Recovery and Resilience Facility

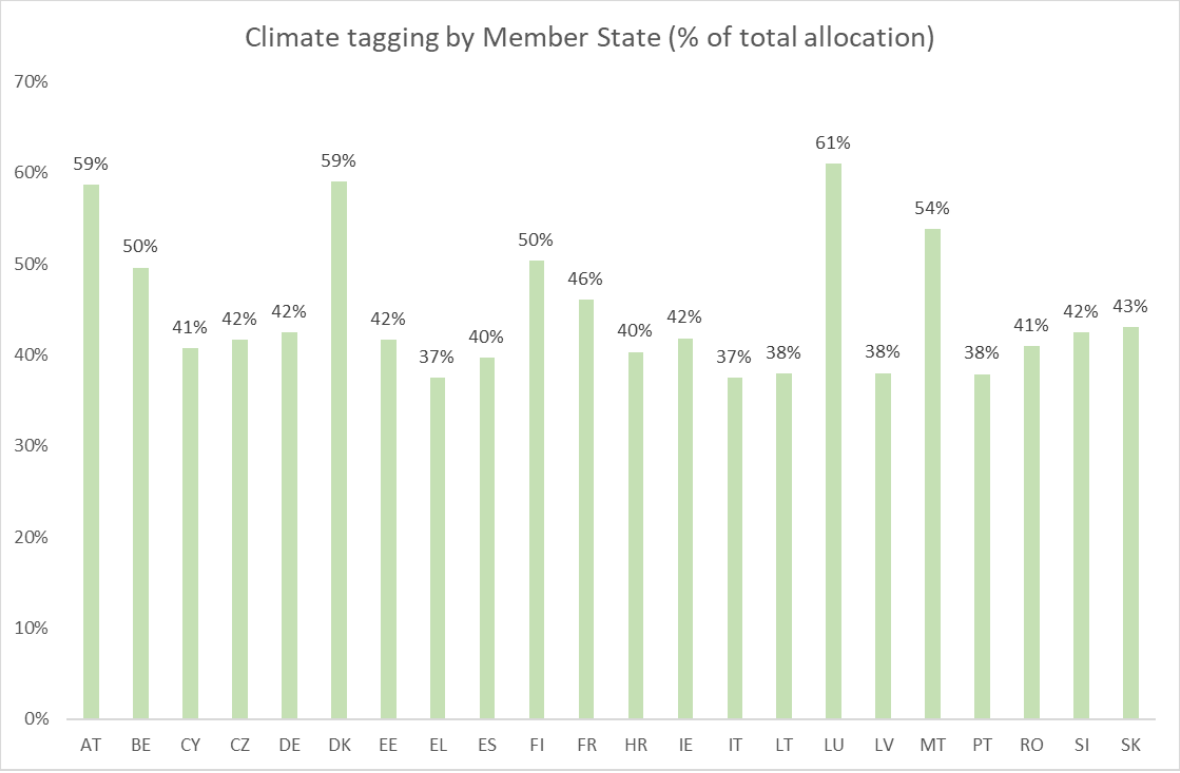
Following the entry into force of the Climate law, that makes the Union's commitment to climate neutrality by 2050 legally binding and increases the intermediate greenhouse gases (GHG) emissions reduction target (relative to 1990 levels) of 40 % to at least 55 %, the Commission adopted in July the 'Fit for 55' package to align the energy and climate regulatory framework with this ambition. This package consists of thirteen inter-connected legislative initiatives, aims to achieve the ecological transition and promote sustainable and fair economic growth with job creation, making it possible to tackle poverty and energy dependence and improve security of supply, health and well-being. Overall, the package revises eight existing pieces of legislation and presents five new initiatives, across a range of policy areas and economic sectors: climate, energy and fuels, transport, buildings, land use and forestry, taxation.

One of the main EU instruments that will support investments in the green transition in the immediate future is the **Recovery and Resilience Facility (RRF).** It aims to foster economic recovery and long-term resilience across the EU by providing large-scale financial support to Member States, in grants and loans, to finance reforms and investments (up to EUR 672.5 billion, 2018 prices). To benefit from the financial support provided by the RRF, Member States need to put forward national Recovery and Resilience Plans (RRPs), outlining consistent packages of reforms and investments to spur their recovery and increase their resilience. The funds must be spent by 2026 at the latest.

