

GET H2 Nukleus: Necessary political support

In order to advance hydrogen technologies along the entire value chain from production and transport to the usage in different sectors, in line with Germany's National Hydrogen Strategy, the following legal and regulatory adjustments are necessary in the short term.

1. Expansion of hydrogen generation capacities

Reduce charges and surcharges in the short term

State-induced electricity costs strongly counteract hydrogen production in electricity-intensive electrolyzers. This applies in particular to the German Renewable Energies Act (EEG) surcharge, which is the largest component of these costs in Germany. In order for green hydrogen to be produced in Germany at competitive costs, electrolyzers must be exempted from this charge. Although an exemption from the EEG charge was promised in the Federal Government's hydrogen strategy, its implementation is proving to be legally problematic. As an alternative, the Special Equalisation Scheme (Besondere Ausgleichsregelung – BesAR) of the EEG, which provides for a transfer reduction for power-intensive processes, can be designed in such a way that it can be used by electrolyzers in a legally secure way, thus providing them with sufficient investment security. This option, which has already been discussed many times, must now be implemented in the interests of the operators of electrolyzers.

We therefore call for:

- The production of hydrogen by means of electrolysis is to be explicitly included in Annex 4 EEG 2017 as an electricity cost-intensive sector under Section 64 EEG.¹ In this context, the feed-in to a pipeline network as well as a possible partial later use of the fed-in hydrogen for energy purposes may not prevent a limitation of the EEG levy pursuant to Article 64 (1) EEG (special equalisation scheme).
- In addition, it must be ensured that - analogous to the regulation for new railway suppliers - the corresponding approval of a levy reduction applies from the day of commissioning of the electrolyser and that this is already decided by BAFA when the investment decision is made on the basis of the planning documents. Currently, the BesAR approval procedure stipulates that the plant must first be built, then at worst be operated for up to 2 years and only for the following third year can approval for a levy reduction be applied for. The considerable burdens associated with this, especially in the first years of operation, and the uncertainty about the permit effectively prevent investments in the market ramp-up.
- In order to create legal certainty for the investment in the plant, the licence for a stock transfer reduction according to BesAR should apply from the beginning for the entire lifetime of the plant (approx. 10-15 years) instead of the current one-year period.

¹ The amendment of the list is possible at national level and does not require approval under state aid law, since according to the relevant legal opinion the EEG is not relevant to state aid either in terms of the pay-as-you-go mechanism or the exemption rules. See ECJ, judgement of 28 March 2019 – C 405/16 P.

Incentive program for „First Mover“

A market ramp-up of green hydrogen is also made more difficult by the fact that the strong learning curve effects to be expected bring major production cost disadvantages for the initial plants. These so-called "first-mover-disadvantages" must therefore be reduced/compensated by an incentive program for investments and operating costs of electrolysis plants. Models for this are, for example, Contract-For-Difference or the tendering procedure for green hydrogen proposed by the PtX Alliance, which is based on the successful tenders in the EEG. We welcome the indirect promotion of industrial electrolyzers mentioned in the hydrogen strategy through the planned support of hydrogen applications in the steel and chemical industry or the incentives for refineries, but these are far from sufficient for the development of a comprehensive domestic hydrogen economy.

The examination of tendering models for the production of green hydrogen for industry, as mentioned in the National Hydrogen Strategy, also leaves many questions unanswered. For example, it is not clear on the whole how "central" electrolyzers, which - as envisaged in the GET H2 Nukleus - can feed into a public hydrogen network and supply many (industrial) customers via this network, can be taken into account in the package of measures or how this business model can be in line with the envisaged support measures.

2. Expansion and conversion of the transport and storage infrastructure for hydrogen

In its National Hydrogen Strategy, the Federal Government rightly stated that Germany has a well-developed natural gas infrastructure and that this will play a major role in establishing a hydrogen economy in the future. In order for the development of the hydrogen economy to be successful in the near future, the measures must be made even more concrete and the necessary legal and regulatory adjustments, such as in the Energy Industry Act (EnWG) and the Gas Network Access Regulation (GasNZV), must be implemented. The five business and energy associations FNB Gas, BDI, BDEW, VIK and DIHK have already submitted corresponding proposals. In addition, on EU level, internal market rules should be amended accordingly to create a level-playing field and enable cross-border trading of hydrogen.

It is of central importance that the **possibility of converting parts of the existing natural gas infrastructure to the transport of hydrogen**, regardless of the source of the hydrogen, is created **before the end of this legislative period**. These changes are necessary in order to ensure the transport of hydrogen and thus to create investment security for hydrogen producers and consumers in pilot projects such as the GET H2 Nukleus. The **regulation of the fee structure for hydrogen networks can be decoupled from this issue in terms of time** and, if necessary, postponed to the next legislative period. In a first step, the network infrastructure should be financed by means of subsidies - as already announced by the Federal Government in the hydrogen strategy. In general, it should be noted that the grid fees can be calculated reliably for grid users. Under no circumstances should the network fees become an obstacle to investment.

