Council of the European Union
General Secretariat

Brussels, 11 July 2022

Interinstitutional files:
2021/0424 (COD)
2021/0425 (COD)

WK 10112/2022 INIT

LIMITE

ENER

REDACTED DOCUMENT ACCESSIBLE TO THE PUBLIC (04.05.2026). ONLY MARGINAL PERSONAL DATA HAVE BEEN REDACTED.

MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Working Party on Energy
Subject:	Hydrogen and gas markets decarbonisation package - presentation

Delegations will find in the annex the presentation on the Hydrogen and gas markets decarbonisation package.

European Commission

Hydrogen and gas markets decarbonisation package

Energy Working Party, 7 July

SoP process

- **Post adoption consultation**
  - **Closed mid-April 2022**
  - **86 replies for Regulation, and 111 for Directive**
  - **Results distributed with present slides to EWP**
- **EP**
  - **Presentation draft reports ITRE rapporteurs and amendements: 13 July**
  - **ITRE Vote: 28 November 2022**
  - **Other opinions: IMCO and AGRI Commitee**

Scope of the Directive and Regulation

Gas Directive & Gas Regulation

Natural gas system

Transmission sytems
Distribution sytems
LNG terminals
Storage facilities

Hydrogen system

Hydrogen networks
Hydrogen terminals
Hydrogen storage

„Natural gas“

- “gases that primarily consist of methane, including biogas and gas from biomass, in particular biomethane”
- “other types of gas, that can technically and safely be injected into and transported through the natural gas system”

„Hydrogen“

“hydrogen of a high grade of purity”

European Commission

Chapters I of Regulation and Directive

Chapter II of Directive

Regulation: Chapter I - Subject matter, scope and definitions

- Regulation shall apply to natural gas system **and dedicated hydrogen system**
- Most relevant definitions
  - Entry-exit system
  - Balancing zone
  - Allowed revenue
  - RAB
  - Transport contract
  - Balancing period
  - Network user
  - New infrastructure

Directive: Chapter I - Subject matter, scope and definitions

- Directive establishes common rules for natural gas system **and dedicated hydrogen system**
- Most relevant definitions:
  - 'natural gas' **-** mean all gases that primarily consist of methane, including biogas and gas from biomass, in particular biomethane, or other types of gas, that can technically and safely be injected into, and transported through, the natural gas system
  - 'gases' - mean natural gas and hydrogen
  - renewable gas
  - low-carbon gas
  - low-carbon hydrogen
  - hydrogen networks
  - hydrogen terminals
  - hydrogen storage

Directive: Chapter II - General rules

- Market based supply prices
- Regional cooperation
- Authorization procedures
- Certification of renewable and low carbon fuels

Consumer Engagement and Protection
Market based supply price

Retail price regulation (art.4)
Mirroring electricity provision (Directive 944/2019 art 5) on retail price regulation: (1) Possibility for price regulation for energy poor and vulnerable households, and, (2) Possibility (transitionary) for price regulation for households and micro-enterprises
Good for new market entrants, availability and uptake of green products, increased competition, consumer engagement, carefully crafted conditions reflecting the Electricity Directive

Promotion of regional cooperation and integration (Article 6 Directive)

Voluntary regional markets integration, notably market mergers, can provide various benefits, depending on the specificities of the markets:

- *Short term:* an opportunity to make best use of infrastructure; a chance to increase competition, liquidity and trade to the benefit of the end-consumers; may also improve security of supply.
- *Mid/long-term:* a basis to further support the transformation of the natural gas market, including the deployment of renewable and low-carbon gases.

Authorisation procedures (Article 7 Directive)

Natural gas system and hydrogen system

Why?
Create uniformity in applicable authorisation procedures for natural gas and hydrogen infrastructure and expedite authorisation procedures

How?

- Default time limits for authorisation (permit) procedures (like under RED II and TEN-E regulation): 2 years
- Establishment of single contact points for authorisation applicants

Hydrogen system

Why?
Address risk of undue delays when repurposing natural gas pipelines for hydrogen transport

How?
Grandfathering: current arrangements applicable to gas pipelines (authorisations and land-use rights) continue to be applicable once these pipes are used for hydrogen transportation.

Certification of low carbon fuels (Article 8 Directive)

Why?