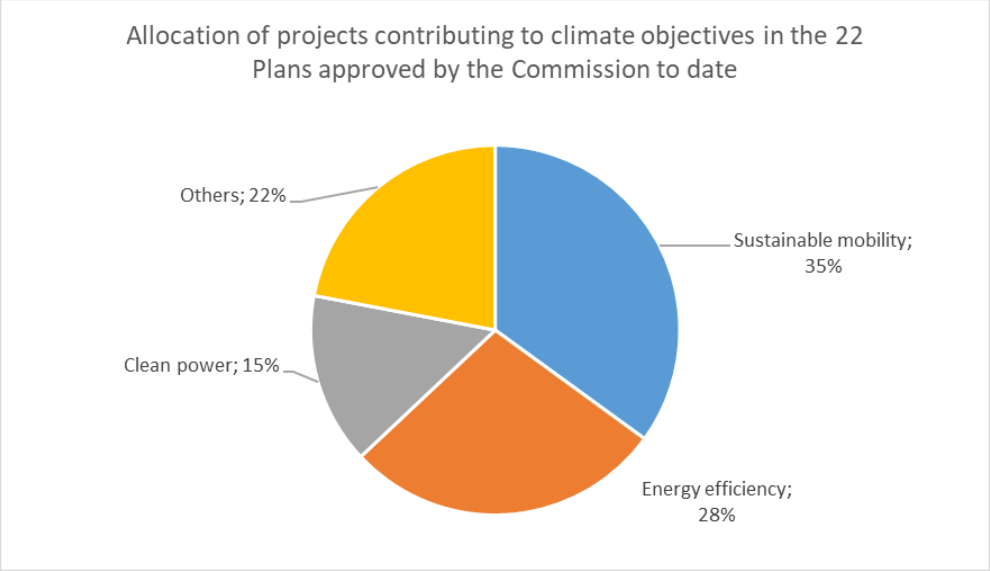
Investments

In order to reinforce the commitment to the green transition, the RRF requires that at least 37 % of each plan's total allocation must target measures with climate-change objectives. The analysis of the 22 plans already approved by the Commission shows that these Member States are planning to go beyond the 37 % requirement, with a combined climate-related investment of around EUR 177 billion, representing 40 % of the total EUR 445 billion RRF funds (grants and loans) allocated to these 22 Member States. In this context, the timely implementation of the RRPs can help Member States achieve the more ambitious targets for 2030 in line with the European Green Deal Package.

The highest climate-related contributions in relative terms are found in the RRPs of Luxembourg (61 %), Denmark (59 %) and Austria (59 %). In absolute values, Italy is the biggest investor in green projects and reforms (EUR 77 billion), followed by Spain (EUR 32.3 billion) and France (EUR 18.8 billion), also reflecting the higher amounts of grants and loans these countries receive.



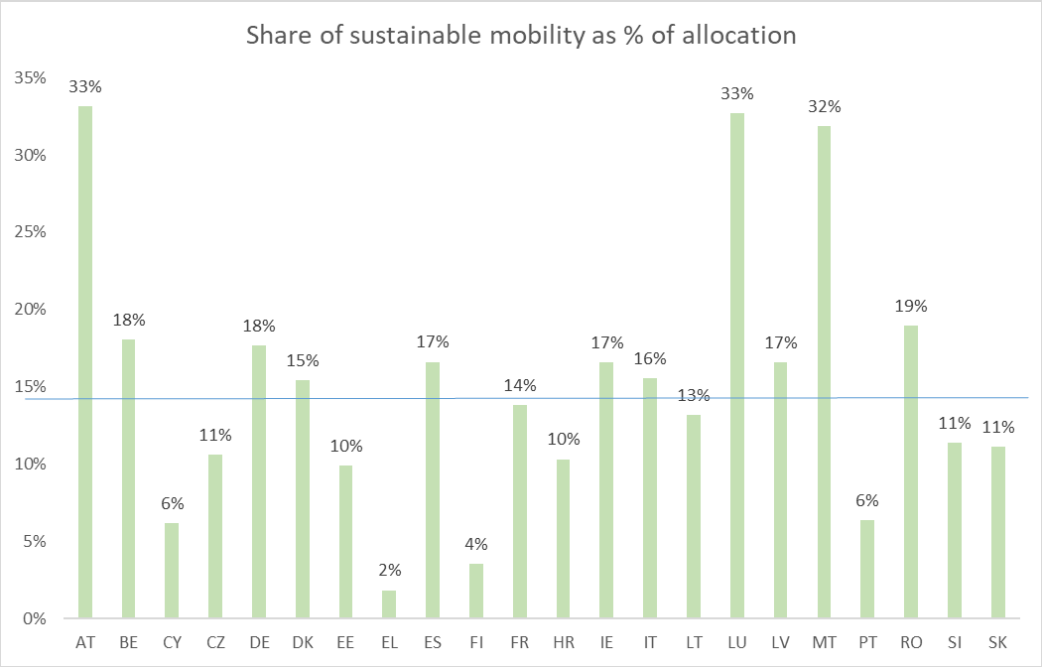
So far, three main categories account for the majority of funds allocated to the green transition. These investment projects are expected to contribute to the achievement of EU 2030 climate and energy objectives and refer to: **sustainable mobility** (EUR 62 billion), **energy efficiency** (EUR 50 billion) and **clean power** (EUR 26 billion).



