

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

Charges and surcharges - exempt electrolyzers from the Renewable Energies Act (EEG) surcharge

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. This consideration has also been incorporated into the National Hydrogen Strategy, according to which a corresponding complete exemption from the EEG surcharge for electrolyzers that purchase green electricity is to be sought. The corresponding implementation would be groundbreaking for green hydrogen. This is all the more justified as electrolyzers will be dependent on the purchase of renewable electricity which is not subsidised under the EEG.

We therefore call for a fundamental exemption from the EEG surcharge for the lifetime of electrolysis plants that purchase green electricity.

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 before the end of this legislative period. 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.

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:

- A timely implementation of RED II (Renewable Energy Directive of the EU) is necessary in order to ensure that the direct use of CO₂-free hydrogen produced in refineries 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% RES in 2030 for the transport sector; some sustainable fuels are credited with a multiple of their energy content (ie: multiplier >1) as an incentive. If RED II is implemented in Germany with an ambitious target obligation of more than 14% in national law (BImSchG), then a credit factor >1 should also be established for green hydrogen used in refineries. In this way the still existing profitability gap can be closed and an 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.