

# LOW-CARBON HYDROGEN FROM NATURAL GAS TO MAKE KEY CONTRIBUTION TO CLIMATE PROTECTION

- Partner: Norway intends to shape the transformation with Germany
- Wintershall Dea builds up value chains for CCS and low-carbon hydrogen

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**Berlin.** Wintershall Dea is calling for the production of low-carbon hydrogen from Norwegian natural gas in Germany. "The North Sea can be the energy hub of the future to help us master the balancing act between security of supply and climate neutrality," says Wintershall Dea CEO Mario Mehren on the sidelines of a meeting with companies and politicians from Norway and Germany held on 9 May in Berlin, which Wintershall Dea also attended. "Security of supply will require electrons and molecules – in addition to renewable electricity, initially natural gas and then large quantities of hydrogen – as well as the storage of CO<sub>2</sub>. We will need a wide range of low-emission technologies to achieve our climate goals." Norway and Germany intend to travel along and shape this path of transformation together.

Wintershall Dea is establishing value chains for CCS and low-carbon hydrogen – in Germany, Norway, Denmark and other countries on the North Sea coast. In March 2023, as part of the Greensand project, Wintershall Dea transported the first industrial CO<sub>2</sub> from Belgium to

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Denmark and stored it there. In addition, the energy company is the operator of two licences for CO<sub>2</sub> storage in Norway. Plans call for BlueHyNow, a state-of-the art plant to produce hydrogen from Norwegian natural gas, to be established in Wilhelmshaven and to eventually produce over 200,000 cubic metres of hydrogen per hour. In January of this year, Norway and Germany confirmed their intention to jointly secure a significant supply of hydrogen from Norwegian natural gas for Germany by 2030.

#### Hydrogen from natural gas reduces emissions

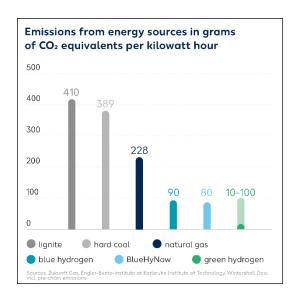
When used in combination with CCS, low-carbon hydrogen produced from natural gas has a carbon footprint along the entire value chain of around 90 g CO<sub>2</sub>/kWh, according to a 2022 study by the German Gas and Water Industry Association (DVGW) and the Engler-Bunte-Institut at the Karlsruhe Institute of Technology (ebi). For BlueHyNow, Wintershall Dea even assumes that this figure will be closer to 80 g CO<sub>2</sub>/kWh. "This value is based on the current German electricity mix and transporting the CO<sub>2</sub> by ship, as is planned during the initial phase," Mehren explains. "Emissions could be further reduced because the electricity mix is expected to become greener, thanks to more efficient capture technologies, and by transporting the CO<sub>2</sub> via pipeline."

This makes the carbon footprint of hydrogen from natural gas much lower than those of lignite (410 g/kWh), hard coal (389 g/kWh) and natural gas (around 228 g/kWh). Depending on the means of transport



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the carbon footprint of green hydrogen is 10-100 g/kWh, according to the DVGW-ebi study. Producing green hydrogen from offshore wind power in Germany has the highest potential to reduce the carbon footprint. The German National Hydrogen Council (NWR) estimates a hydrogen demand of 92-129 TWh per year in 2030 and of 964-1,364 TWh per year between 2040 and 2050. "To be able to furnish these quantities, we will need a variety of different production technologies and suppliers," Mehren says.



#### More information:

<u>CO2 Footprint of Hydrogen (dvgw.de) (in German only)</u> Zukunft Gas: Treibhausgasemissionen von Erdgas und anderen fossilen Energieträgern (in German only)



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#### About Wintershall Dea

Wintershall Dea is transforming from the leading European independent gas and oil company to become a leading European independent gas and carbon management company. We have more than 120 years of experience as an operator and project partner along the entire E&P value chain. The company with German roots and headquarters in Kassel and Hamburg explores for and produces gas and oil in 11 countries worldwide in an efficient and responsible manner. With activities in Europe, Latin America and the MENA region (Middle East & North Africa), Wintershall Dea has a global upstream portfolio and, with its participation in natural gas transport, is also active in the midstream business. And we develop carbon management and low-carbon hydrogen projects to contribute to climate goals and secure energy supplies. More in our <u>Annual Report</u>.

As a European gas and oil company, we support the EU's 2050 carbon neutrality target. As our contribution, we have set ourselves ambitious targets: We want to be net zero across our entire upstream operations – both operated and non-operated – by 2030. This includes Scope 1 (direct) and Scope 2 (indirect) greenhouse gas emissions on an equity share basis. Wintershall Dea will also bring its methane emissions intensity below 0.1 per cent by 2025. We endorsed the World Bank's Initiative 'Zero Routine Flaring by 2030' and continue to support the initiative aimed at eliminating routine flaring in operated assets by 2030. In addition, we plan to support global decarbonisation efforts by building up a carbon management and hydrogen business to potentially abate 20-30 million tonnes of CO2 per annum by 2040. You can find more about this in our <u>Sustainability Report</u>.

Wintershall Dea was formed from the merger of Wintershall Holding GmbH and DEA Deutsche Erdoel AG in 2019. Today, the company employs more than 2,000 people worldwide from almost 60 nations.

More information on the Internet at <u>www.wintershalldea.com</u> or follow us on <u>Twitter</u>, <u>Facebook</u>, <u>LinkedIn</u>, <u>YouTube</u> and <u>Instagram</u>.