GET H2 Nukleus: first publicly accessible hydrogen network will allow wide-ranging CO₂ reductions

- BP, Evonik, Nowega, OGE and RWE Generation sign a Letter of Intent to develop a hydrogen network from Lingen to Gelsenkirchen.
- The planned network, around 130 kilometres in length, will link the production of green hydrogen with industrial customers in Lower Saxony and North Rhine-Westphalia.
- The GET H2 Nukleus project is set to become the first hydrogen network in the regulated sector with non-discriminatory access and transparent prices.
- The companies aim to be ready to operate the regulated network and an electrolyser in late 2022 in order to make a speedy and important contribution to a low-carbon future.

Essen, Germany. Germany's first publicly accessible hydrogen network is due to supply increasing quantities of green hydrogen (H2) to industrial companies in Lower Saxony and North Rhine-Westphalia from late 2022 onwards. BP, Evonik, Nowega, OGE and RWE Generation have signed a Memorandum of Understanding to develop the GET H2 Nukleus project. All these companies are members of the GET H2 initiative

There are high hopes for green hydrogen in the energy transition. The idea is to convert power from renewable energies into hydrogen and use it as a carbon-free source of energy in industry and other sectors. An expansion of the relevant infrastructure is key to transporting green hydrogen in Germany.

The green hydrogen is to be produced from renewable energies in Lingen, in Lower Saxony, in an 100 MW electrolyser owned by RWE Generation. It will then be transported to industrial customers and refineries in Lingen, Marl and Gelsenkirchen – mainly via existing gas pipelines operated by transmission system operators Nowega and OGE and converted for the transportation of 100 percent hydrogen, but also via a partially new construction by Evonik. Access to this hydrogen network is to be open in a non-discriminatory way to all generators, traders or consumers, as is already the case with power grids and gas networks. This will
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make a rapid, reliable integration of further hydrogen projects possible.

In building such infrastructure, the project partners are paving the way for a sustainable national hydrogen sector and a leading technological role for Germany in it. What is important in the view of the project partners is that politicians should create the necessary legal conditions to enable all companies involved in hydrogen projects to rapidly expand their production of green hydrogen and of the relevant hydrogen infrastructure, as well as providing a secure basis for investment.

In supplying refineries and chemical parks, GET H2 Nukleus kicks in where green hydrogen can make the fastest contribution to a low-carbon future. These companies already use large quantities of hydrogen in their production processes and will significantly reduce their carbon emissions by switching over to green hydrogen. Building up a hydrogen infrastructure based on the existing gas infrastructure will guarantee for industrial customers precisely the security of supplies which they are dependent upon. In the longer term, existing cavern storage facilities along the hydrogen pipeline are to be incorporated which will further increase this security of supplies. Production of green hydrogen and supply to customers is to start by the end of 2022 if possible, provided that this is economically viable and the political conditions are right by then.

Background: transporting H2 and its role in the energy turnaround

Transferring hydrogen in dedicated networks is something that has been carried out in Germany and other European countries for several decades now. So far, however, these networks have been private ones in the industrial sector without any access for outsiders.

Producing green hydrogen from wind and solar power makes it possible to transport renewable energies over long stretches, store it on a large-scale for a long time, and use it in sectors which are difficult to be directly electrified. It is for these reasons that the production of green hydrogen and the building-up of hydrogen infrastructure can be important steps on the path to reaching climate targets.
More information about the initiative GET H2: [https://www.get-h2.de/en/initiativeandvision](https://www.get-h2.de/en/initiativeandvision)

Information about the GET H2 Nukleus project partners:

**Evonik Industries AG**
Evonik is one of the world leaders in specialty chemicals. The company is active in more than 100 countries around the world and generated sales of €13.1 billion and an operating profit (adjusted EBITDA) of €2.15 billion in 2019. Evonik goes far beyond chemistry to create innovative, profitable and sustainable solutions for customers. More than 32,000 employees work together for a common purpose: We want to improve life, day by day.

**Evonik Technology & Infrastructure GmbH**
As an integral part of Evonik the Evonik Technology & Infrastructure GmbH supports customers on their growth course by providing reliable technology and infrastructure services in the areas of energy & utilities, technical service, process technology and engineering, logistics, and site management. Customers from any Evonik site in the world can access the services and know-how of Technology & Infrastructure with around 8,000 employees. The company is part of Evonik’s Services Segment that, with around 12,000 employees, generated sales of €763 million in fiscal 2019.
BP Europa SE
BP Europa SE employs around 10,500 people in Germany, Austria, Belgium, Hungary, the Netherlands, Poland and Switzerland. The company is based in Hamburg, where its lubricants, aviation and shipping businesses are handled. Bochum is the administrative headquarters of BP in Germany, as well as being the hometown of the German retail market business Aral. The supply and sales units of BP Europa SE are also based here. The company also operates refineries and retail stations in other European countries. With around 43 million tonnes of petroleum products under the brand names of Aral, BP and Castrol, BP Europa SE meets a large part of annual demand in Europe. BP has set itself the ambitious aim of becoming net zero by 2050 or earlier. This applies particularly to all of BP’s operative activities on an absolute basis and includes a stepwise increase in investments in alternative businesses.

Nowega GmbH
Nowega GmbH is a transmission system operator, based in Münster. A subsidiary of Erdgas Münster GmbH, Nowega operates, maintains and markets around 1,500 kilometres of high-pressure gas pipelines. The pipeline network stretches from the Dutch border across Lower Saxony and parts of North Rhine-Westphalia to the Wendland, and it is part of the inner European transportation route for natural gas.

OGE GmbH
OGE is one of the leading transmission system operators in Europe. With a pipeline network measuring around 12,000 kilometres, the company transports gas throughout Germany. Due to its geographical position, OGE connects up the gas flows in the European internal market. The company's 1,450 staff stand for security of supplies. OGE makes its network available to all market players in a non-discriminatory and transparent way, and in line with market requirements. The company shapes energy supplies, both today and with the energy mix of the future.

RWE Generation SE
RWE Generation SE, based in Essen, is responsible within the RWE company for power generation on the basis of gas, coal, hydrogen and biomass. The company has a workforce of around 2,700 people – in Germany, the UK, the Netherlands and Turkey – who operate power stations with a total output of around 25 gigawatts. Performing securely and flexibly, these power stations help to make sure that there is a reliable supply of power for Europe’s power grids, alongside the steadily growing – though by nature volatile – contribution made by renewable energies.

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