- Low carbon fuels need to contribute towards mitigation of climate change.
- Certification framework for renewable fuels already exists and is continuously reinforced.
- Challenges are very similar. Hence, the set of tools applied for certifying renewable fuels (voluntary certification schemes, the mass balance system and the union database) is also suitable for certifying low carbon fuels.
- The extension of the certification framework does not create additional administrative burden and ensures a coherent treatment.
- Necessary to have definition for mandatory tariff discounts.

How?

- Include definitions for low-carbon hydrogen, low-carbon gas and low carbon fuels based on a performance criterion for GHG emissions savings (70%), but not targets.
- Extend the framework for certifying renewable fuels to low carbon fuels.

Chapter II section 2 - Network access: Regulation

Chapter II section 3 - Transmission, storage, terminals: Regulation

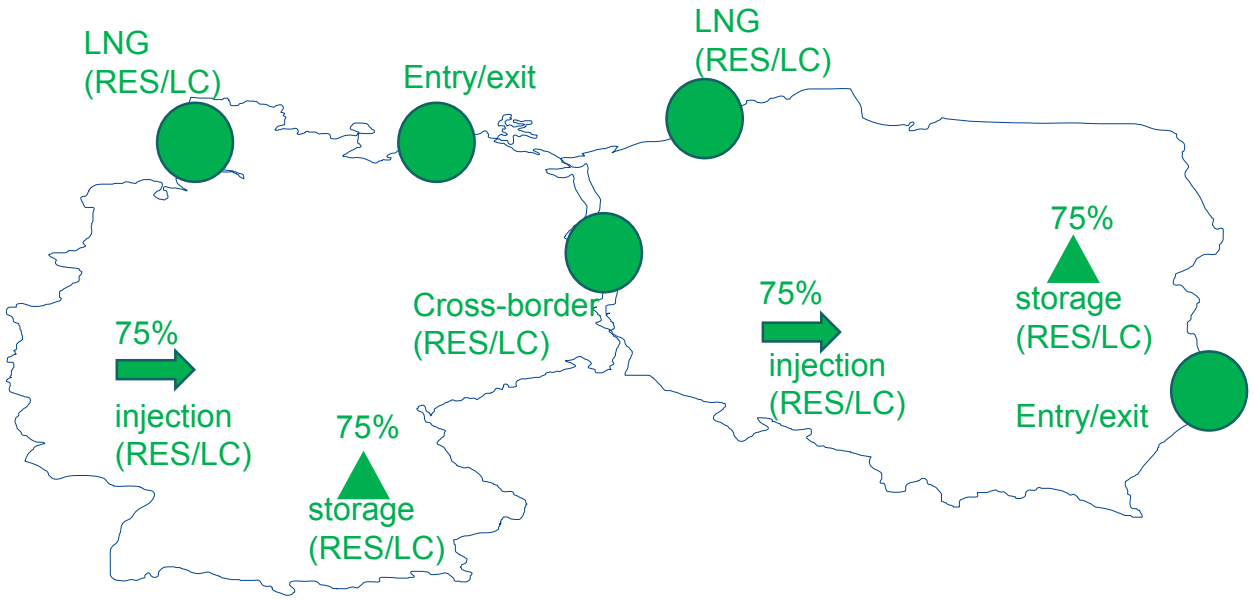
Chapter II section 4 – Distribution: Regulation

Chapter V - Natural gas TSOs, SSOs: Directive

Chapter VI - Natural gas DSOs: Directive

Chapter II - section 2 - Network access

Articles 15-16 Gas Regulation



New ITC mechanism
- 10% revenue reduction as a trigger
- 3 years to agree (TSOs + NRAs), if no agreement: ACER

New mandatory tariff discounts for renewable and low carbon gases:

- Removing (100% discount) the **cross-border tariffs** and for **entry tariffs from LNG terminals** to the grid.
- 75% discount **on entry points (injection) production facilities** (e.g. biomethane or hydrogen) for the purposes of scaling-up these gases.
- 75% entry points from and exit points to **storage** facilities
- ! Recent storage proposal: 100% discount for all gases

European Commission

Chapter II section 3 - Transmission, storage, terminals

- Gas quality and allowed blending cap
- Terminals and storages transparency

Gas quality in natural gas system and allowed blending cap

Articles 35, 40 and 72 Gas Directive, Articles 19, 20, 23, 30, 35, 38, 65(16) and Annex Gas Regulation

Issue: The quality of gases transported and consumed in Europe is changing due to increased injection of renewable and low-carbon gases (incl. biomethane and hydrogen).