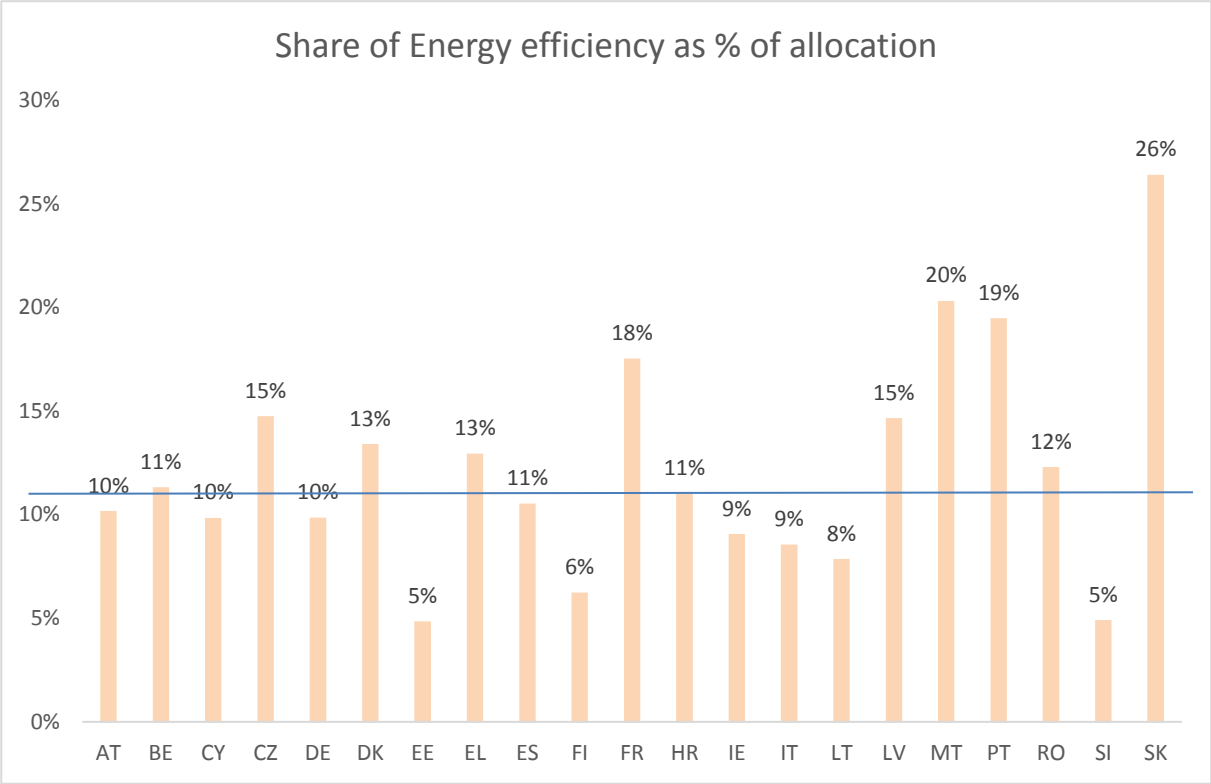
These investments will contribute to the significant ramping up of public and private energy system investments necessary to achieve our 2030 energy and climate objectives. Compared to the average 2011-2020 annual investments in the energy systems excluding transport (which amounted to EUR 185 billion), the investment needs associated with Fit for 55 represent an additional EUR 215 billion per year[1].