Adapt regulatory framework Transport of gas for hydrogen

According to the legal opinion of the German Federal Network Agency, transmission system operators are not entitled to construct and operate regulated pure hydrogen networks due to the wording of the EnWG. Therefore, the proven regulatory framework for the transport of natural gas

must be further developed so that it can also be applied to hydrogen. In particular, the operators of transmission networks and gas storage facilities should be given the opportunity to convert their infrastructures from natural gas to hydrogen as part of their regulated asset base.

Furthermore, the current technology link, which defines only hydrogen from electrolysis as biogas to be included in a gas network, must be removed. Instead, network access, i.e. transport and storage, must be made possible for all hydrogen, regardless of how it is produced and by whom. Such a regulated third party access to the grid is particularly important in the market ramp-up phase of the "green" technology. This requires the deletion of the technology link from the gas definition in § 3 No. 19a of the EnWG.

Furthermore, the term "natural gas" should be replaced by the term "gas" in the definitions of the EnWG for the operators of transmission networks (section 3 no. 5 and no. 19 EnWG) and of gas storage facilities (section 3 no. 9 EnWG).

Introduce definition of hydrogen networks

A new definition for hydrogen networks and corresponding additions to the EnWG and the Gas Network Access Ordinance should make it possible to operate pure hydrogen networks with separate balancing groups.

Demands for the transport of pure hydrogen must be included on an equal footing in the Gas Network Development Plan (NEP Gas) and, in the short term, the foundations for the first concrete projects must be created in parallel.

With regard to the establishment of network connections for feeding hydrogen into existing natural gas networks, appropriate regulations in the EnWG and the Gas Network Access Ordinance should ensure that the feed-in is within the limits of the DVGW rules and that existing users of the respective natural gas network are not affected by this.

The conversion of existing natural gas pipelines to the transport of hydrogen should be facilitated by ensuring that existing easements and rights of use for land remain valid. To this end, an interpretation rule for limited personal easements and for contractually agreed permissions should be inserted into the EnWG.

3. Incentives to use hydrogen for the market ramp-up phase

Rapid implementation of RED II in German federal law:

- Timely implementation of RED II (Renewable Energy Directive of the EU) is necessary to ensure that, in addition to use in refineries, the direct use of CO₂-free hydrogen can be credited to reduction quotas in transport. The adopted National Hydrogen Strategy also regards such timely implementation as central.
- RED II sets a target of 14% renewable energies in 2030 for the transport sector; some sustainable fuels are credited with a multiple of their energy content (i.e. multiplier >1) as an incentive. To close the remaining economic gap, double crediting should also be made possible for green hydrogen used in refineries. This is also being prepared in neighbouring European countries such as the Netherlands and France. In this way a fast and ambitious market ramp-up can be achieved.
- The establishment of verification systems and quality standards as planned in the National Hydrogen Strategy should be expressly supported, for example with regard to guarantees of

origin for electricity from renewable energies. These should be unbureaucratic and comprehensible and should later on also be picked by EU legislation. In this respect, pragmatic criteria for the use of renewable electricity should be applied to determine the "green" nature of the hydrogen produced from renewable electricity (implementation of Art. 27 Criteria, Recital 90 of RED II). A very narrow interpretation of the criteria of additionality, geographical proximity or simultaneity mentioned in RED II would limit the amount of renewable electricity that can be used and the production possibilities for green hydrogen to such an extent that the economic production of hydrogen in Germany as well as in the EU as a whole would be considerably more difficult. A scorecard model in which points are awarded for meeting the above criteria could thus be a pragmatic alternative. In the long term, qualified certificates of origin should be recognised as sufficient for simplification purposes and since the electricity generation becomes greener.

Further conditions for the use of hydrogen:

- As also envisaged in the National Hydrogen Strategy, the introduction of tradable certificates for hydrogen should be harmonised at EU level in line with the Green Deal. It is crucial that these certificates can be counted towards CO₂ reduction targets; the basis should be an open-technology CO₂-based classification of the hydrogen used and thus of different hydrogen production technologies. This will also enable hydrogen to be traded at an early stage.
- "Green" or climate-neutral hydrogen can then be purchased on the balance sheet. This applies to hydrogen produced by electrolysis using renewable electricity and, for example, to hydrogen produced by steam reformation or pyrolysis using biogas/biomethane.
- Such an openness of technology is particularly important for an effective market ramp-up and should therefore be anchored as a firm principle.