EU directive on gas and hydrogen networks

OVERVIEW

On 15 December 2021, the European Commission adopted a legislative proposal to recast the 2009 EU Gas Directive, as part of the proposed hydrogen and decarbonised gas markets package. This reflects the EU’s growing climate ambitions, set out in the European Green Deal and its ‘Fit for 55’ package.

The Commission’s proposal aims to support the decarbonisation of the energy sector by ramping up the production of renewable gases and hydrogen, and facilitating their integration in EU energy networks. The recast directive would become a core component of a new EU legislative framework for hydrogen networks, comparable to those that already exist for natural gas and electricity.

The Commission’s proposal would refine the principles of the existing Gas Directive and fully extend their scope to cover hydrogen networks. This includes an important set of consumer rights, provisions relating to transmission and distribution system operators (including their unbundling), third-party access and integrated network planning, and independent regulatory authorities.

In the Parliament, the file was attributed to the Committee on Industry, Research and Energy (ITRE), which appointed Jens Geier (S&D, Germany) as rapporteur on 7 February 2022.

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<tbody>
<tr>
<td><strong>Committee responsible:</strong> Industry, Research and Energy (ITRE)</td>
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<td><strong>Rapporteur:</strong> Jens Geier (S&amp;D, Germany)</td>
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<td><strong>Shadow rapporteurs:</strong> Jerzy Buzek (EPP, Poland)</td>
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<td>Claudia Gamon (Renew, Austria)</td>
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<td><strong>Next steps expected:</strong> Publication of draft report</td>
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</tbody>
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Introduction

On 15 December 2021, the European Commission adopted a **hydrogen and decarbonised gas markets package**, consisting of three major legislative proposals: a **recast regulation** on EU gas and hydrogen markets; a **recast directive** on EU gas and hydrogen markets (the subject of this briefing); and an entirely **new regulation** to reduce methane emissions in the EU energy sector. These proposals aim at transforming the legislative framework for EU gas markets, which has changed little since the third energy package was adopted in 2009. They are broadly consistent with earlier **legislative changes to EU electricity market design in 2019** (introduced as part of the clean energy package in 2016). For gas markets, the proposed changes would focus on boosting production and storage of hydrogen and renewable gases, and facilitate their integration in existing or new gas networks. The hydrogen and decarbonised gas package aims to support the European Green Deal and help to fulfil the growing climate ambitions of the EU, which will eventually require a thorough decarbonisation of the whole energy sector.

Existing situation

**Directive 2009/73/EC** concerning common rules for the internal market in natural gas is a core part of the **third energy package** (2009), which sets out the main single market rules for the functioning of EU gas and electricity networks. These include the unbundling of transmission system operators (TSOs) and distribution system operators (DSOs); independent regulatory authorities; transparent costs and tariffs for third-party access to energy networks; cross-border cooperation; the creation of the EU-level Agency for the Cooperation of Energy Regulators (ACER); and enhanced rights for European energy consumers. The third energy package affirms the important role of the European Network for Transmission System Operators for Electricity (ENTSO-E) and the European Network for Transmission System Operators for Gas (ENTSOG), which are responsible for network planning, mapping investment needs, helping to monitor the single market and its security of supply, drafting network codes,1 and developing standards for interoperability between national systems.

The 2009 Gas Directive is intimately linked to **Regulation (EC) 715/2009** on conditions for access to the natural gas transmission networks, and together they constitute the core rules for the EU gas market. They are complemented by other EU legislation affecting gas markets, notably **Regulation (EU) 2017/1938** on security of gas supply. In 2019, the electricity legislation in the third energy package was overhauled as part of a collective EU effort to modernise electricity grids, improve cross-border networks, involve citizens more actively in energy markets as both producers and consumers (‘prosumers’), and incorporate a high and growing share of renewables in the EU electricity system. In contrast, the gas legislation in the third energy package has changed little over the past decade. The most notable amendment has been a targeted revision of the Gas Directive in 2019, which expanded its scope to cover pipelines between the EU and third countries. Both the Gas Directive and the Gas Regulation are still largely concentrated on the functioning of networks for natural gas. They have rather less to say about the promotion of renewable and low carbon gases, or the potential creation of EU-wide hydrogen networks.

The **European Climate Law** of 30 June 2021 enshrines two important binding climate targets in EU law. Firstly, the EU must reduce its net greenhouse gas (GHG) emissions by 55 % in 2030 (compared to 1990 levels). Secondly, the EU must achieve climate neutrality (net zero GHG emissions) by 2050. These goals form the centrepiece of the **European Green Deal** pursued by the von der Leyen Commission, and their realisation will require closely aligned and cross-sectoral efforts in the EU and its Member States. The **EU hydrogen strategy** aims to maximise the benefits of this energy carrier, which can be produced from clean and renewable energy sources (‘green hydrogen’), and which has great potential for decarbonising ‘hard to abate’ sectors and for energy storage. The **EU energy system integration strategy** and the **EU offshore renewable energy strategy** both emphasise sectoral coupling and envisage a key future role for hydrogen production and storage.
Parliament's starting position

In its resolution of 15 January 2020 on the European Green Deal, Parliament 'stresses the need to ensure that the use of energy sources such as natural gas is only of a transitional nature, considering the objective of achieving climate neutrality by 2050 at the latest'. The resolution also supports the deployment of 'green hydrogen' and 'sustainable energy storage'.

