Press Release

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Hydrogen ramp-up in Germany is slowing down: E.ON study outlines options for accelerating

- E.ON's third “H2-Bilanz” (H2 balance) shows further need for action on political framework conditions
- After significant increase in the spring, only slight increase in planned generation capacity
- Study by Frontier Economics on behalf of E.ON examines options for accelerating the hydrogen ramp-up

The ramp-up of the hydrogen economy in Germany is slowing down – even if the overall positive development continues. This is shown by the third H2-Bilanz published today by E.ON based on data from the Institute of Energy Economics at the University of Cologne (EWI). The planned hydrogen production capacity by 2030 has increased from 8.1 gigawatts in February 2023 to 8.7 gigawatts in August 2023. Even though there is still a slight upward trend here, the increase is nowhere near as strong as in the months from July 2022 to February 2023. The German government’s goal in the national hydrogen strategy is to have at least 10 gigawatts of electrolysis capacity installed in Germany by 2030.

In the case of H2 infrastructure, the number of pure hydrogen pipelines in operation in Germany has remained almost the same. There is a clearly positive development in the plans for a hydrogen network, the planned length of which has almost doubled: The construction of 5,708 kilometers hydrogen pipelines by 2035 is now planned, compared to only 2,813 kilometers that were announced back in February of this year. E.ON attributes this to the fact that the construction of a hydrogen infrastructure has gained momentum in recent months with the decision to create a hydrogen core network.

For E.ON, this is a further indication that clear political and regulatory frameworks are directly accelerating the ramp-up of the hydrogen economy. In many areas, however, these are currently not sufficient to limit existing technology, demand, and infrastructure risks nor to make the costs of producing green hydrogen, in particular, competitive. For this reason, E.ON has commissioned the consulting firm Frontier Economics to investigate various options for accelerating the hydrogen ramp-up in Germany.

Patrick Lammers, Member of the Board of Management of E.ON: “Acceleration is something that we urgently need in the hydrogen ramp-up in Germany. The discrepancy between planned projects and final investment decisions is far too great. We need instruments to speed up the hydrogen ramp-up. That’s why we at E.ON have initiated a study that identifies various options. In this way, we want to

provide concrete impetus and support policymakers in creating the necessary framework conditions for the success of the hydrogen economy."

The new study focuses on five different instruments. As the green gas quota is increasingly a subject of political discussion and since the EU already imposes quotas for hydrogen in industry and in the transport sector which must be met in the member states, Frontier Economics has analyzed this instrument in depth. One argument in favor of a green gas quota is that it can be implemented without the use of direct public funds and enables a reliably plannable ramp-up of green gases. A green gas quota would also be a concrete political signal for the future of green gases as a sensible addition to electrification.

However, the study also points out some disadvantages. For example, the green gas quota creates only a relative certainty of quantity for green gases, as it is based on total gas sales. This is especially true for green hydrogen. In addition, a quota for obliged entities would entail the risk of not being able to procure sufficient hydrogen. In general, the introduction of a green gas quota – like other instruments – would be associated with additional costs. From E.ON's point of view, the instrument should therefore initially be used cautiously in order to minimize financial burdens and risks and to promote acceptance.

The study shows that there is no one-size-fits-all solution for a rapid hydrogen ramp-up. However, E.ON and Frontier Economics were able to identify the advantages and disadvantages of the various instruments and how they would have to be designed to minimize the disadvantages. Which instrument is most appropriate depends on the specific premises and policy objectives.

About the H2-Bilanz

The H2-Bilanz is published twice a year. The scientific, data-based approach is intended to help ensure that the right adjustments are made for a successful hydrogen ramp-up. The analysis includes the specific project plans through 2030 and indicators such as green hydrogen generation capacity, import volumes, infrastructure, and possible applications. The H2-Bilanz data and further information can be found at https://www.eon.com/de/hydrogen/h2-bilanz.

The Frontier Economics Study

On behalf of E.ON, the consultancy firm Frontier Economics has examined the options available to accelerate the hydrogen ramp-up in Germany. The new study focuses on five instruments on the production or demand side: a green gas quota, Carbon Contracts for Difference (e.g., climate protection contracts), fixed premiums (such as the H2Bank), variable premiums for green gas production and tax incentives. All further information can be found at: https://www.eon.com/en/about-us/politics/german-energy-policy/instruments-hydrogen-ramp-up-germany.html

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