

Cefic Views on the Commission Proposal Amending the Gas Directive & Gas Regulation

Cefic welcomes the Commission ambition to develop both a competitive hydrogen market and a renewable and low-carbon gas market in the EU.

To achieve the broader Union objective of climate-neutrality by 2050, large volumes of competitively priced renewable & low-carbon energy and feedstock are an essential pre-condition, working in conjunction with an enabling regulatory framework and the deployment of breakthrough technologies.

The chemical sector is at the very heart of making this transition happen: we provide essential technologies and materials to consumers and industries alike. Our own demand for renewable & low-carbon energy and feedstocks will continue to increase as we advance on the ambitious path to transform our processes.

As part of that transition, Cefic is pleased to facilitate the organisation of the roundtable on clean hydrogen in industrial applications of the European Clean Hydrogen Alliance. Together with members that are part of this and related roundtables, the chemical industry has presented a sizeable number of projects aimed at producing renewable & low-carbon hydrogen.

Accelerating these trends will require an ambitious industrial policy that creates the enabling framework that is needed for the transformation of Europe's industrial base. We view setting market-centric regulatory guidelines for gaseous energies and feedstocks as a key component in such an industrial policy. This should include rolling-out access to renewable & low-carbon gases in a technology-neutral manner, whilst ensuring unhindered access to competitively priced, high-purity energies and feedstocks.

In the context of the EU's proposal for hydrogen and decarbonised gas markets reform, we would hence like to put forward a number of recommendations, focusing on the following key issues:

- [Gas Quality Must be Maintained in the Scale-up of the Hydrogen Production & Supply](#)
- [Hydrogen Purity Levels must be Ensured in the Ramp up of the Hydrogen Market](#)
- [Definition & Certification of Low-carbon Hydrogen should be Predictable and Workable](#)
- [Regulation of Gases needs to Remain Market-centric, Cost-reflective and Transparent](#)

1. Gas Quality Must be Maintained in the Scale-up of Hydrogen Production & Supply

While we appreciate the intention of the Commission to kick-start the hydrogen economy, the proposed blending cap for hydrogen at natural gas interconnection points presents a **considerable challenge from a feedstock quality perspective** (Gas Regulation, Art. 20). For the chemical sector in particular, high-purity natural gas is essential as feedstock for optimal operations and to avoid damage to the underlying assets (requires >98% methane purity by volume)¹. Failure to ensure these levels of purity would require **costly adaptations** to industrial installations, raising the **societal costs** of the transition and undercutting the chemical sector's competitiveness.²

More generally, gas quality needs **vary considerably between consumer groups** and use-cases (heating vs. feedstock use)³. These differences cannot be addressed adequately through a **top-down approach to hydrogen blending**. Instead, Transmission System Operators (TSOs) should be free to reject gas transmissions at cross-border interconnection points on the basis of quality concerns, irrespective of the percentage of blended hydrogen. In that decision, the varying gas quality requirements of different consumer groups should be taken into account.

- Provisions on the **blending cap should be deleted** (Gas Regulation, Art. 20).
- TSOs should be free to reject gas transmissions at cross-border interconnection points **on the basis of quality concerns**, irrespective of the percentage of blended hydrogen (Gas Regulation, Art. 20). No blending cap should limit this essential quality safeguard.

If implemented, possible fluctuations in gas quality resulting from hydrogen blending present considerable commercial and regulatory challenges:

- **Commercial Issues:** Blending may precipitate that the contracted composition of gases varies from the actual composition of delivered volumes. The differences in energy content⁴ and sensitivities of industrial assets to fluctuating purity levels create operational and commercial uncertainty for both end-users and suppliers.
- **Safety Issues:** In some chemical processes, such as Methane Chlorination, high levels of gas purity are particularly important for maintaining safety standards. Shares of blended hydrogen that could react with chlorine would undermine those safety standards, particularly if the delivered shares vary and hence make technical adaptations more challenging.
- **Regulatory Compliance:** Compliance with EU environmental regulation is linked to physical emission levels measured at the plant (EU Emissions Trading System, Industrial Emissions Directive). Variations in gas composition at the exit point from contracted volumes would undermine monitoring, verification and reporting measures.
- **End-use Needs:** If the delivered share of hydrogen in gas supply does not match the respective end-use needs, energy intensive deblending is necessary. It is unclear how the deblended volumes of hydrogen would be further utilised, without incurring additional costs.