[1] SWD/2021/621 final

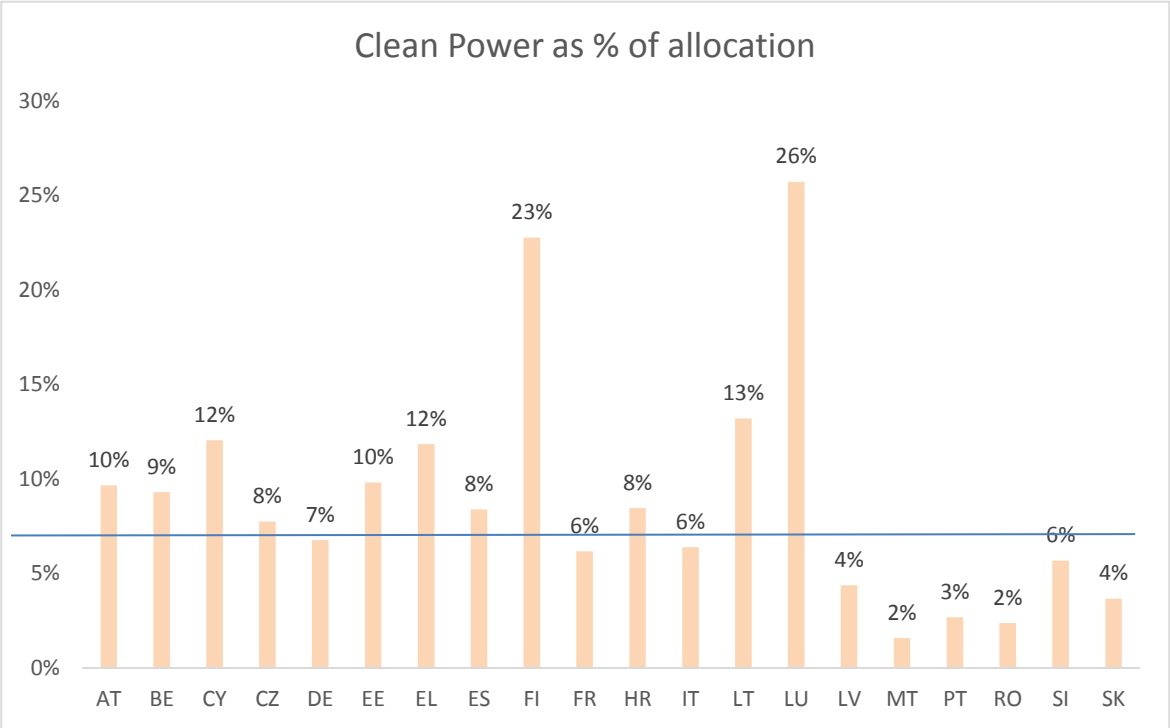
Sustainable mobility. All the 22 RRPs put forward measures to support sustainable mobility for an amount of EUR 62 billion (35 % of total climate measures and 14 % of the total allocation of the Plans). These measures are directly linked to the Fit for 55 package objectives to make transport greener by cutting emissions through i.e. enhanced electro-mobility, expanding recharging networks, or improving public transport. In the RRPs, investments in railway infrastructure account for the biggest share (55 % of the sustainable mobility investments), followed by urban transport infrastructure (15 %).



Energy efficiency. The Fit for 55 package includes targets and measures to enhance the development of renewable and less polluting energy systems for private and public buildings. 21 out of the 22 approved RRPs include direct investments addressing energy efficiency, ranging from energy renovations in private buildings (53 % of the energy efficiency projects) or renovations in public infrastructure (29 % of total) to construction of buildings or energy efficient projects for enterprises (18 % of total).



Clean power. 20 approved RRPs include dedicated investments in clean power with a total amount of EUR 30 billion (15 % of the climate-related investments). The proposed investments have a broad scope, ranging from the production of renewable energy (50 % of the total clean power allocation) to energy networks and infrastructure (25 % of the total clean power allocation). These investments contribute to the requirements and targets of the Fit for 55 package aiming to decarbonise the European energy system and leading to a clean industrial transformation. RRPs also present investments in renewable and low-carbon hydrogen, which is expected to play a central role in the green transition and decarbonisation of otherwise hard to abate highly energy-intensive industries such as steel, cement and fertiliser production. It will also be required to decarbonise certain transport means, including shipping, non-electrified rail transport and heavy-duty vehicles. Several Member States have included environmental taxation measures aiming at promoting sustainable mobility (e.g. tax exemptions for registration of electric cars or deduction of the value added tax for public transport tickets).