Aim: Ensure system integrity and interoperability and delivery of gas to end-consumers in the quality they require in a cost-efficient manner.

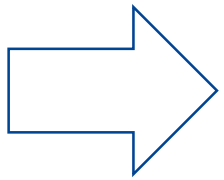
How: the proposal foresees a two-tier approach:

- harmonised rules on roles and responsibilities for gas quality management:
  - TSOs will be responsible for gas quality management in their networks;
  - DSOs can be mandated with gas quality management task where this is necessary due to volumes of renewable and low-carbon gases injected at distribution level;
  - TSOs, ENTSOG as well as DSOs and EU DSO entity (where relevant) reporting on gas quality and its developments; NRA and ACER monitoring gas quality aspects, incl. developments on hydrogen blending; increased transparency.
- Cross-border coordination on gas quality problems and a 5% cap for hydrogen blends at interconnection points between Member States.

Transparency requirements (Article 31 Regulation)

More transparency at LNG terminals, hydrogen terminals, gas and hydrogen storages

Why: to allow more flexible gas trade and better use of the terminals and storages, including for RES and LC gases



- Single EU-wide transparency platform – LNG and storage
- Tariff publication (including exempted terminals and negotiated access gas storages)
- Regulatory authorities may request operators to make public any additional relevant information for system users.

Chapter II section 4 - Distribution

New entry-exit definition

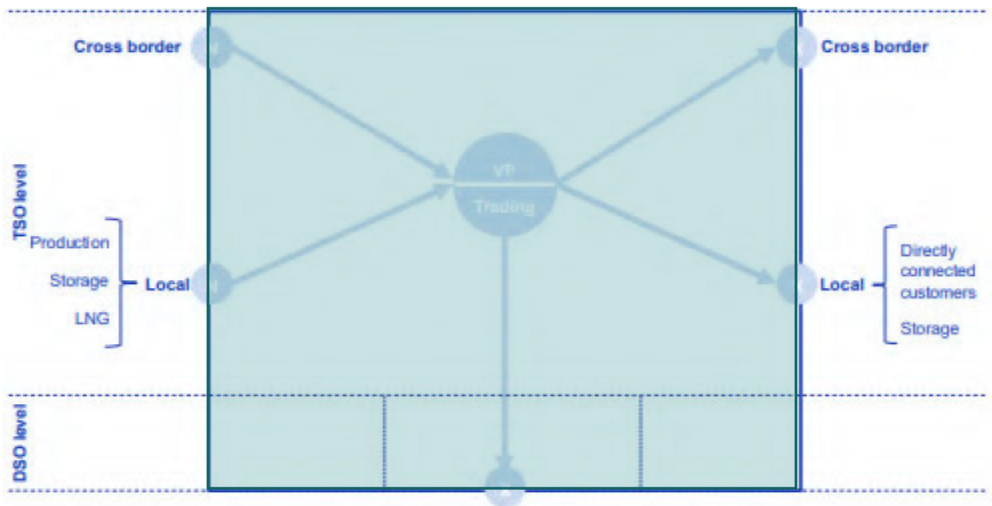


Figure 1: Schematic Representation of a 'Full' Entry-Exit System

Source: DNV KEMA (2013), https://ec.europa.eu/energy/sites/ener/files/documents/201307-entry-exit-regimes-in-gas-parta.pdf

- Objective: ensure access to wholesale market irrespective of connection at TSO or DSO (level playing field)
- Definition refers to access regime, not to tariffs or how to allocate capacity between TSO and DSO
- ***Art. 33 Regulation*** → principle of firm capacity for RES & LC production connected to DSO
- ***Art. 34 Regulation***→ principle of cooperation between TSO and DSO
- + *Art. 26 Directive* introduces principle of level playing field irrespective of connection level

Shaded area = balancing zone covering DSO level = entry-exit system

European Commission

Directive: Chapter V and VI

Article 37 and 41: ***connection*** of new production facilities for renewable and low carbon gases to TSO and DSO systems