Should individual Member States pursue hydrogen blending measures irrespective of these challenges, the Gas Package needs to foresee **safeguards in gas trading rules** and **transparency requirements for network operators**. If introduced, these blending measures should remain stable over time so as not to further exacerbate the aforementioned concerns.

¹ Technical Note on Hydrogen Blending & De-Blending in the Chemical Sector (2022)

² [Fraunhofer Institut \(2022\)](#): Estimate for additional costs only for industry for 0-10% blending: CAPEX 14-188 million €/y; OPEX: 381-1733 million €/y

³ See graph in Annex I

⁴ Hydrogen has only around 34% the energy content of natural gas by volume

- Gas exchanges within virtual trading points need to **reflect and maintain gas quality** and - composition to facilitate compliance with EU environmental legislation (Gas Regulation, Art. 5).
- Network operators should be required to **publish information on gas quality**, gas odourisation and gas pressure requirements in a timely manner to accurately reflect fluctuations in gas composition (Gas Directive, Art. 9).

The scarcity of hydrogen volumes, at least in the short term, also necessitate its target use for efficient emissions reductions in the EU economy. Its decentralised distribution for low-grade heating is not one of those use cases. Instead, it would increase competition for these gases – to the detriment of the transition to climate neutrality for hard-to-abate sectors.

If nevertheless hydrogen blending would be envisaged, then this would rather have to be imagined at the downstream lower pressure distribution grids e.g. to enable a local small hydrogen production (e.g. small electrolyser) to blend its locally produced hydrogen into the grid, in absence of a local hydrogen consumer.

2. Hydrogen Purity Levels must be Ensured in the Ramp up of the Hydrogen Market

While the chemical industry can utilise **hydrogen** both **for feedstock** and energy purposes, it is the former that dominates today's operations. Here, high-purity hydrogen, just like high-purity natural gas, is essential. On the path to climate neutrality the importance of hydrogen for our sector, both as energy and as a feedstock, is expected to increase notably.⁵

Throughout the scale-up of dedicated hydrogen infrastructure and supply, hydrogen network operators will have to play a key role in **ensuring hydrogen purity levels**. The proposal for a recast of the Gas Directive insufficiently addresses this concern, by leaving the decision whether hydrogen network operators will be responsible for managing hydrogen quality to the respective regulatory authority. This threatens to **fragment the very nascent hydrogen market** in the EU even further, by undermining hydrogen uptake due to quality concerns.

- Hydrogen network operators should be required to **ensure stable hydrogen quality** at the exit point (Gas Directive Art. 46).

As a matter of principle, we view competitive markets as the most straightforward pathway to an efficient roll-out of hydrogen volumes and infrastructure. However, it is essential that **the unbundling of existing networks** and the establishment of a **third-party access (TPA)** regime does **not erode the high level of hydrogen quality** industrial users rely on (Gas Directive, Art. 47).

- **Third-party access** to dedicated hydrogen infrastructure should **not undermine hydrogen quality** at the exist point (Gas Directive, Art. 31-33).
- Differences in **gas & hydrogen quality**, based on published standards, should be recognised as a **basis for refusals of access** to the respective network (Gas Directive, Art. 34).
- **Gas and hydrogen quality standards**, including odourisation requirements, **should be harmonised** at EU level (Gas Directive, Art. 46 & 72) and clear guidance be provided on gas & hydrogen safety standards (Gas Directive, Art. 9).

As an essential part of the chemical sector's transition, we welcome provisions aimed at facilitating the scale-up of hydrogen use in industry. **Avoiding administrative burdens on geographically confined networks** is especially important for maintaining the efficiency of existing integrated industrial clusters and

⁵ [FCH JU: Hydrogen Roadmap](#)

incentivising the utilisation of on-site production of hydrogen, for instance as a by-product in steam cracking or chlor-alkali processes (Gas Directive, Art. 48) to reinforce industrial clusters.

- Avoid undue regulatory burdens by strengthening **regulatory exemptions for geographically confined hydrogen networks** (Gas Directive, Art. 48). This should be done by applying to them also the exemptions currently applied to closed distribution networks for natural gas, for instance regarding exemptions around third-party access rules (Gas Directive, Art. 31). These derogations should only expire when the exempted network becomes connected to another hydrogen network.