In addition, the analysis shows that the Member States are going beyond the 37 % target of funding for decarbonisation, with a combined green investment (beyond measures contributing to climate objectives) of around EUR 192 billion. However, looking ahead, the new European climate and energy targets will generate new investment needs. Over the next ten years, annual energy-related investments, including transport, will need to increase by EUR 390 billion[2] compared to the annual amounts invested over the last ten years. This represents an increase of around EUR 110 billion per year compared to the estimated level of investment needed to achieve the EU's previously agreed 2030 climate and energy targets.

In this context, many EU policies and funding instruments contribute to the transition to climate neutrality (e.g., the Sustainable Europe Investment Plan, Just Transition Fund, InvestEU programme, the Innovation and Modernisation Funds). Targeted use of these funds, combined with the measures included in the RRPs, will play an important role towards green recovery by triggering significant private sector investments. The EU budget together with the Next Generation EU package can be a strong driver for transformation and leverage sustainable private and public investment, if resources are well-deployed.

[2] SWD(2021) 621 final

Reforms

The RRPs approved to date also include relevant reforms to support the green transition, which will contribute to creating an enabling environment for the climate and energy transition. The industry needs a fair green and digital transition, which we need to enable through innovation, investment and skills development. New technological solutions are also important for increasing the efficiency of investments and competitiveness of the EU economy. For instance, Member States have put forward in their RRPs reforms to foster increased energy efficiency through the phasing out of outdated heating systems or the development of one-stop shops for the energy renovation of buildings; reforms of energy markets and permitting procedures to facilitate the deployment of renewable energy; and reforms to encourage sustainable mobility through the promotion of intermodality or tax incentives for clean vehicles.

Additional reforms will be necessary to enable a transition towards the EU climate and energy objectives. This notably concerns permitting procedures, where overly complex and lengthy administrative procedures constitute a major barrier for renewable energy industries and for the transition to a decarbonised energy system. Current permitting practices delay deployment and investments into clean energy projects and infrastructure by many years. Simplification and streamlining of permitting procedures is urgently needed to create a common market for renewables that facilitates efficient and cost-effective deployment as well as investor certainty, also in view of the massive investments needed to close the current EUR 49 billion per year investment gap[3].

[3] annual-single-market-report-2021-5-5-2021.pdf, page 29.

Role of transition pathways

As the recent update to the EU's industrial strategy confirms, the post-crisis green and digital transition will be more important than ever for the future competitive sustainability of Europe's companies and industries. To implement the transition, transition pathways will set out the steps that industrial ecosystems need to take towards sustainable competitiveness. These pathways will be co-created by industry, other stakeholders and national and European public authorities.

The Commission is following a common approach to the design and delivery of the transition pathways[4] by prioritising the ecosystems that the Commission considers most in need of an accelerated transition. The Commission already started the process for the Tourism[5] as well as Energy-intensive Industries[6] ecosystems and is now proceeding at full speed on Mobility, Construction, Textiles and Proximity and Social Economy ecosystems.

To facilitate the co-creation process among industry, other stakeholders, and national and European public authorities, the Industrial Forum is also supporting the development of transition pathways through a dedicated Task Force kicked-off in July 2021. The Task Force is working on the design of the blueprint of the pathways and focuses on elements relevant for several ecosystems, but also on specific challenges of certain ecosystems. The design of this blueprint will take into account the policy priorities and targets indicated in the Fit for 55 package.

In order to bridge the Fit for 55 actions with transition pathways, it is essential to keep a continuous flow of information between the relevant services in the Commission and the Industrial Forum. This is an important asset to ensure an effective, coordinated, fair and sustainable transition of industrial ecosystems within the recovery process.

---

4 Including scenarios SWDs, public consultations, the publication of the pathways and their promotion at a high-level event, followed by monitoring and adaptation when needed

5 COMMISSION STAFF WORKING DOCUMENT Scenarios towards co-creation of transition pathway for tourism for a more resilient, innovative and sustainable ecosystem - SWD(2021) 164

6 COMMISSION STAFF WORKING DOCUMENT For a resilient, innovative, sustainable and digital energy-intensive industries ecosystem: Scenarios for a transition pathway – SWD(2021) 277

Questions for discussion:

1. ***What could be done at national and EU level to maximise synergies between Fit for 55 and approved RRPs to effectively and cost-efficiently put Europe on a firm path towards climate neutrality?***

2. ***What other areas, besides the essential infrastructure developments and soft measures, like green skills, should be promoted to achieve recovery and the twin transition goals?***

Relevant examples of climate-related measures in the Recovery and Resilience Plans approved by the Commission to date

Sustainable mobility:

Spain: within the framework of the Strategic Project for the Recovery and Economic Transformation (PERTE), the project "Electric and Connected Vehicles" mobilises EUR 3.4 billion of public investment (the project expects to induce also more than EUR 19.7 billion of private investment, reaching a total of 24 billion euros). Three billion euros will be spent on new electric and hybrid vehicle models in factories adapted to the 2050 climate neutrality target; a further EUR 40 million will be for a technology plan in the sector and there will be funds to the training and re-skilling of workers and to facilitate access to these new vehicles for final consumers.