In its own-initiative resolution of 10 July 2020 on a comprehensive European approach to energy storage, Parliament places considerable hope in hydrogen storage, but also notes that green hydrogen is not yet competitive, due to high production costs, even compared to blue hydrogen produced from natural gas with carbon capture and storage. Parliament emphasises the importance of retrofitting gas infrastructure and creating new infrastructure to support green hydrogen, as well as ensuring common EU standards are set for blending hydrogen with natural gas. Parliament wants to ensure that EU gas market rules are adapted in a way that allows TSOs and DSOs to transport low carbon gases (hydrogen, synthetic methane, biomethane) as a regulated activity.

In its own-initiative resolution of 19 May 2021 on a European strategy for hydrogen, Parliament strongly supports green hydrogen as the long-term solution for climate neutrality and backs phasing out fossil-based hydrogen as soon as possible. However, Parliament also acknowledges the need to lower the costs of green hydrogen and make it competitive with other energy sources. To ramp up hydrogen production levels to meet decarbonisation goals, 'regulatory barriers need to be overcome and a coherent, integrated and comprehensive regulatory framework for a hydrogen market should be swiftly proposed by the Commission', while the EU gas market design could 'serve as basis and example for the regulation of the hydrogen market'.

In its own-initiative resolution of 19 May 2021 on a European strategy for energy system integration, Parliament stresses that building a renewable hydrogen supply chain in Europe is a priority, including the need to develop hydrogen storage capacity. In light of the need to achieve climate neutrality by 2050, Parliament stresses that natural gas should only be a transitional fuel.

European Council starting position

On 10-11 December 2020, the European Council agreed to reduce net greenhouse gas emissions by at least 55% by 2030 (compared to 1990 levels) – a target EU Member States should meet collectively – and committed the EU to achieving climate neutrality by 2050.

On 24-25 May 2021, the European Council asked the Commission to put forward a package of climate and energy legislation to meet the above goals, and welcomed the co-legislators' agreement on the European Climate Law that enshrines these 2030 and 2050 targets in EU law.

Preparation of the proposal

The Commission published a detailed impact assessment (IA) to accompany its legislative proposals to revise the existing EU legislation on gas markets. At the same time, it published an evaluation report of the 2009 gas package. The IA and the evaluation report come to the similar conclusion that revisions to the EU gas framework are necessary to take account of both significant market changes over the past decade and the growing need to decarbonise our energy systems. The IA includes the findings of an online public consultation (26 March-18 June 2021), which received a total of 263 responses, mostly in favour of reforming and modernising the EU gas framework. Almost half of the responses came from companies or business organisations, while just under a third came from business associations, with a much smaller contribution from non-governmental organisations and other bodies. This was complemented by specialised stakeholder consultations and workshops. The IA received a 'positive opinion with reservations' from the Regulatory Scrutiny Board on 17 September 2021.

In relation to hydrogen, DG Energy sponsored an external study to assist the Commission’s impact assessment in designing a regulatory framework for hydrogen (December 2021), a related METIS study on the costs and benefits of a pan-European hydrogen infrastructure (December 2021), and an ASSET study on Hydrogen generation in Europe: Overview of costs and key benefits (May 2021).

The European Parliamentary Research Service published an implementation appraisal of the Third Gas Package in December 2021, and will publish an initial appraisal of the Commission’s impact assessment in due course.

The changes the proposal would bring

The legislative proposal for a recast EU Gas Directive consists of 11 chapters (including final provisions), comprising 90 articles. The legal basis for this legislative proposal is Article 194 TFEU, which provides the EU with specific competences in the energy field.

Chapter 1 sets out the subject matter, scope and definitions. This includes EU definitions of what constitutes a renewable or low carbon gas, alongside an EU definition of natural gas. The chapter contains several new definitions that are relevant to the functioning of hydrogen markets.

Chapter 2 sets out general rules for the organisation of gas and hydrogen markets, by refining existing provisions on market access, in particular the free choice of supplier, market-based pricing, public service obligations, and the promotion of regional cooperation. It also includes new provisions on the sustainability and certification of renewable and low-carbon gases.

Chapter 3 builds on existing rights for natural gas consumers, and extends these to cover hydrogen and renewable gases. These include basic contractual rights, switching rights and fees, smart metering, comparison tools, data management, single points of contact, right to out-of-court dispute settlement, and protection of vulnerable customers. In addition, the chapter includes new provisions to support active customers and facilitate citizen energy communities.