3. Definition & Certification of Low-carbon Hydrogen should be Predictable and Workable

The absence of a **common certification** methodology for **low-carbon hydrogen** until at least the end of 2024 delays important investment decisions and risks uneven implementation of certification schemes across the single market (Gas Directive, Art. 8). These delays are detrimental not just to the roll-out of low-carbon hydrogen itself, but through its **support for the up-take of renewable & low-carbon fuels**, also delays their roll-out.

Reaching the objective of climate-neutrality by 2050 will require the cost-efficient deployment of all renewable and low-carbon solutions in a **holistic, technology-neutral manner**.⁶

To accelerate the deployment of low-carbon hydrogen, the Gas Directive needs to provide **regulatory guidance** by defining a common methodology for low-carbon hydrogen certification.

This methodology should set **clear, absolute thresholds in greenhouse gas (GHG) savings** for low-carbon hydrogen and be coherent with **existing certification guidelines** for other types of renewable fuels and **existing guarantee of origin schemes** (RED II, Art. 29, 30).

- **We recommend** defining a common certification methodology for low-carbon fuels, including low-carbon hydrogen, in the Gas Directive (Gas Directive, Art. 8). This includes setting an absolute GHG savings threshold in the interest of regulatory certainty.
- **We recommend** applying any respective GHG reduction target to a benchmark that is reflective of existing hydrogen production methods and is stable over time.

Similarly, any new certification scheme should avoid to undercut on-going investments in low-carbon hydrogen, to maintain investment confidence.

- **Early movers in low-carbon hydrogen** investments should not be unduly punished in case of changing legislative requirements.

4. Regulation of Gases needs to Remain Market-centric, Cost-reflective, and Transparent

As a matter of principle, we view competitive, market-centric approaches as the most cost-effective framework for facilitating the transition to climate-neutrality.

Unbundling Rules

To promote proper market functioning in the gas package, we recommend that the unbundling of gas and hydrogen enterprises be conducted in a way that aims to minimise costs to consumers and increases cost

⁶ [ECH2A Project Pipeline](#)

transparency (Gas Directive, Art. 54 & 56, Art. 62-62). Unbundling rules should not create barriers to the re-purposing of assets to lower the overall cost of the transition.

- While the re-purposing of assets should be considered to reduce the overall cost of the transition, **cross-subsidisation** between networks and consumer groups **should be avoided** (Gas Directive, Art. 4). Any **re-purposing** should happen in a transparent and cost-effective way that fairly values the respective assets.

Natural gas phase-out

As part of the transition towards climate-neutrality, the gas market framework should also contribute to gradually **phase-out unabated natural gas**. To this end, the phase-out should be **market-driven** and not undermine **investments in CCUS and low-carbon hydrogen projects**, which rely on long-term natural gas supply contracts.

Guarantees of Origin

To establish a well-functioning market for renewable & low-carbon natural gas, these gases should be **tradable virtually** through a **common guarantee of origin (GO)** system that is separate from the physical delivery of those molecules. For this, the GO system needs to be extended to reflect information on the GHG emissions associated with the underlying gas. The certification of gases should not affect the well-established GHG accounting rules under EU environmental legislation.

- Establish a **book & claim system** for renewable & low-carbon gases through tradable guarantees of origin.

Tariffs Rules

While supportive of the scale-up of low-carbon and renewable gases, we recommend that there are no **tariff discounts** included in the proposal for the Gas Regulation based on the underlying technologies or origins of gases. Instead, fiscal support to low-carbon and renewable gases should be promoted under designated EU legislation, such as the Energy Taxation Directive.

- Any tariff discounts should be **non-discriminatory** and based on the principle of cost reflectiveness and transparency (Gas Regulation, Art. 15).

Gas Storage

Recent events have demonstrated the **importance of addressing the security of supply**, amongst others, through gas storages. To that end, we understand the EU Commission's ambition to improve security of supply through a common legislative framework on gas storages and invite Member States to apply **filling obligations** in a way that **minimises costs to consumers** and **maintains the proper functioning of gas markets**.

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About Cefic
Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.1 million jobs and account for 15% of world chemicals production.

Annex I Overview of Technical Limits to Hydrogen Blending in Existing Infrastructure and End-Uses

