

Statement

Hydrogen Summit Hamburg organised by EEHH (Renewable Energy Hamburg) on February 28th 2022, with representatives from the German Federal Government and the Free Hanseatic City of Hamburg

Statement of north German hydrogen companies

Foreword

Hamburg, 28.02.2022

With its opening balance for climate protection, the Federal Ministry for Economics and Climate Protection has called for urgency and set a target for Germany to reduce annual emissions three times as much as before. Industry and mobility must also play a key role in achieving this, and are going to do so.

The involved industry in Hamburg and northern Germany supports these targets. We have launched a series of significant projects and are ready to start reconfiguring the regional energy system. We want to work together to secure the future of our industrial location and to actively develop new, sustainable fields of industry. Accelerating the start-up of the hydrogen economy is especially important when it comes to decarbonising industry and mobility.

In order to meet these targets, quick action needs to be taken to improve the relevant legal framework. We aim to tackle this using a holistic approach, and we believe the public sector flanking measures currently under discussion still do not go far enough.

The most important points are:

1. The European framework has to set appropriate specifications: the sufficient availability of green hydrogen to supply industry and logistics on competitive terms needs to be guaranteed, which requires funding to establish local production capacities, transport chains and an import infrastructure.
2. To get the market up and running quickly, suitable customer tools need to be developed nationally in the different sectors, such as climate protection contracts (carbon contracts for difference) in industry, tax breaks for mobility and CapEx funds in all application technologies. Only by doing this can the currently substantial price gap compared to traditional fossil fuels be closed.

3. Approval processes for infrastructural, electrolysis and application projects must be seriously accelerated, as is already planned for those involving wind power and photovoltaic systems. Funding applications and approvals (e.g. via IPCEI) also have to be simplified and accelerated.

Statement of companies involved in policy:

We want to exploit the opportunities brought by the use of hydrogen to drive innovation and establish a sustainable, integrated energy system – and we take on high project risks to do so. To achieve the target of reducing emissions quickly, we believe it is particularly urgent that policy and the economy take the first steps together.

The conditions in Hamburg are unique: here all sectors of industry – steel, aluminium, energy, and chemistry in combination with port industries, logistics and aviation – are concentrated within a very small area and can be connected to each other and to a future Europe-wide hydrogen grid by way of a pipeline network.

Shell, Mitsubishi Heavy Industries, the municipal Hamburger Energiewerke GmbH and Vattenfall are planning to build a 100 MW electrolysis plant, the Hamburg Green Hydrogen Hub (HGHH), at this location. To link local production, cross-regional infrastructure and users, Gasnetz Hamburg is planning to set up an industrial hydrogen network. Furthermore Airbus, ArcelorMittal, Gasnetz Hamburg, Greenplug, Hamburger Hafen und Logistik AG, Hamburg Port Authority, HADAG Seetouristik and Fährdienst have joined forces with the HGHH to form the Hamburg Hydrogen Network, in order to use the production, transport and utilisation of green hydrogen in the Hamburg port catchment area to make a key contribution to reducing business CO₂ emissions. Further projects are seeing the involvement of Aurubis, Stadtreinigung Hamburg and Hamburger Energiewerke, who are also pursuing specific projects to establish a hydrogen economy in industry, infrastructure and transport, while ADM, Cargill, GP Joule, Greenplug, H&R-Group, Hobum, Nynas, Sasol, Speira und Trimet also have related plans.

With its unique concentration of prominent companies and sectors, and the driving force of renewable energy – largely produced here in the north – the economy in northern Germany provides the best possible springboard for implementing the energy transition in a joined-up value creation system. The region therefore has the potential to become a blueprint for the hydrogen economy in Germany and Europe. As a company, we are up to the challenge! However, to be able to implement our targets, we need initial support and the right framework conditions. Rapid improvements to regulations will help us to invest at the right time, meet the ambitious CO₂ targets and make northern Germany a beacon for Germany as a whole.

For this reason, the companies listed below have agreed to this common statement.