- transparent and efficient procedures for non-discriminatory connection
- Approval by regulatory authorities
- TSO shall not be entitled to refuse economically reasonable and technically feasible connection requests

Article 35 : ***LNG and storage system operators shall cooperation***, within one Member State and regionally

➢ Better use of infrastructure and synergies where possible (i.e. gas storage to serve as a storage for LNG

Back-up slides

5% allowed cap for hydrogen blends at interconnection points in the natural gas system

Articles 20, 65(7) Gas Regulation

- It is a cap, not a blending obligation. It means that transmission system operators must accept at interconnection points max. blend of 5% to avoid market segmentation.
- Provides a process to agree on the practical implementation (technical solutions and financing) with clear roles for market participants and regulators.
- It applies at interconnection points between Member States. It does not set a cap for a Member State's domestic network.
- Voluntary agreements for higher blends at interconnection points between Member States remain possible.
- In line with the Hydrogen Strategy: reflects the priority to use hydrogen in its pure form.
- 5% was found by studies cost-efficient in terms of abatement and adaptation costs for end-users and infrastructure operators.

Gas quality management in the natural gas system

Articles 35, 40, 72 Directive, Articles 19, 20, 23, 30, 35, 38 and 65(16) Regulation

Issue: The quality of gases transported and consumed in Europe is changing due to increased injection of renewable and low-carbon gases (incl. biomethane and hydrogen).

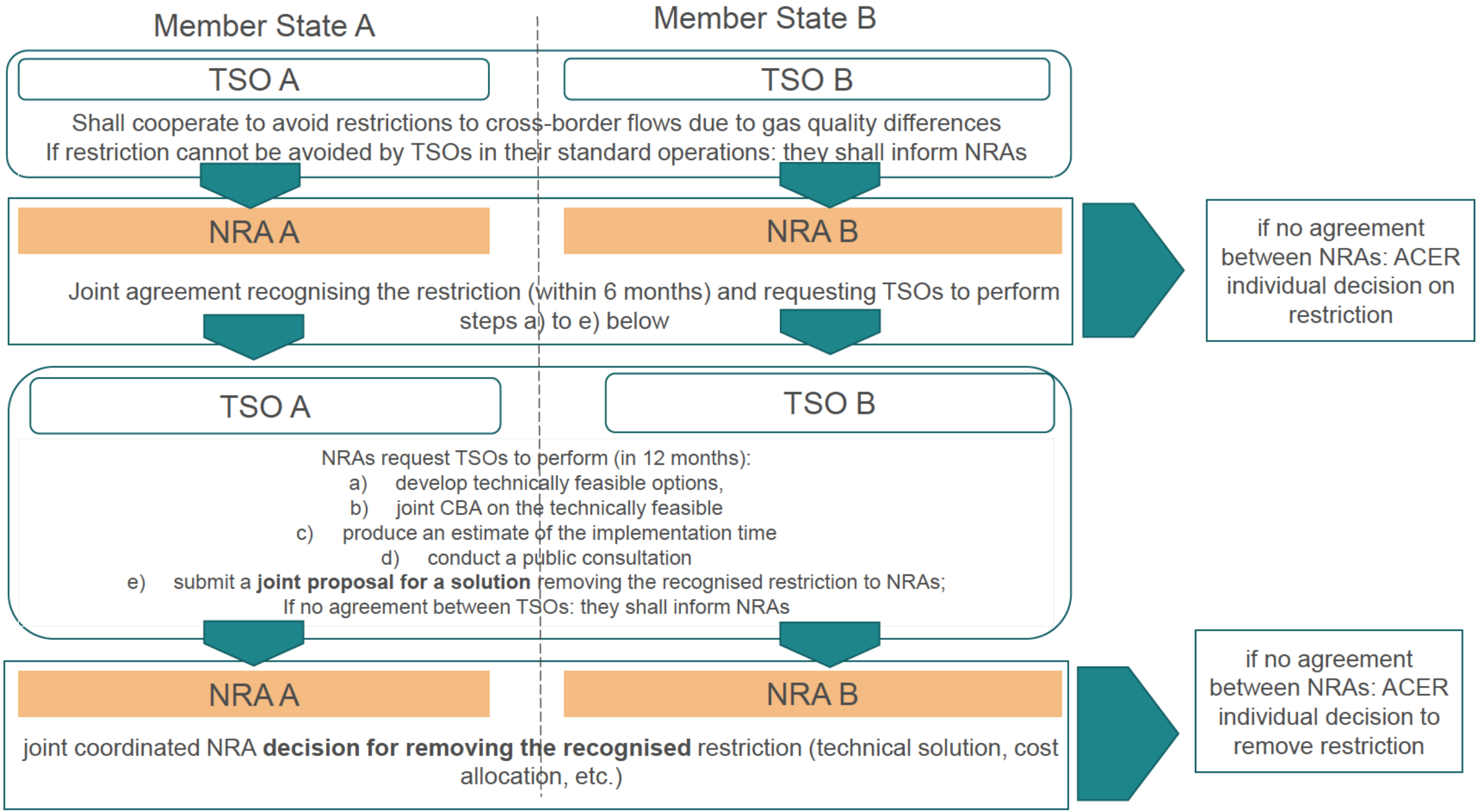
Aim: Harmonised rules on gas quality management will ensure system integrity and interoperability and delivery of gas to end-consumers in the quality they require (e.g. for industry processes) in a cost-efficient manner.

