



Position

Towards a competitive hydrogen market

Joint proposal from associations to change the regulatory framework for hydrogen networks

**Association of Gas Transmission System Operators (FNB Gas)
Federation of German Industry (BDI)
Federal Association of the Energy and Water Industry (BDEW)
Association of the Industrial Energy and Power Industry (VIK)
Association of German Chambers of Industry and Commerce (DIHK)**

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Starting point needed for the development of a competitive hydrogen market

With its European Green Deal, the European Commission is setting new standards for a legally binding climate protection framework while seeking to make the EU largely climate-neutral. This will require a significant expansion of renewable energy production, a considerable expansion of the electricity grid, the expansion of hydrogen production capacities, the use of existing gas infrastructure, and an infrastructural coupling of all energy consumption sectors. As a carbon-free energy carrier and raw material, hydrogen will increasingly replace today's fossil fuels. In particular, it is indispensable for achieving climate neutrality in basic industries. With its National Hydrogen Strategy, the German government is looking to establish hydrogen as another grid-bound energy source in the future defossilised energy system.

Hydrogen can be used in all sectors, and it provides the basis for innovative power-to-x solutions. Given their large transmission and seasonal storage capacities, existing gas infrastructures will be available for hydrogen in the near future and will be used more extensively in the longer term for a future hydrogen economy.

Even if the development of a competitive European internal market for hydrogen still requires many political and legislative decisions to be made, e.g. on the market design, it is critical that the right fundamental decisions regarding the necessary infrastructure are taken today, as these projects have long lead times.

There is a broad industrial and energy policy consensus that the existing infrastructure needs to be prepared today in such a way that the transportation of pure hydrogen and its storage in particular can become a real option as soon as possible, at the latest by the middle of this decade. **Therefore, it is imperative that the legislative changes required for this to happen are introduced during this legislative period.** As in the successful liberalisation of the European electricity and gas markets at the beginning of the 21st century, the reliable, regulated provision of the necessary network infrastructure is a basic prerequisite for competitive market development.

This will require the following legal and regulatory changes:

- **Option to convert existing infrastructure to hydrogen**
The Federal Network Agency's legal view is that the wording of the German Energy Industry Act does not provide for the construction and operation of regulated pure hydrogen networks by transmission system operators. Therefore, the proven regulatory framework for the transportation of natural gas should be further developed so that it can also be applied to hydrogen. In particular, operators of transmission systems and gas storage facilities should be given the opportunity to convert their infrastructure from

natural gas to hydrogen. This would require the term "natural gas" in the definitions of the German Energy Industry Act to be replaced by the term "gas" for operators of transmission networks and gas storage facilities.

- **Technology-neutral definition for hydrogen**

In addition, the existing technology link, which refers specifically to hydrogen from electrolysis, would have to be removed and the transportation and storage of hydrogen, regardless of the type of its generation, be allowed instead. All that is needed is to remove the reference to the specific technology from the gas definition in the German Energy Industry Act.

- **Introduction of a definition for hydrogen networks**

A new definition for hydrogen networks and minor additions to the German Energy Industry Act and the Gas Network Access Ordinance should make it possible to operate pure hydrogen networks with a separate balancing regime.

- **Rules for network connections**

As a pure hydrogen network develops, it should become possible at the transmission level to prevent mixing of gases, i.e. hydrogen should only be fed into the hydrogen network and methane should only be fed into the methane network. This will ensure that customers are supplied with pure gases.

Feeding hydrogen into natural gas (transmission and distribution) networks can make economic sense, e.g. if parallel infrastructures are not economically feasible or if a hydrogen production plant is located in an area where there is no hydrogen network. As regards the establishment of network connections for blending hydrogen into existing natural gas pipeline systems, it should be ensured by appropriate provisions in the German Energy Industry Act and the German Gas Network Access Ordinance that blending is within the limits of the DVGW (Deutsche Vereinigung des Gas- und Wasserfaches e.V. - German Technical Association for Gas and Water) rules and that existing users of the natural gas network are not affected by this.

- **Interpretation rule for limited personal servitudes**

The conversion of existing natural gas pipelines to hydrogen should be facilitated by amending the German Energy Industry Act to include an interpretation rule for limited personal servitudes and for contractual permissions.

These first legislative amendments will be a starting point for the development of a competitive hydrogen market and provide planning and investment security to all market players. It will open up industrial policy perspectives and will help position Germany as a leading industrial nation even in a defossilised world. Further regulatory

changes based on these initial proposals will follow from the subsequent debate.

Existing local industrial hydrogen networks such as those operated by Air Liquide Deutschland GmbH or Linde AG do not readily lend themselves to being operated under the current entry-exit regime. For this reason, it is recommended that the current degrees of freedom be retained for the time being. This will protect companies and their legitimate expectations regarding infrastructure investments and existing contractual relationships.

Further statutory and regulatory policy adjustments in both European and German law, which are also essential for a well-functioning competitive hydrogen market, should be tackled in a second step without much delay. This also concerns the development of a fair competitive framework for existing and future forms of energy storage. Concrete proposals will be made in due course.

However, opportunities should also be provided to make it easier to define the details of the market model, which has proved its worth for natural gas, taking into account the needs of hydrogen customers. In this context, the "living labs of the energy transition" offer opportunities to test revised market models using digitisation and acknowledging the central objectives of regulation. The positive insights gained in this way can be transferred to the current market model for the benefit of customers.

Imprint

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