



GEODE position paper on the development of a European regulatory framework for renewable, decarbonised and low-carbon gases, including hydrogen

GEODE welcomes the European Commission's intention to propose a regulatory framework for hydrogen, decarbonised and renewable gas markets by the end of 2021. As a European association representing local gas and electricity distribution system operators (DSOs) across Europe, we know the challenges our members face in making their infrastructures climate resilient within the current regulatory framework. We will address the general issues in the following.

The decarbonisation of the European economy is one of the central challenges of our time. Today, we still need 80 percent fossil energy sources to cover our energy demand. Over the next three decades, we will have to phase out the use of these energy sources in order to meet international and European climate targets. However, without any doubt molecular energy sources such as hydrogen and renewable, decarbonised and low-carbon gases will continue to play a key role in the future energy mix, for example, in sectors that are difficult to electrify or as dispatchable power. Additionally, the gas grid is a highly valuable infrastructure when it comes to sector integration that entails a more energy- and cost-efficient decarbonisation than an electrification only approach. Thus, **the gas grid can actively support the electricity grid in keeping the network stable**, for instance, when the storage of fluctuating, renewable energies is facilitated through P2G solutions or through the use of the gas grid as a storage facility.

To ensure that sufficient hydrogen is available in time, a rapid market ramp-up for hydrogen technologies is necessary. As the hydrogen strategy for a climate-neutral Europe (COM(2020) 301 final) points out, a suitable infrastructure for linking supply and demand is a key prerequisite for such a market ramp-up. Facilitating the development of hydrogen networks will help ensure the potential for hydrogen is maximised across the energy system, rather than restricted to particular users through stand-alone projects. Fortunately, **we can rely on the existing European gas networks, which can be used or retrofitted for blending and/or repurposed for the transmission and distribution of pure hydrogen in the future – insofar as the regulatory framework allows for it.**

A hydrogen grid, which will certainly be built up successively on the basis of supply and demand, requires – as a natural monopoly – regulatory principles that ensure pluralistic competition in the future internal hydrogen market and which must already be applied today. In our view, the Gas Directive 2009/73/EC is a solid starting point for the regulation of the future gas market. The Gas Directive should be made more flexible for renewable, decarbonised and low-carbon gases, thus enabling a transformation of today's gas networks and their operators.

Such flexibility would enable current network operators to carry out a combined operation of methane and hydrogen networks in a single undertaking. This universal approach to a uniform regulation for all gases is clearly preferable to specific regulation of hydrogen networks. Today's network operators, who are looking for decarbonisation perspectives, have the necessary know-how, staff and assets to decisively facilitate the development of a hydrogen infrastructure, which is currently not possible due to the lack of a supporting regulatory framework.

The central barrier in today's regulation that GEODE would like to address is the exclusive focus of the Gas Directive on natural gas, while other gases, especially hydrogen, are only regulated if they are fed into a natural gas network. This makes the operation of pure hydrogen networks within the regulatory framework impossible. This could be made possible by integrating renewable gases into the gas



guideline on an equal basis.¹ **Established principles (role of TSOs/DSOs, third-party access, neutrality of network operation), which ensure competition in the gas network today, can thereby be easily extended to renewable gas networks.**

Of course, especially in the beginning, the developing hydrogen network should not be over-regulated as this would slow down the market ramp-up for hydrogen in general. Instead, dynamic regulations and temporary exemptions from regulatory principles for hydrogen networks should be established, allowing a stepwise transition for hydrogen networks to full regulation analogous to the expansion of the network.

This also includes, in particular, the treatment of existing private hydrogen networks, which can make a valuable contribution to the development of the hydrogen infrastructure at the beginning and can be exempted from regulation for a transitional period. After a defined sunset date, however, these should also be subject to the regulated network operation of the public hydrogen grid.

Temporary exemptions should also apply with regard to provisions on vertical and horizontal unbundling, because synergies between energy sources and value-added stages should be used more efficiently, especially with a view to the objectives of the EU strategy for energy system integration. However, this must also be seen in **the context of company size, which was overlooked in the European Commission's public consultation on the Hydrogen & Gas Markets Decarbonisation Package. Small local network operators in particular are usually vertically integrated companies for which decarbonisation should not be made unnecessarily difficult by strict unbundling rules.** Especially joint financing of hydrogen and natural gas networks should be allowed to give these companies opportunities to participate in the new decentralized energy system and achieve fast decarbonisation of the gas grid.

However, the joint financing in a universal regulation for natural gas and hydrogen networks is often dismissed due to concerns around alleged cross-subsidization of industrial hydrogen networks at the expense of gas residential customers. GEODE analysed this in-depth in a paper published in 2020², prior to the launch of the EU hydrogen strategy, and we found that in the first phase of market ramp-up, a limited number of industrial customers will use hydrogen in large-scale (e.g. steel making, chemical production processes and refineries). Those facilities may already be connected to the transmission network for natural gas or are customers of private-owned point-to-point hydrogen pipelines. The larger number of industries, however, is connected to distribution grids and contributes a significant share to network financing due to their high consumption volumes. These companies are likely to switch to hydrogen at an earlier stage to green their production, thereby significantly decreasing the user base in natural gas grids, while barely impacting the total costs of network operation.

In other words, **at distribution level, separately regulated and financed gas networks are contradictory in terms of customer protection.** Without transformation, residential customers (who lack alternatives), will bear all natural gas network costs – and these can be expected much earlier than 2045-50. The impact will be amplified by the shut-down preparations during the phase-out of fossil fuels. The costs from shortened write-off periods due to the decreased lifespan of gas infrastructure and the dismantling of gas pipes will turn into prohibitive network charges eventually.

¹ For TSOs Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks and regulation (EU) 2017/460 on establishing a network code on harmonised transmission tariff structures for gas (NC TAR) have to be aligned accordingly.

² BBH: Principles of the regulation of German hydrogen networks in the context of an adaptation of the European legal framework and the financing of hydrogen networks by integration into the legal framework of gas network regulation, Berlin, April 2020



On the other hand, the benefits of a dedicated hydrogen regulation remain uncertain. Overall a picture is drawn wherein two transmission systems exist - methane and hydrogen - while distribution networks connect to one or another or both to blend the gases (direct customers can choose as well). However, freedom of choice is an integral part of the universal approach, too. Furthermore, the universal approach enables operators – in addition to obvious advantages, such as the uncomplicated reallocation of assets – to respond to customers’ needs and transform the industry.

In summary, the separate regulation and financing of gas distribution networks leaves domestic customers with the liabilities of fossil fuels, whereas **the universal approach enables distribution networks to transform into hydrogen networks and maintain low costs.**

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