

Press release

Pilot hydrogen plant takes shape: Modules for 10 MW alkaline electrolyser arrive in Lingen

- Pressurised alkaline plant from Sunfire represents one of two forms of electrolysis that RWE wants to test
- Entire plant with capacity of 14 megawatts to be in operation in autumn

Essen, 30 March 2023

Nine months after the ground was broken for RWE's pilot hydrogen plant, the first electrolyser modules for generating hydrogen have arrived at the construction site at the Emsland gas-fired power station.

During a four-day period, eight pressurised alkaline electrolyser modules manufactured by Sunfire, with a capacity of 10 megawatts (MW), arrived at the site on articulated lorries. A gantry crane on rails lifted the components, each weighing 15 tonnes, into place in a specially erected hall where they will be combined in groups of four to create stacks almost ten metres high.

Sopna Sury, COO Hydrogen RWE Generation, comments: "Following months of preliminary work, it is exciting for everyone to see the pilot plant taking shape. With the arrival of the first electrolyser, we have come another step closer to our goal of producing green hydrogen. Once it has been commissioned, the Lingen plant will help us to build up experience with two technologies for the subsequent operation of large-scale electrolysers."

In the coming weeks, engineers will install the 10 MW pressurised alkaline facility within the pilot plant and integrate it into the infrastructure at the Emsland gas-fired power station. A Linde PEM electrolyser with capacity of 4 MW will be delivered to an adjacent building in the near future to complete the pilot plant.

The facility is expected to go into operation this autumn. Using electricity from renewables, it will be able to generate up to 290 kilograms of green hydrogen every hour. The hydrogen will be fed into a public hydrogen network or be mixed with gas as a climate-neutral fuel for turbines at the power plant. In the future, it could also be used to supply the mobility market and the hydrogen-ready gas turbine being planned for construction in Lingen by RWE and Kawasaki.

The German state of Lower Saxony is providing €8 million of funding for the project.



The Lingen location plays a key role in RWE's hydrogen strategy: Just a few metres from the pilot hydrogen plant, the company plans to set up its first large-scale electrolyser facility as part of the GET H2 project. Its capacity will then be expanded in 100 MW increments to 300 MW by 2026. The objective of GET H2 is to work with partner entities to start building up a supraregional hydrogen infrastructure.

When it comes to hydrogen, RWE has all the possibilities under one roof: from green electricity production to expertise in producing and storing green hydrogen, and its Supply & Trading business that can make the fuel available to meet the needs of industrial customers. RWE is currently working with high-powered partners on more than 30 hydrogen projects.

For an overview of the largest hydrogen projects RWE is involved in, see: https://www.rwe.com/en/research-and-development/hydrogen-projects/

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RWE

RWE is leading the way to a green energy world. With an extensive investment and growth strategy, the company will expand its powerful, green generation capacity to 50 gigawatts internationally by 2030. RWE is investing more than €50 billion gross for this purpose in this decade. The portfolio is based on offshore and onshore wind, solar, hydrogen, batteries, biomass and gas. RWE Supply & Trading provides tailored energy solutions for large customers. RWE has locations in the attractive markets of Europe, North America and the Asia-Pacific region. The company is responsibly phasing out nuclear energy and coal. Government—mandated phaseout roadmaps have been defined for both of these energy sources. RWE employs around 19,000 people worldwide and has a clear target: to get to net zero by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement. Very much in the spirit of the company's purpose: Our energy for a sustainable life.

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