Therefore, the proposal foresees a two-tier approach:

- **harmonised rules on roles and responsibilities for gas quality management**:
  - TSOs will be responsible for gas quality management in their networks (Art. 35 Gas Directive)
  - DSOs can be mandated with gas quality management task where this is necessary due to volumes of renewable and low-carbon gases injected at distribution level (Art. 40 Gas Directive);
  - TSOs, ENTSOG as well as DSOs and EU DSO entity (where relevant) reporting on gas quality and its developments (Articles 23, 35 and 38 Gas Regulation); NRA and ACER monitoring gas quality aspects, incl. developments on hydrogen blending (Art. 72 Gas Directive and Art. 65(16) Gas Regulation); increased transparency (incl. on ENTSOG transparency platform, e.g. H2 and oxygen content) (Art. 30 Gas Regulation, points 3.1.2.1.c and 3.3.4 Annex to Gas Regulation).
- **Cross-border coordination** on gas quality problems (Art. 19 Gas Regulation and Art. 71 Gas Directive) and a 5% cap for hydrogen blends at interconnection points between Member States (Art. 20 Gas Regulation)

Cross-border coordination on gas quality

Article 19 Regulation; Article 71 Directive, table 49 of IA



Public consultations summary for the *Hydrogen and Decarbonised Gas Markets Package*

[redacted]