Italy will integrate more regions into the high-speed rail network and complete the rail freight corridors; boost sustainable local transport through the extension of cycle lanes, metros, tramways and zero-emission buses, including the construction of electric charging stations across the country and hydrogen refuelling points for road and rail transport, investing EUR 32.1 billion.

Germany will invest EUR 5.4 billion in climate-friendly mobility, i. a. to promote the sale of electric vehicles, alternatively powered buses and to enhance the necessary sustainable alternative fuel and charging infrastructure.

Ireland promotes sustainable mobility alternatives to private passenger cars by supporting investments to improve rail infrastructure in the Cork area. The EUR 164 million investment is part of a broader programme meant to result within 10 years in the electrification of the network. Carbon tax increases to encourage the switch to less polluting road transport.

Luxembourg is setting up a dense, accessible network of charging points for electric vehicles. This investment of EUR 30.5 million contributes to the electrification and decarbonisation of the road transport sector (which accounted for 50 % of Luxembourg's emissions in 2018, more than double of the EU average). It also includes a reform to promote the purchase of zero- or low-emission vehicles from procuring authorities and entities.

Lithuania will invest EUR 242 million in the transport sector to significantly reduce GHG emissions by phasing out the most polluting road transport vehicles (private, public, commercial, public transport and freight fleet) in cities and by increasing the share of renewable energy sources in the transport sector. Additionally, by March 2023, a distance based e-toll charge should be introduced.

Latvia will focus on the reduction of greenhouse gas (GHG) emission in the Riga metropolitan area which covers about 65 % of the Latvian population. Investments of EUR 295 million will create a multimodal public transport network and foster the use of public transportation. Additional investments in clean mobility and infrastructure focus on railway solutions (electrification of 81 km of railway) and zero-emission public transport (acquisition of four low-floor trams, 17 electric buses and seven electric bus charging stations, construction of cycle lanes).

Belgium proposed measures of EUR 410 million to create additional 187 km cycling infrastructure and improve the existing one. At Federal level in Belgium is spending EUR 350 million in order to refurbish rails and make railway stations easily accessible. Belgium also plans the reform of the company car tax scheme, whereby new company cars need to be zero-emission from 2026 onwards to benefit from the existing preferential scheme. The reform is expected to reduce the greenhouse gas emissions related to the use of company cars and to increase the supply of zero-emission vehicles on the second-hand market.

Portugal will invest EUR 967 million to the component Sustainable mobility, encompassing the expansion of Lisbon and Porto metro networks, their extension through Light rail transit and electric busses transit system as well as the purchase of 145 zero emission busses (with charging infrastructure). A flanking measure in the component Infrastructure not financed through the Plan is the delivery of 15 000 publicly available recharging points for electric cars. In addition, the Transport Ecosystem Reform includes a fiscal deduction of the value-added tax associated to the purchase of monthly public transport tickets, with the ultimate goal of enhancing the use of public transport and reducing greenhouse gas and pollutant emissions.

Czechia will finance more than 5,000 low-emission vehicles for the public and business sector, promoting the deployment of over 4,500 electric charging stations, improving railway infrastructure and 90 km of cycling pathways (EUR 1.1 billion).

Romania aims at modernising the railway infrastructure, including electrified or zero-emission railways and rolling stock, investing EUR 3.9 billion.

Austria will support the transition from fossil-fuel powered buses to zero-emission buses, a large-scale rollout of electric vehicles and plans to install charging stations (investing EUR 256 million) and also expand the electrified rail network between regions (EUR 543 million).

Croatia plans an investment of EUR 197 million to develop and implement a new urban mobility ecosystem project that will include 3 key elements: (i) a fully autonomous electric vehicles capable of performing all dynamic driving functions without any driver-person assistance with the help of artificial intelligence, (ii) the development and construction of a specialised infrastructure for autonomous and electric vehicles integrated with public urban transport, and (iii) the development of a software platform to operate the complete system.

