



Gas Infrastructure Europe


GIE Position Paper on the Regulation of Hydrogen Infrastructure

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Intervention under Section 06.

(Cont'd: Regulatory Framework for pure hydrogen market and infrastructure)


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Benefits of the existing gas infrastructure

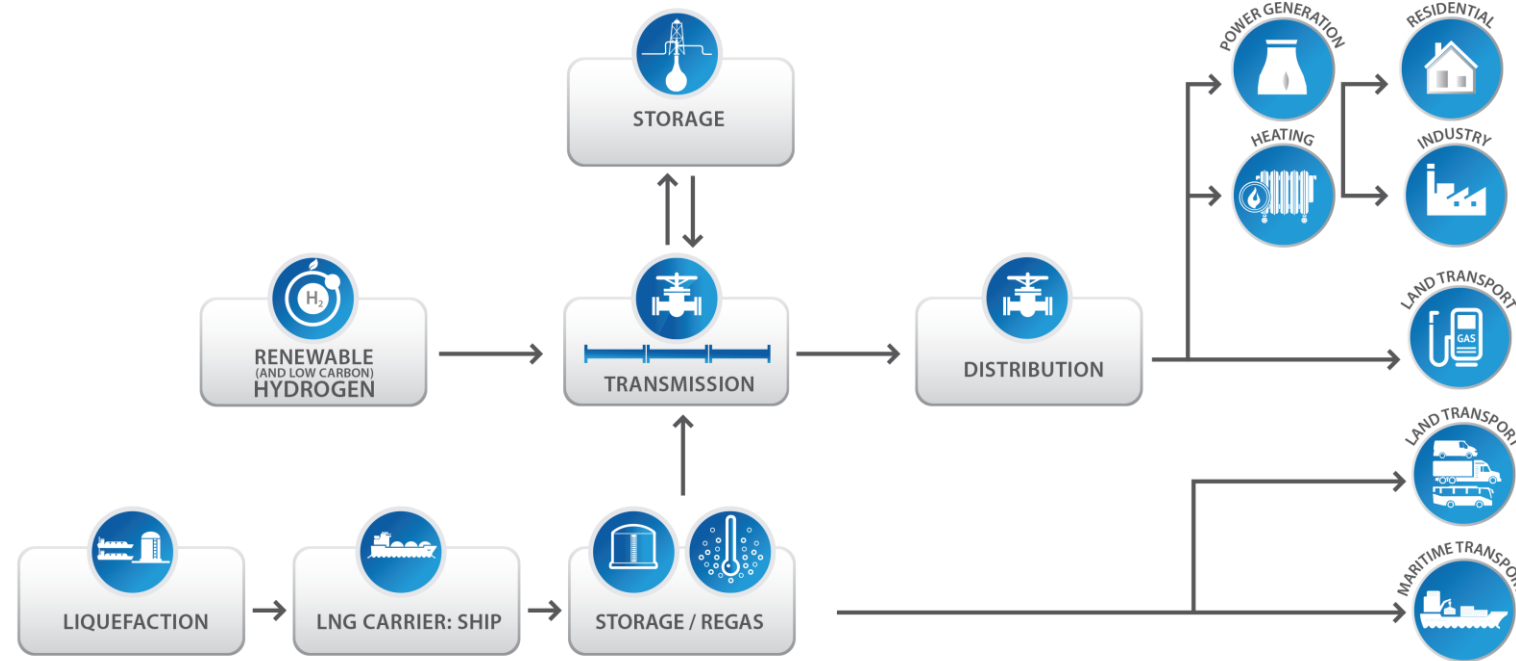


Elements of the regulatory environment



GIE policy recommendations

The uniqueness of this paper is the consideration of the entire gas infrastructure to transport, store and import hydrogen!



Hydrogen is THE topic right now. GIE contributes to the debate by providing perspectives from Transmission System Operators, Storage System Operators and LNG Terminal System Operators!