Chapter 4 refines existing rules on third-party access to natural gas infrastructure, as well as refusal of access and connection, and extends their scope to cover hydrogen networks and terminals.

Chapter 5 slightly refines existing rules applicable to transmission, storage and system operators of natural gas. Chapter 6 does the same for the rules applicable to gas distribution system operators.

Chapter 7 sets out entirely new rules applicable to future hydrogen network, storage and terminal operators, as well as hydrogen interconnectors with third countries. This chapter also establishes new provisions that will apply to existing and/or geographically confined hydrogen networks within the EU, and imposes certain confidentiality obligations on hydrogen operators.

Chapter 8 refines existing rules on integrated network planning for gas markets, and fully extends their scope to cover hydrogen markets.

Chapter 9 refines existing rules on the unbundling and certification of transmission system operators, and fully extends their scope to cover the unbundling and certification of hydrogen system operators.

Chapter 10 slightly refines existing rules on the designation and independence of regulatory authorities, including their duties and powers, as well as the regime for cross-border issues.

Chapter 11 envisages that most existing derogations (i.e. those allowed under the 2009 Gas Directive) must expire by the end of 2025, although new derogations are possible under the recast
EU directive on gas and hydrogen networks

directive. Pipelines with third countries could continue to have longer derogation periods (up to 20 years), in line with the changes introduced in the 2019 targeted revision of the Gas Directive.

Advisory committees

The European Economic and Social Committee (EESC) and the European Committee of the Regions (CoR) are being consulted on this proposal and may adopt an opinion in due course.

National parliaments

National parliaments are being consulted on this proposal and have the opportunity to submit reasoned opinions on the grounds of subsidiarity before the deadline of 14 April 2022.

Stakeholder views

Eurogas, an association which represents gas producers and distributors at EU level, welcomes the gas package in its press release but also calls for more ambition. It advocates a 20% reduction in GHG emissions from gas consumption and an 11% share of renewable gases by 2030, while 'gas and electricity planning should be closely integrated to make the most of these potential gains'.

Gas Infrastructure Europe (GiE), which represents gas infrastructure operators at EU level, welcomes the Commission's proposal but also has some recommendations for improvements. Gas infrastructure operators should be allowed to participate in decarbonisation activities by supporting innovative technology facilities (including power-to-gas-facilities).

Representing services of general interest, SGI Europe welcomes the Commission's proposal but maintains it should go further towards 'recognising fossil gas as a stepping stone towards the elimination of coal and as a transitional and flexible solution to introduce renewables'. SGI Europe would also want all low carbon and renewable fuels to be placed on a level playing field.

The European consumers association, BEUC, criticises the emphasis on hydrogen. BEUC claims its research shows that hydrogen is the most expensive solution for consumers in terms of renewable heating. Furthermore, BEUC is concerned that the recast directive and regulation would oblige consumers to pay for hydrogen networks (through their gas bills), even if they never use them.

Environmental associations are very critical of the Commission's proposal. A joint letter to the European Commission from Greenpeace and other environmental associations calls for a complete fossil gas phase out by 2035, rather than continued support for 'low carbon' gases. The latter should be strictly defined and treated less favourably than renewable gases. The letter supports much greater scientific oversight of gas and hydrogen networks, together with the 'horizontal unbundling' of gas and hydrogen network operators to avoid conflicts of interest. It is also critical of blending hydrogen and natural gas, which it simply does not view as a solution.

Friends of the Earth is very critical of the Commission's proposals, which 'continue to facilitate the privileged position of the gas industry', by not phasing out the use of fossil gas by 2030 and by promoting a mass hydrogen rollout that justifies continued use of fossil gas to power it.

The European Environmental Bureau (EEB) suggests that the Commission's proposal is 'a Christmas gift' to the fossil fuel industry. EEB is favourably disposed towards renewable hydrogen but is highly critical about provisions for 'low carbon' gases and any blending with fossil gas.

Legislative process

The file has been referred to the Committee on Industry, Research and Energy (ITRE), which appointed Jens Geier (S&D, Germany) as rapporteur on 7 February 2022. The rapporteur is tasked with delivering a draft report for the ITRE committee.
EUROPEAN PARLIAMENT SUPPORTING ANALYSIS


OTHER SOURCES:
Gas and hydrogen markets directive (common rules), Legislative Observatory (OEIL), European Parliament.

ENDNOTES

1 Network codes are the rules designed by ENTSOG to facilitate the harmonisation, integration and efficiency of the cross-border European gas market. Network codes for the European electricity market are set by ENTSO-E.

2 Citizen Energy Communities (CECs) support the self-production and potential sale of renewable energy to the grid. The 2019 Electricity Directive developed a definition of CECs at EU level and encouraged their development across the EU (see 2019 CEER report). The recast Gas Directive would support similar CECs for gas and hydrogen markets.

3 This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under 'European Parliament supporting analysis'.

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First edition. The 'EU Legislation in Progress' briefings are updated at key stages throughout the legislative procedure.