Malta will invest EUR 94 million to shift traffic from road to more sustainable modes and decarbonise road transport through electrification. Measures include a scheme supporting the purchase of zero-emission electric vehicles in the private sector, a renewal of the public sector vehicle fleet with electric vehicles and the purchase of electric buses for public transport.

Slovakia will invest EUR 712 million in low-carbon transport, supporting the roll-out of charging stations for alternative fuels and the modernisation of railways and new cycling infrastructure.

Denmark will invest EUR 259 million providing premiums for phasing out old diesel cars, for creating new bicycle paths, for expanding infrastructure for electric bicycles, and for purchasing green ferries.

Greece will invest EUR 520 million to increase sustainable mobility in line with a national strategy aligned with the National Energy and Climate Plan. Such investments will result in: the development of R&D centres for innovative products or services, such as the recycling of electric car batteries; the creation of the first CO2 storage facility in the country; the installation of publicly accessible charge points for electric vehicles; the purchase of electric buses; incentives for the replacement of old taxis with electric taxis.

Cyprus will invest EUR 87 million to encourage a shift from private cars to public transport, cycling, walking, and promoting the use of clean vehicles.

Energy efficiency:

Ireland's national Recovery and Resilience Plan will support the retrofitting low-cost residential housing stock, entailing energy efficiency upgrades, via guarantees provided to lending banks. The scheme is endowed with EUR 40 million with an estimated total lending portfolio of EUR 300-500 million. With funds of EUR 55 million the installation of energy metering and monitoring control systems should be promoted to speed up businesses' transition to a low carbon economy and assist with reducing GHG emissions. At least 750 projects will benefit from this project, leading to an estimated abatement of 250,000 tonnes of CO_2 emissions.

Finland plans investments of EUR 130 million for energy efficiency renovation of existing housing/building stock. These investments should e.g. aim to utilise surplus heat in district heating networks. In addition, Finland plans to introduce a reform of energy taxation to take account of technological developments and reduce industrial emissions: the amendment of energy taxation legislation shall contribute to the phasing out of fossil fuels by promoting electrification of industry and encouraging investment in low-carbon technologies.

Belgium directs EUR 670.7 million in reforms and investments to provide renovation incentives and to accelerate private energy efficiency investments. Among these are (i) an integrated single subsidy scheme for energy efficiency and renewable energy renovation, supporting about 20200 dwellings; (ii) revision of the energy label scheme, supporting the energy efficient renovation of 8.400 dwellings; (iii) introduction of a demolition-reconstruction grant supporting the reconstruction of 1760 dwellings; (iv) revision of the renovation support scheme for smart control of heat pumps, electrical boilers, electric storage heating and home battery, supporting 8.400 households.

Portugal: EUR 610 million will be invested in the energy efficiency in residential buildings, central government buildings and buildings used by the services sector.

Germany will invest EUR 2.6 billion in climate-friendly construction and renovation.

Slovenia will invest EUR 230 million in financing large-scale renovation programmes to increase the energy efficiency of public buildings, including schools.

Croatia plans energy renovation investments of EUR 764 million for projects of buildings i.a. damaged by the earthquakes and of buildings with cultural object status.

Romania will invest EUR 2.7 billion in energy-efficient renovation and seismic renovation of buildings to reduce CO2 emissions by at least 0.15 million tons in private buildings and 0.075 million tons in public buildings.

France directs EUR 3.8 billion in the project "Rénovation thermique des bâtiments publics". This investment is expected to improve the energy efficiency of public buildings. It should allow the renovation, by the end of 2024, of nearly 30 million of square metres of floors of public sites belonging to the State, as well as 681 schools, with an objective of achieving at least 30 % of energy savings.

Italy strengthens the Ecobonus and Sismabonus for energy efficiency and building safety with EUR 12.05 billion. It is expected that a surface of at least 32 million square meters of buildings will be renovated, which would result in energy savings of at least 40 % and an increase of at least two categories in the energy efficiency certificate; a surface of at least 3.8 million square meters of buildings will become proof to anti-seismic purposes.

Denmark provides EUR 80 million support measures for energy renovation, which includes supporting SMEs to grow and create local employment with projects such as energy renovation of buildings or boosting energy efficiency for industry.

Slovakia will invest EUR 528 million to improve the energy efficiency in family houses, financing a large-scale renovation wave to improve energy and green performance of at least 30,000 residential units.

Greece will invest EUR 2.712 billion to support the achievement of climate neutrality of urban areas and the climate resilience of cities and their building stock. These resources will be used for building renovations and energy upgrades for the regeneration of urban areas and energy poverty mitigation.

