

# Hydrogen and Gas markets Decarbonisation Package

Combined evaluation roadmap/Inception Impact Assessment

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**Elettricità Futura**  
March 2021



Elettricità Futura welcomes the development of a Hydrogen and Gas markets Decarbonisation Package.

Direct electrification is a viable and efficient solution to decarbonize a large part of the energy demand, while hydrogen can play a significant role in specific hard to abate sectors. Other green gases and biofuels can also be part of a decarbonized energy mix.

Likewise, the new EU gas package should define a legal and regulatory framework that caters for the emergence of a European hydrogen market grounded on a shared understanding of its technological, industrial and economic context. Following a gradual approach, the EU strategy for hydrogen can ensure level playing field and competition as a compass and envisage a "preparatory phase" that focuses on research, pilot projects and regulatory sandboxes.

As other gas intensive industries, the paper one is efficiency oriented, equipped with CHP systems and ready to integrate some hydrogen (5-10%). To this regard we remark that an inclusive energy transition must safeguard assets' value as well as competitiveness of virtuous industrial consumers.

Considering hydrogen production costs, availability and decarbonization potential, it should be first considered to foster green hydrogen production at or near the site of use. Whereas injecting hydrogen into natural gas networks could stimulate a market off-take, such application results less efficient than others, more focussed on hard to abate sectors. In addition, while hydrogen and synthetic gases will need time to disclose their potential, biomethane can offer, in some circumstances, an immediate alternative to natural gas. Once established a system of guarantees of origin, virtual PPA-gas could allow the virtual transaction of significant amount of clean gas.

Renewable and low carbon gases should be qualified depending on production process and associated GHG emissions. The imported gas should also be included in a suitable classification, mirroring the import of renewable electricity.

Network planning should be carried out in a cross-sectoral perspective and based on cost-benefit analysis, pursuing the realization of a sustainable and efficient infrastructure at the minimum social cost. The regulatory framework should build on the key principles of unbundling, third party access and independent authorities should refer to them to correctly evaluate the development plans.

Regarding the development of gas distribution and transport networks, sustainability criteria should be enforced, according to the proposal for TEN-E regulation, while the Energy Efficiency first principle should lead any project.

The development of a hydrogen network will probably start at decentralized level, to link the industrial users, and gradually expand, driven by market forces. In a scenario of increasing transport need, retrofitting existing gas networks is preferable to realising new networks. In fact, the first option can extend the life span of infrastructures, limiting stranded assets. The unbundling principle should anyhow be respected to avoid cross-subsidies.

An integrated approach to network planning is crucial. Given the significant investment costs associated to both retrofitted and new networks, alternative solutions - such as using existing and/or new electricity transmission assets and promoting hydrogen valleys - must be carefully evaluated. An increasing deployment of electrolysers (up to 40 GW by 2030 according to the EC hydrogen strategy) will make gas, hydrogen and electricity networks more and more inter-dependent. Leaving room to the market actors and promoting competitiveness will lead to an efficient system integration, where hydrogen will be a wholesale product. Electrolysers should be considered as gas injection sources (in general terms, this should apply to every source of hydrogen or other gases), connecting gas and electricity markets. Their connection requirements and their role in the electricity markets should thus be properly defined, by amending Directive 2019/944 and Regulation 2019/943. Tariff frameworks should also be designed to minimize cross-sectoral distortions.

According to the unbundling principle, the gas transportation must be kept apart from the market activities. Gas TSOs should interact with electrolysers and other gas sources in the same way electricity TSOs' interact with generating units or e-storage facilities. In fact, gas TSOs are monopoly entities and their investment costs are socialized across network users, without any competitive pressure.

Universal blending standards for renewable and decarbonized gas can enable cross-border exchanges, with positive effects on competition and thus on pricing. Suitable metering standards for blended gas (renewable and fossil) should be set considering their different calorific values.

Finally, it would be useful to consider the role of gas in enabling and supporting the transition to climate neutrality, and thus improving regulation. A full harmonization of the main rules is an important objective to pursue in order to: (i) make the market more liquid and increase the competition level, (ii) prevent the risk of decommissioning for those pipelines facing low demand, but that are nonetheless necessary both for the EU Security of Supply and for preserving an effective competition on the market. (iii) make GNL price signals more evident on the market, regardless of the terminal location.



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