



Press release

## AquaCore: the nucleus for green hydrogen on Helgoland

Focusing and strategic development after one year of research work

- AquaPortus will not be implemented on Helgoland, the idea of AquaPortus with focus on LOHC will be further explored in the TransHyDe project Helgoland
- Follow-up project **AquaCore** starts implementation of a local direct utilization option with green hydrogen

**Helgoland, September 7, 2022** – Since about a year, intensive research work has been carried out for the Helgoland site in the field of innovative energy supply with green hydrogen. In the hydrogen lead project TransHyDE, funded by the German Federal Ministry of Education and Research, a flexible transport chain with LOHC (liquid organic hydrogen carriers) as a carrier for green hydrogen is being researched and developed using Helgoland as an example. The idea originally came from the AquaPortus project, the goal of which was subsequent on-site implementation. Numerous data from the completed studies have now been evaluated. The project team has proven that the innovative LOHC system not only works, but also offers convincing benefits. At the same time, however, the evaluation has also revealed reasons why AquaPortus will not be implemented on the island. Instead, the **AquaCore** project, the nucleus for green hydrogen on Helgoland, is starting as a strategic further development with a local direct supply option.

### AquaPortus – successful driver of innovation

AquaPortus had set itself the goal of storing the green hydrogen produced offshore in an electrolysis plant from the AquaPrimus project on the island of Helgoland in a hydrogenation plant in LOHC. The LOHC "loaded" with hydrogen would then have been transported to the mainland via the port of Hamburg and released again for final use. The thermal energy from the hydrogenation process on Helgoland was to be used for part of the island's heat supply.

During the research and development work, it became apparent that the originally planned hydrogen quantities were not in sync with the actual quantities available. "After looking at different scenarios and weighing the results, AquaPrimus has found that initially only one wind turbine with a corresponding electrolysis unit will be built in the area of the wind farms off Helgoland instead of two to three. Thus, contrary to the original goals, the quantities of hydrogen that would arrive on Helgoland have been greatly reduced, so that there would not be sufficient H<sub>2</sub> available for further transport towards the mainland," comments Siying Huang, project manager of the project partner Hydrogenious LOHC Technologies, on the decision not to pursue the implementation of AquaPortus any further.



"AquaPortus has always been Helgoland. But when knowledge gain leads to strategic further development, that is a successful research and development process. We remain convinced that LOHC technology, as already proven, has great potential and will soon have an important place in the supply of green hydrogen," says Christoph Tewis, project manager of AquaPortus and TransHyDE Helgoland. Regardless of the project changes, research and development work in the TransHyDE Helgoland project will continue as planned until 2025. The goal is a reproducible and scalable blueprint for worldwide locations. The strategic importance of the Port of Hamburg with the planned release facilities as a future hydrogen hub will be considered even more strongly.

### **AquaCore: Opportunity for the energy turnaround on Helgoland**

The AquaVentus vision was created on Helgoland in 2020 in order to realize the energy turnaround locally and at the same time drive forward expansion stages in the North Sea – always with Germany's climate targets in mind. Helgoland has been working for many years to replace fossil oil-based heat supply in a climate-friendly way. **AquaCore** is both a follow-up project to AquaPortus, a prototype and an initial project: the wind turbine with electrolysis unit from the AquaPrimus subproject supplies green hydrogen produced offshore for local direct applications. Thus, the project is now being returned to its origin.

The project is being led by Versorgungsbetriebe Helgoland (VBH) and the municipality of Helgoland with the support of Schleswig-Holstein Netz AG. In the project, primarily the green hydrogen is to be converted into heat by hydrogen boilers directly at Versorgungsbetriebe Helgoland and fed into the district heating network. "With this variant, which is currently being investigated, the heat demand could be completely covered with green hydrogen. Fossil oil would then finally be a thing of the past at this point," Kay Martens, managing director of VBH, promises AquaCore. AquaCore's schedule is based on the AquaPrimus and AquaDuctus (pipeline) subprojects. Commissioning is scheduled to take place by 2026.



### About AquaVentus

The project family around the AquaVentus initiative comprises numerous sub-projects along the value chain from the production of hydrogen in the North Sea to its transport to customers on the mainland. These coordinated consortia synchronize demand and production, thus enabling a rapid market ramp-up. The AquaVentus project family includes, for example: The development of offshore wind turbines with integrated hydrogen production (AquaPrimus), a large-scale offshore hydrogen park (AquaSector), a central offtake pipeline (AquaDuctus), maritime hydrogen-based applications (AquaNavis) and a research platform (AquaCampus).

All information, including about our founding members, can be found at [www.aquaventus.org](http://www.aquaventus.org)

### Press contact:

#### **AquaCore**

Bianca Maierhofer  
Communication  
Telephone: +49 40 6963267-54  
E-Mail: [b.maierhofer@te-pm.de](mailto:b.maierhofer@te-pm.de)

#### **AquaVentus Förderverein e. V.**

c/o Gemeinde Helgoland  
Lung Wai 28  
D – 27498 Helgoland  
Urs Wahl  
Public Affairs  
Telephone: +49 171 3234478  
E-Mail: [wahl@aquaventus.org](mailto:wahl@aquaventus.org)