The gas infrastructure is able to follow different pathways for the integration of hydrogen:

Retrofitting

- Enables hydrogen to be blended into natural gas
- (De)blending to enable quick decarbonisation wins and scale-up of (de)centralised hydrogen production/technologies
- Cost-effective transitional solution in several EU countries

Repurposing

- Using existing gas infrastructure to transport, store and import and export 100% hydrogen
- Cost- and time savings
- Minimise need for new energy infrastructure

Building new infrastructure

- Connecting hydrogen supply and demand
- Infrastructure companies have the expertise to build, own and operate hydrogen infrastructure

Transmission Pipelines

- Single hydrogen pipeline can transport **10-20 times more energy** than an electricity cable¹
- Repurposing pipelines at **10-35% of costs** that would be required for newly built hydrogen pipeline²

Storage Sites

- Salt caverns, depleted fields and aquifers in the EU could already today have a theoretical potential of storing **60 TWh** hydrogen³
- Gas storages are at least **100 times cheaper** than electricity storage costs in batteries⁴

Terminals

- Retrofitting and repurposing LNG Terminals **at lower costs** (compared to investments into new terminals) that contribute to enable the **intra-EU trade** and **non-EU imports and exports of hydrogen and hydrogen carriers**

1)https://static1.squarespace.com/static/5d3f0387728026000121b2a2/t/5e85aa53179bb450f86a4efb/1585818266517/2020-04-01_Dii_Hydrogen_Studie2020_v13_SP.pdf

2)https://gasforclimate2050.eu/sdm_downloads/european-hydrogen-backbone/

3) <https://gie.eu/index.php/gie-publications/databases/storage-database>

4)https://static1.squarespace.com/static/5d3f0387728026000121b2a2/t/5e85aa53179bb450f86a4efb/1585818266517/2020-04-01_Dii_Hydrogen_Studie2020_v13_SP.pdf

An appropriate system to regulate the hydrogen infrastructure is needed in order to kick-start the hydrogen market and to achieve the targets of the EU Green Deal and the EU Hydrogen Strategy!

GIE calls for a coherent legislative framework with the existing EU Gas Legislation!

- Avoid inconsistent roles and responsibilities and definitions of regulatory principles to be set for the hydrogen market.
- **Leave Member States more flexibility** to apply the appropriate regulatory environment to scale up the national and regional hydrogen markets depending on the market developments.
- Acknowledge and enable the **crucial role of infrastructure operators** to contribute to the EU climate targets by being allowed to **retrofit, repurpose and newly build and consequently own and operate their infrastructure.**

GIE calls for a dynamic regulatory approach at European level!

- **Dynamic regulation** evolving with the market and infrastructure development stages
- Consider the basic principles of the regulation for electricity and natural gas **to be extended to the regulation of hydrogen** from the outset, including:
 - The principle of unbundling from vertically integrated activities
 - Third-Party-Access to the hydrogen infrastructure for all market users
 - Based on transparent and non-discriminatory access rules
 - Taking into account the specifics of regional hydrogen markets

GIE calls for a financial framework that guarantees support for infrastructure conversion and construction of new infrastructure!

- Accounting rules for gas and hydrogen infrastructure should **allow a transparent mutualisation of costs** between the different parts of the wider energy system – including gas and hydrogen infrastructure – to **ensure cost-reflective and stable tariffs for using the gas and hydrogen infrastructure in the long run** for the benefit of all energy users.
- Especially when scaling up a hydrogen infrastructure, a coordinated energy system and network planning between electricity, gas and hydrogen infrastructure should be the central mode for identifying the necessary infrastructure needs, **allowing for 'Member States' to choose on the right remuneration model at national level.**

GIE calls for a level-playing field for gas infrastructure operators to be central actors in the energy transition process.

- In fulfilling the current EU legislation, it is crucial that gas infrastructure operators, including TSOs, will be allowed to **participate in decarbonisation activities**, supporting the development of innovative technology facilities (including power-to-gas-facilities).
- Implementation of **national regulatory sandboxes** in the revised legislation may represent a first application to support innovative initiatives.

GIE looks forward to the debate and the exchange with all stakeholders on finding the most appropriate scheme for regulating the hydrogen infrastructure!