

Position Paper

on the EU KOM Inception Impact Assessment
Consultation

“Hydrogen and Gas Markets Decarbonisation
Package“

Berlin, 10th of March 2021

FNB Gas representing the German Gas TSOs welcomes the EU Commission's initiative to revise the existing gas market rules in a legislative "Hydrogen and Gas Markets Decarbonisation Package" with the aim of decarbonizing of Europe's energy demand. As gas TSOs, we are fully committed to the ambitious targets of the European Green Deal and the European Hydrogen Strategy and are eager to contribute to the energy transition by making use of our gas infrastructure.

Hydrogen will play a decisive role in Europe's future carbon-free energy system. It enables short-term and seasonal storage as well as efficient long-distance transport of volatile renewable energy from production areas to centers of demand. Hydrogen is not only an obvious solution for sectors which are hard to decarbonize, such as high heat industrial processes, mobility and the residential heating sector, but offers decarbonisation potential in numerous application forms. Multiple studies and intense political discussions in recent months and years have clearly shown the high potential of repurposing existing gas infrastructure for the transport of hydrogen. This core principle should be at the heart of the revision of the gas market rules with the aim of providing a stable and reliable regulatory framework that incentivizes investments in hydrogen technologies and infrastructure as soon as possible.

FNB Gas believes that the following key issues should be addressed by the EU Commission within this crucial legislative initiative:

Application of gas market rules to hydrogen

The regulatory framework for the gas and electricity markets has enabled and facilitated the evolution of a competitive, transparent and resilient internal market in Europe. It broke apart monopoly positions and empowered consumers by giving them the opportunity to choose their energy supplier based on individual needs and priorities. It is to be expected that the future hydrogen network will share very similar characteristics with the current gas network, namely large infrastructure systems connecting production and demand centers that represent natural monopolies which cannot be duplicated. Given that Europe wants to be carbon-neutral in less than 30 years from now, the ramp up of the hydrogen market needs to start as soon as possible and should benefit from the positive experiences gained in the gas

and electricity sector regulation in recent years. **We therefore believe that the regulatory principles for gas should also apply to the hydrogen market right from the start in order to give legal certainty to investors. These regulatory principles comprise unbundling of infrastructure from production, storage and trade, Third Party Access (TPA) to the system, non-discriminatory network charges and transparency on rules and procedures.** The regulatory framework for hydrogen is by nature strongly linked to the one of the gas systems. This is essential since the largest part of the future European hydrogen system will be based on repurposed gas infrastructure. **It is therefore logical that the most efficient way of ensuring regulatory and planning alignment between gas and hydrogen is to incorporate the regulatory framework for hydrogen within the gas legislation. This should be realized by broadening the scope of the Gas Directive and the Gas Regulation from natural gas to other kinds of gases including hydrogen.** Having a separate legislative act for hydrogen would provide the unavoidable risk of establishing legal and procedural conflicts for gas TSOs and other market participants, especially in the technical and administrative process of repurposing infrastructure to hydrogen and the underlying network planning process. These conflicts and uncertainties may again lead to unnecessary delays that risk reaching the ambitious decarbonisation targets. The development of a separate regulatory framework for hydrogen instead of the integration of hydrogen in the gas regulatory framework also bears the risk of delaying the start of a hydrogen economy due to the additional time required for implementation and application.

Today the hydrogen market is not at the same stage as the gas market was when the third energy package was introduced. Not all the detailed rules currently applied to the gas market may therefore be suitable for hydrogen for a transitional period, but they should in general provide the target framework also for hydrogen. While there is a need for basic provisions on elements such as balancing, capacity products and allocation mechanisms as well as interoperability between systems, such technical regulatory issues should allow for a certain degree of flexibility in order to address the changing market characteristics during the ramp up of the hydrogen market. To which extent these elements can be applied to hydrogen could be assessed in new or amended Network Codes, making use of the well accepted and proved system of the gas and electricity market.

Defining the role of gas TSOs

The EU Commission recognizes that in some Member States TSOs are not allowed to own, operate, and finance hydrogen infrastructure. This limitation is a clear barrier to realizing a European hydrogen system which should primarily be based on repurposed gas infrastructure. **It is therefore crucial that the European legislation for gas and hydrogen explicitly defines that certified gas TSOs are able and allowed to own, operate and finance hydrogen infrastructure (on- and offshore), be it repurposed from existing gas infrastructure or newly built. This principle should be valid for all gas TSOs irrespective of their applied unbundling model.**

As is currently the case for the operation of gas and electricity networks, TSOs should be enabled to operate gas and hydrogen networks within one organization as a combined network operator. This would facilitate efficient planning, financing, operation and maintenance of the infrastructure and ensures that the technical expertise of gas TSOs regarding the safe and secure operation of infrastructure can be effectively used for hydrogen transport.

Financing the hydrogen infrastructure

Europe has less than 30 years left to achieve the transition from fossil fuels to renewable energy source including large amounts of renewable and decarbonised hydrogen to be used in various application forms. The required hydrogen network will need to be developed soon and needs to be designed and constructed with a long-term view on future hydrogen demand in terms of transport capacity, location and timing. A liquid internal market for hydrogen will be established over the next years in relation to the growing demand. Therefore, hydrogen infrastructure projects will be planned according to the anticipated future demand with significant consequences regarding the financing of such projects at the time of their realization. For many initial hydrogen projects, network charges may either be prohibitively high for consumers, thus imposing a barrier from the consumption and production side, or the revenues realized by network operators could be too low to recover the investment costs, thus imposing a barrier from the transport side.