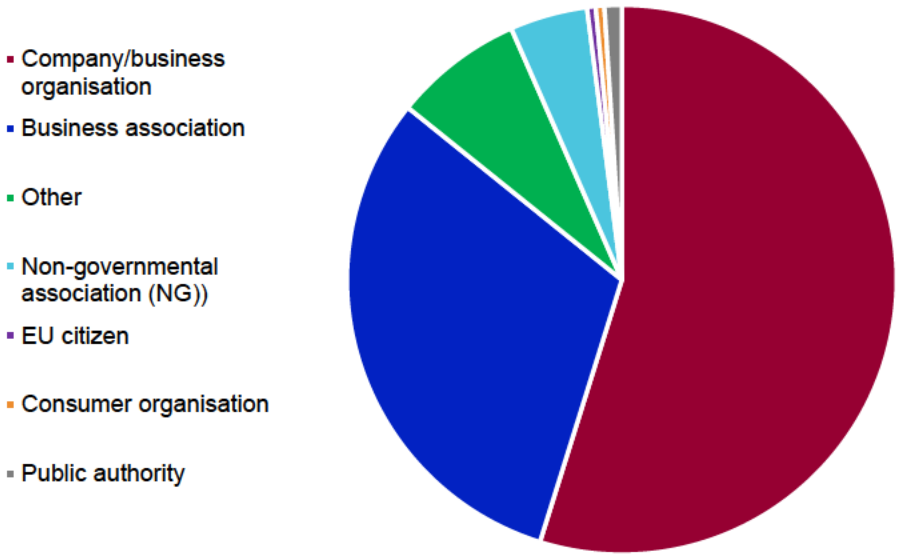
Directorate-General for Energy

European Commission

July 2022

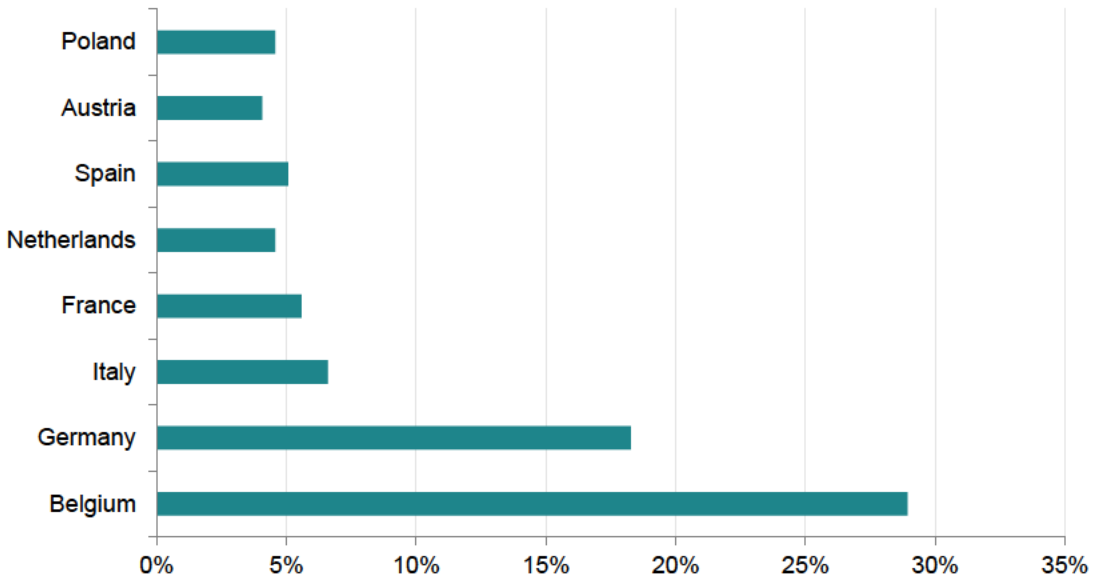
The Commission received 86 replies for the Regulation and 111 for the Directive

Total by category of respondents



Source: European Commission

Total by country



Source: European Commission
Note: This chart shows the top 8 countries. Other countries combined made up 19% of the responses.

European Commission

Stakeholder feedback (1/4)

Definitions

- Call for clarifications (natural gas, renewable gases, low-carbon hydrogen, low-carbon gases)
- ‘Entry-exit system’ definition deemed too open.

Certification of renewable and low-carbon gases

- Call to define the GHG emissions savings criteria as soon as possible (as part of the package, or in a DA, but before 2024).
- Suggestions to revise the 70% threshold upwards or downwards according to distinct categories.
- Some respondents favoured a mass balance system, while others a book-and-claim method.

Stakeholder feedback (2/4)

Consumer rules

- Citizen energy communities provisions approved, provided that DSOs have a stronger role.
- General support to the right to switch supplier.
- Some concerns on the smart metering provisions.

Regulatory principles for the hydrogen market

- General preference to keep existing gas unbundling models (ITO, ISO and ownership unbundling) and apply them to the hydrogen market.
- Concerns about time limitations imposed to financial transfers.
- General support for the TPA propositions, with a preference for regulated TPA compared to negotiated TPA.

Stakeholder feedback (3/4)

Tariff discounts for renewable and low-carbon gases

- General sentiment that tariff discounts at interconnection points might fragment internal energy markets.
- Concerns about unfair advantages.
- Need for further clarity on the ITC mechanism.

Natural gas quality and hydrogen blends

- Some support for the 5% hydrogen blending cap, although concerns that it may impact gas quality and incur high adaptation costs.
- Calls to lower the hydrogen blending cap to 1% or 2%.

Stakeholder feedback (4/4)

European Network of Network Operators for Hydrogen (ENNOH)

- General support for ENNOH from the hydrogen industry, end-users, energy storage companies and climate organisations.
- Gas industry players disregard the need for ENNOH, arguing that the expertise of ENTSOG could suffice.

EU DSO Entity

- DSOs and some associations asked for the creation of a separate EU DSO entity for gas.

Security of Supply

- Concerns about the ban on long-term contracts for unabated gas beyond 2049.