

EU Consultation: [An EU hydrogen strategy](#)

The German Association Energy Storage Systems (BVES) represents the interests of more than 200 members from Germany as well as from other EU Member States. Its members are specialised in all kind of storage technology from battery, heat to H2 etc.

We welcome the roadmap as a major step forward towards the success of the EU Green Deal by decarbonising our society and economy. We support the priority for green hydrogen as it facilitates pro-market business models in a decentralised energy world. We support the integrated systemic approach of the road map: "Renewable hydrogen supports the integration of renewable electricity generation as it decouples the energy production and usage in location and time and can balance electricity demand and supply. This is amongst other uses also important for electricity grid management, and as well for isolated or stand-alone regions of the EU, or for specific and local uses concentrated in a restricted area or city".

The roadmap mentions hydrogen as a means which "also provide long-term, large-scale storage, and flexibility to the energy system".

Hydrogen is an energy carrier which can be stored. And it is the storage infrastructure in which this hydrogen is stored. Therefore, it is very important to have a clear understanding about the storage infrastructure, its capacities and how it is regulated. However, H2 allows to store energy in a very flexible way. Therefore, it is very important to have a detailed knowledge about the capacity needs of the storage infrastructure its capacities and the way how it is regulated. It is not sufficient to limit the focus on transport infrastructure and the investment needed for this specific feature. Transport and storage infrastructure build the backbone of a reliable hydrogen-based energy system which addresses the key features of the European energy system, flexibility, and the security of supply.

Green Hydrogen will not only contribute to the flexibility of the European energy system but will also ensure the security of supply and will therefore benefit consumers and industry with a cost-efficient level of reliability provided the following regulatory issues are addressed:

- As prerequisite for a sector integration and a hydrogen strategy, a large scale of additional renewable power installations is needed. The non-power sectors combine a huge demand for energy. To decarbonise those sectors with hydrogen, new capacities of renewable power production needs to be installed in the next years, in addition to the capacities needed to decarbonise the power-sector itself.  
**Recommended action:** Support the implement the renewable energy strategies in the Member States
- In many Member States, including Germany, the electrolyser is defined as ultimate user. Fees, levies, and taxes have to be paid for the electricity used and when H2 is used the state-imposed share of the price is due to be paid again. The multiple or sometimes

double charging of a kilowatt with network tariffs and net metering is still a major barrier for storage as well as to the electrolyser. In addition, there are certain bureaucratic exemptions which are not sufficient to attract private investment on a larger scale.

**Recommended action:** Re-draft the Market Design Directive and REDII to provide a clear definition of the role of the electrolyser as well as for storage of hydrogen in the energy system. Revise the energy taxation directive to reduce the cost-burden imposed on green hydrogen by the Member States.

- Electricity is expensive in Europe and especially in some Member States including Germany due to an unfavourable market design which needs to be re-viewed.  
**Recommended action:** Permitting rules for the energy integration and for electrolyser in particular shall be addressed as well as the market design. A coherent European approach needs to be developed to avoid a fragmented regulatory framework by the Member States
- Hydrogen facilitates the integration of energy consuming sectors industry, heating and cooling, transport with the power producing sector. The whole of these sectors can only be supplied with hydrogen if there is a sufficient transport and storage infrastructure such as salt caverns. Approximately 1/3 of green hydrogen needs to be stored before use in these sectors due to the volatility of the renewable energy sources and continuous demand. With a growth of hydrogen production, the hydrogen storage capacity as well as its distribution infrastructure needs to be extended.  
**Recommend action:** Ensure the right conditions for investment into storage, distribution, and transport. Use the ETS to achieve an effective carbon price in all sectors and implement an associated control regime for imports
- Some Member States use the scaling up of the hydrogen technology to put their TSOs into a favourable position by questioning the principle of unbundling. This is a threat for a market-based economy which gives freedom to the participants in the market and would increase overall implementation costs due to guaranteed rates of return in the regulated sector.

**Recommended action:** Ensure that the unbundling principle is applied, and the integrity of the internal market is guaranteed.

- Trustworthiness of the source of origin is crucial for the success of H<sub>2</sub>. It is necessary to have a reliable reporting system to ensure that the decarbonisation is happening  
**Recommended action:** Build a reliable certification system build on the track-record of the ETS system. Blendig of green hydrogen with natural gas should be avoided to avoid additional costs for the industry.

**Conclusion:**

- Storage is facilitating a systemic solution for our European energy systems. The relative high costs for transport mean that on-site production and regional storage solutions should be prioritised. The unfavourable regulations for transport and storage in the Member states should be changed. An integrated European approach is needed to achieve the decarbonisation of our economy under cost competitive conditions. The building of a hydrogen economy is happening in a globalised world with a high exposition to competition.

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