Governmental support mechanisms via European or national funds can mitigate the resulting gap in financing, however they can hardly bridge it completely. Infrastructure investments are usually depreciated over a period of more than 50 years and entail high operational costs. Financial support mechanisms cannot be planned in a reliable manner for such a long period of time. Furthermore, the hydrogen market is still in its very early stages of development with an unavoidable “chicken and egg” dilemma between unavailability of infrastructure and missing demand/supply. Infrastructure investments during this phase imply certain risks linked to the long-term predictability of the demand of anchor customers. It is our understanding that the EU Commission is very ambitious when it comes to hydrogen and wants concrete infrastructure projects to be realized soon, which is also reflected in EU initiatives such as the European Clean Hydrogen Alliance. To achieve this, it is essential that appropriate financing and tariffication arrangements are established for gas TSOs that ensure the recovery of investment costs within a regulatory framework.

The obvious solution to address this issue is to provide a legislative framework that enables the mutualisation of network costs for hydrogen and gas, resulting in a joint cost recovery mechanism for TSOs and combined network charges for the users of the gas and hydrogen systems. Such an approach would enable TSOs to invest into hydrogen infrastructure within the regulated framework and would be appropriate since many of today’s gas consumers will ultimately become consumers of hydrogen (industrial consumers and residential consumers) and will therefore benefit from the conversion of today’s gas infrastructure to hydrogen (e.g. by avoiding costly investments in a completely different heating technology). Furthermore, preventing climate change by shifting to renewable energy is a task for the society as a whole and therefore all energy consumers should contribute to the costs of the transition. A mutualisation of costs would facilitate and support the development of hydrogen infrastructure in the short and medium-term. In the long run however, it would also ensure that the remaining consumers of (natural) gas are not overburdened when gas demand declines and network costs are allocated to a decreasing number of network users.

It must be stressed that infrastructure investments will not materialise without appropriate financing regimes that ensure cost recovery for TSOs. A principle rejection of any form of cost base mutualization is not helpful and misses to provide workable alternatives to this approach.

In the end, policy-makers risk that delays follow and the hydrogen market stalls due to insufficient infrastructure.

Incentives for the use of renewable and decarbonised gases

As was the case for many renewable energy technologies in the electricity sector in the past, technologies to produce renewable hydrogen are not cost-competitive with fossil gases today. To enable the ramp-up of hydrogen, it is essential that the costs to produce renewable hydrogen decrease significantly within a short period of time. Incentive mechanisms that enable the production of large amounts of renewable hydrogen despite higher costs in the early phase can help to develop technologies to scale and thereby to reduce the production costs in the medium and long run.

We believe that a quota for the supply of gas to end consumers which requires suppliers to provide a pre-defined share of renewable and decarbonised gases (such as hydrogen) within their portfolio is an efficient and appropriate mechanism to incentivize the ramp up of the underlying technologies. The EU Commission should consider such an approach within their legislative package “Fit for 55”.

Network planning process

The future hydrogen infrastructure will mainly emerge out of the existing gas networks as being an economically efficient solution. Gas pipelines will gradually be repurposed for the exclusive transport of hydrogen. As a precondition for this, both pipeline systems need to be regarded as unity when it comes network planning procedures. Cross-border transport and the duties of supply for the natural gas market need to be guaranteed in parallel to the development of an internal market for hydrogen. A separate network planning process could massively hamper these two responsibilities TSOs facing in the upcoming years.

Therefore, we are convinced that only an integrated network planning process for hydrogen and gas infrastructure can lead to efficient solutions and synergies as well as guaranteeing security of supply in the energy market.

Technology-neutrality also for hydrogen

With carbon-neutrality being the ambition in the long-run, we believe that green hydrogen produced via electrolysis with renewable electricity will be by far the dominant type of hydrogen to be used in Europe in 2050 and beyond. During the transition phase, it is key to ramp up hydrogen demand as fast as possible in order to realise emissions savings quickly and to create a competitive internal market in Europe. Since green hydrogen is not competitive now and production capacities will be limited in the years to come, we believe that other forms of hydrogen production need to play a vital role to get the hydrogen market started. Decarbonised hydrogen **produced from natural gas via steam methane reforming and CCUS or pyrolysis can be available in large quantities within a rather short period of time and will help to achieve emissions reductions quickly. The European legislative framework for gas and hydrogen should be drafted with this principle in mind and should provide the required legal framework to facilitate respective technologies.**

As for the production technologies for hydrogen, we believe that politics should also not predetermine how hydrogen is used in the future. The legislative framework should rather be technology-neutral and provide a level playing field for all decarbonisation options in the individual sectors allowing the market to decide which is the most efficient solution respectively. **For hydrogen in specific, the EU Commission in its hydrogen strategy is overly focused on the use of hydrogen in the industrial and mobility sectors while the residential heating sector is hardly considered. We believe that this political predetermination is a mistake since the electrification of heating in existing buildings will reach its limits quickly, especially in urban areas.** Gas networks are often already in place in these areas and can provide gaseous energy directly into the households. Therefore, a holistic approach incorporating transmission and distribution networks is crucial. Also, hydrogen in CHP-plants is an option in regions where heat networks already exist. Renewable and decarbonised hydrogen can therefore play an important role in the heating sector as well and the legal framework provided now should not disincentivize such technologies.

About FNB Gas

Vereinigung der Fernleitungsnetzbetreiber Gas e. V. (FNB Gas) is the association of German transmission system operators, i.e. the operators of the major supra-regional and cross-border gas pipelines. The Association was established at the end of 2012 and has operated an office in Berlin since April 2013. One main focus of the Association's activities is the Network Development Plan Gas, which has been drawn up annually by the transmission system operators since 2012. Furthermore, the Association represents its members as a point of contact for politicians, media and the public.