Cyprus will invest EUR 169 million to improve the energy efficiency of the building stock and other infrastructure and to support green investments for SMEs, households, the wider public sector and NGOs.

Malta plans to invest EUR 60 million for energy-efficient renovations and greening of private and public buildings, including hospitals and schools.

Spain will introduce a personal income tax deduction linked to renovation works for increasing the energy efficiency.

Clean power

Estonia's Plan includes a programme to strengthen the electricity grid to increase renewable energy production capacity and adapt to climate change as well as a programme to boost the deployment of renewable energy generation on industrial sites with a pilot Energy Storage Programme with the amount of EUR 45 million. The transmission system operator's investments into the transmission grid shall be co-financed with the aim of adding at least 310 MW of additional connection capacity, investments made by companies to connect renewable electricity production capacities into the grid shall be supported through grants.

Finland will invest EUR 474.7 million in clean power projects, stimulating the introduction of new clean technologies for energy production and use. The support shall prioritise 'hard-to-decarbonise sectors' where emission reductions are difficult and costly. The investment shall provide support for large-scale projects in the demonstration phase with a priority on technical feasibility, with a particular focus on offshore wind energy production; renewable fuels in transport (electric fuels and biofuels); non-incineration heat production such as geo-energy; and other renewable energy projects such as large biogas transport projects using low-used inputs, large-scale solar energy projects and projects that promote energy storage. Finland will also use funds for the development of the production and storage of clean hydrogen on a commercial scale to meet the national targets by 2035.

France will invest nearly EUR 2 billion to develop decarbonised hydrogen. In addition France will invest 1.7 billion to foster R&D for green transition.

Germany foresees investments in the decarbonisation of industry, in particular through green hydrogen, of EUR 3.3 billion, including support to projects under an IPCEI in preparation on green hydrogen of EUR 1.5 billion.

Lithuania envisages the creation of at least 301,9 MW of additional electricity generation capacity from renewable energy sources. Out of this new capacity at least 271,8 MW should consist of solar power plants including 4 MW solar power in the Utena region and at least 30,1 MW of onshore wind power. Moreover, individual electricity storage facilities of at least 15,2 MWh and other electricity storage of at least 200 MW should be installed. In total, investment of EUR 293 million are directed to clean power projects.

Romania will invest EUR 855 million in clean energy production, supporting the phasing-out of coal and lignite power production, the deployment of renewables as well as related production processes, and hydrogen.

Italy has several projects aiming at developing the production and incentivising the use of renewable energies including green hydrogen as well as increasing recycling, reducing landfill waste and improving water management (EUR 11.2 billion).

Portugal plans to invest EUR 370 million under the component Hydrogen and Renewables. New installations should increase the production capacity of renewable hydrogen and other renewables gases (including electrolysers for renewable hydrogen). Specific projects are planned in Madeira and the Azores, including production in hydroelectric, geothermal, photovoltaic and wind plants, battery storage system, and expanding the capacity of the electric network. The specific component Decarbonisation of Industry will devote EUR 715 million to innovation projects in industry in 4 areas: low carbon processes and technologies; energy efficiency measures; incorporation of renewable energy and storage; and development of decarbonisation roadmaps and capacity building initiatives.

Austria plans to refocus the tax system to benefit the climate: introducing tax reforms to incentivise green technologies, preferential tax rates for low- or zero emission products combined with targeted tax relief for companies and households in need.

Croatia envisages the adoption of a Hydrogen Strategy for Croatia which shall include quantified targets on the production potential of green hydrogen by 2030. This will be accompanied by investments worth EUR 46.9 million for the construction of an installation capable of delivery 10 MW of hydrogen power production by electrolysis, the building of at least six hydrogen charging stations for cars, buses and heavy duty vehicles and the building of carbon capture and storage technologies

Greece will invest EUR 1.2 billion to increase the weight of renewable energy sources in the electricity system and facilitate Greece's process of decarbonisation. Among others, the funds will be used to: complete the interconnection with the Cyclades islands and make electricity distribution more environment-friendly and able to absorb a greater share of renewable energy (EUR 195 million); increase the storage capacity to accumulate more surplus renewable electricity (EUR 450 million); rehabilitate land currently used as lignite mines (EUR 242 million).

Cyprus will invest EUR 100 million to address the country's energy isolation through the "EuroAsia Interconnector", which will ensure security of supply and more competitive wholesale electricity prices. It will also enable the increased use of electricity from cleaner sources by connecting the electricity network of Cyprus to the EU continental system.