The improvements we consider necessary are specified below:

1. Availability of green hydrogen at competitive terms: We agree with the call for the accelerated reduction of emissions in the ‘opening balance for climate protection’ of the Federal Ministry of Economics and Climate Protection. As north German companies, we want to do our part, but

need sufficient amounts of green hydrogen on competitive terms. This requires the establishment of capacities, transport chains and an import infrastructure:

- a. Construction and operation of electrolysis plants:** To flank the setup of electrolysis capacities, investment costs have to be funded sufficiently and at the right time. In addition, suitable regulatory conditions have to be created in order to enable even industrial-scale systems to be operated in a way that is economically viable. The EU specifications from the Renewable Energy Directive (EU-RED) should create a framework that does not overly restrict the operating duration of the electrolysis plant. The Renewable Energy Act would currently limit this to a maximum of 5,000 full capacity hours per year. As the share of renewable energies in the power supply increases, so too should the permissible capacity. This would also reduce the CapEx share of the hydrogen price and minimise the need for expensive storage capacities.
- b. Use of electrical power:** We require access to adequate amounts of affordable electrical power that meets the requirements for green hydrogen production. The rules in the drafts of the EU-RED II – Delegated Act currently do not allow this on the German electricity market, which is why we need transitional solutions that define the criteria for green hydrogen more broadly and create the flexibility needed for electrical power procurement. For this purpose, options exist in purchasing renewable power via PPAs (from production facilities not funded or no longer funded, as well as from overseas) or, as a supplement, purchasing power via the stock market in combination with certified proof of origin.
- c. Import:** Along with local production, funding is needed to establish an import and distribution infrastructure long term. This needs to ensure that German ports are able to use and retain their locational advantages in European competition. Clear, EU-wide framework conditions for the handling, transport and storage of hydrogen and its derivatives are required for this purpose.
- d. Infrastructure:** Funding is needed to quickly establish a distribution network for transporting the hydrogen so that this is available at the start of production. In the same way, planning and constructing cavern storage facilities, and connecting these to a cross-regional H2 pipeline system, require active support in order to create an affordable regional offering as quickly as possible.

2. Market launch: To reinforce the future demand for green hydrogen, it is worth focusing on core markets in industry such as steel, or in the transport and logistics sector. Hamburg is predestined for this role, because along with the steel industry, the traffic sector for rail, road, water and air enjoys representation by prominent companies.

- a. Price gap:** In these sectors, suitable customer tools need to be introduced such as climate protection contracts (carbon contracts for difference), which close the currently significant price gap compared to traditional fuels. In the same way, tax breaks for synthetic fuels and additional CapEx funding need to be provided in all application technologies. We would like to point out that the more restrictions the rules named under 1. a. & b. place on operation and electricity procurement, the greater is the gap needing to be closed. A Europe-wide, harmonised use of quotas in the procurement

and consumption of hydrogen-based products should also create the necessary planning security.

- b. Funding of application technologies:** Along with technological development on the production side, development is needed in terms of hydrogen application. For example, many device types, such as in heavy goods logistics, are only in the prototype stage or not even there yet. In order to ensure they are ready for series launch, funding is needed both for development and for added costs for investments in vehicles and handling devices, petrol stations and other required infrastructure, along with additional costs in operation. Hydrogen also contributes significantly to the decarbonisation of air traffic. The north German aviation industry intends to push for the use of H₂ as an energy source in the aviation industry until it reaches application readiness, including in terms of key technologies in the aircraft as well as in the testing of the necessary infrastructure on the ground.
- c. Transitional regulations and flexibility:** To establish a hydrogen market, the market launch needs greater flexibility to be granted for a limited period in purchasing climate-neutral hydrogen for technical testing and initial pilot projects.

3. Certification: Trading with certificates allows the demand for green hydrogen to be funded in Germany without being tied to one location. The use of hydrogen to make products should therefore be made verifiable and controlled using corresponding certificates and standardisations.

4. Administration: The companies in northern Germany are ready to get started – but we feel stifled. To ensure that the energy transition succeeds across different sectors, but above all, quickly, approval processes for infrastructural, electrolysis and application projects need to be seriously accelerated, as is already planned for those involving wind power and photovoltaic systems. Funding applications and approvals (e.g. via IPCEI) also have to be simplified and accelerated. Funding processes must not drag on for several months or years. The related effort must be based around what is necessary for target achievement and, as whole, should be proportionate.

5. Regulation: The mandatory ownership separation of gas and hydrogen networks, as is currently being discussed as part of the EU Commission's Gas Package, prevents important synergies in the transformation process and should therefore be avoided.

The measures listed here should provide initial support for companies taking on a pioneering role in converting value chains.

If we succeed together in switching the economy in Hamburg's port area and northern Germany to green hydrogen, the hydrogen cluster in Hamburg will be able to act as a blueprint for the conversion of industry as a whole in Germany and Europe.

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