



Corporate communication

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Press release

WESTKÜSTE100 – cavern suitability test successfully completed

In the course of inspection and maintenance work, Raffinerie Heide subjected the cavern to a suitability test at the end of August for the planned storage of green hydrogen as part of the WESTKÜSTE100 real-world laboratory project. The findings have now been presented: The cavern is suitable for the storage of green hydrogen.

Hemmingstedt, 3 November 2021 – With the involvement of the relevant authorities, the State Mining Office for Lower Saxony and Schleswig-Holstein, Raffinerie Heide was able to complete work on one of the caverns north of the refinery site on schedule at the start of September. This not only included inspection and maintenance work, but also a review to determine whether the caverns are suitable for storing green hydrogen as part of the WESTKÜSTE100 project. The assessment is now complete.

‘On the basis of the insights gained, it can be ascertained that the cavern is suitable for reinforcing and converting for hydrogen storage,’ reports Dr Sandra Niebler, head of the commercial and economics division and responsible for the energy transition projects at the Raffinerie site in Hemmingstedt. Special inspection equipment was brought into the cavern for the suitability test. The equipment was able to establish that the conditions leading to the cavern and within it were good overall. ‘This is an important outcome for us at Raffinerie Heide and particularly for the future users of green hydrogen with the aim of decarbonising sectors such as aviation, industry and the chemical sector. We are now in a position to move onto the next procedural planning phase for the planned storage of green hydrogen in the cavern,’ says Sandra Niebler. All approval aspects will also be further fleshed out in the course of this phase.

The importance of hydrogen storage as part of WESTKÜSTE100

The plan within the WESTKÜSTE100 project is to use electricity from renewable energy sources to produce green hydrogen in an electrolysis plant. This green hydrogen will be used in the natural gas grid for supplying heat, in a hydrogen filling station for cars and in the industrial process directly within Raffinerie Heide. This will help to decarbonise industry, the mobility sector and the heating market under real conditions in accordance with the aims of the energy transition. Storing the green hydrogen will make it possible to convert the available renewable energy sources, such as wind energy, into a continuous stream of energy for industrial use. This will ensure that the green hydrogen is also available during periods when there is a wind lull. Caverns close to the refinery are currently already used to store government reserves of oil and fuels.

WESTKÜSTE100 project status

As part of the project, a 30 MW electrolyser – Germany's largest such plant – is set to be built for the production of green hydrogen and commissioned in 2023. Those involved in the project are currently working towards reaching a final investment decision. Raffinerie Heide is planning to construct and commission the 30 MW electrolyser in conjunction with Ørsted Germany and Hynamics Germany within the joint venture H2 Westküste GmbH. 'Overall, the project has made good progress. The project team has already completed the draft plans for the electrolysis plant, including all connected ancillary equipment and the associated approval aspects, which means that work can now begin on the next, detailed planning phase,' explains Sandra Niebler.

Find out more about the WESTKÜSTE100 project at www.westkueste100.de

About Raffinerie Heide

Based in Dithmarschen (Schleswig-Holstein), Raffinerie Heide GmbH is the most northerly crude oil processor in Germany. The company has an annual processing capacity of 4.5 million tonnes of crude oil, equal to the oil demands of the entire state of Schleswig-Holstein. The refinery with a medium-sized ethos, which was founded in 2010, produces traditional petroleum products such as petrol, diesel and aviation fuel. It also produces light heating oil and base materials for the chemicals industry. Raffinerie Heide, which is one of the most complex refineries in Europe, is among the best on the continent in terms of utilisation and availability thanks to its strict standards of care in relation to maintenance.

With sites in Hemmingstedt and Brunsbüttel, the company is also working hard to prepare for a new, greener future. Raffinerie Heide is striving to actively help shape the energy transition in Germany, focusing on the use of alternative raw materials and renewables. Raffinerie Heide is working with other partners on the use of renewable electricity and the production of green hydrogen by means of electrolysis. Read more about the refinery of the future: www.future-heiderefinery.com