

The Progress of our Electrolysis in 2023 – Moving from 10 to 100 Megawatts



Realizing our vision of a world without fossil fuels – Milestones 2023

Dresden, December 21, 2023 | As the year comes to a close, we look back with gratitude on some of our project highlights from the past 12 months. Our accomplishments already give us energy for an exciting and no less challenging year in 2024. Together, we will realize our vision of a world without fossil fuels. How are we doing it? With a realistic mindset – carefully considering the right steps in the right order. We take our steps with focus. We go the extra mile. We explore new and enlightening ways. Above all, we always strive to provide our customers with the best electrolysis technology for their large-scale green hydrogen production.



10 MW Pressurized Alkaline + 250 kW SOEC

We start with one of the world's leading suppliers of renewable energy: This year, RWE produced hydrogen for the first time at its Lingen site using our most efficient SOEC technology. But this is just the beginning: We have also installed our pressurized alkaline electrolyzer with a capacity of 10 megawatts in Lingen. Two milestones reached in 2023 for RWE's major goal of building at least two gigawatts of electrolysis capacity by 2030.¹

20 MW Pressurized Alkaline

Our journey in 2023 takes us to Finland, where P2X Solutions, a pioneering project developer, is implementing Finland's first large-scale green hydrogen production plant in Harjavalta. This year, [we installed our 20-megawatt pressurized alkaline electrolysis technology on site](#). P2X Solutions aims to achieve a total capacity of one gigawatt for green hydrogen production by 2031.²

30 + 30 MW Pressurized Alkaline

We are taking another look at one of the key projects in Germany's energy transition – the Bad Lauchstädt Energy Park. The new hydrogen plant is being built from the ground up. [At the heart of the project is our 30-megawatt pressurized alkaline electrolyzer](#). We participated in the groundbreaking ceremony in June of this year, and a few weeks ago, the European energy supplier Uniper and the multi-energy company TotalEnergies signed the first off-take agreement. Uniper is groundbreaking in the development of the European hydrogen economy.

Another project is the Swedish "Project AIR" between Uniper and the chemical company Perstorp to revolutionize chemical production. In this project, we will supply our pressurized alkaline electrolysis technology with a capacity of 30 megawatts.

Progress by Innovation

In 2023, we made progress in several projects involving our SOEC technology. As part of the MultiPLHY project, we installed the world's first SOEC electrolyser to be operated in an industrial environment at Neste's refinery in Rotterdam. Additionally, we are continuing our successful GrInHy project series with Salzgitter AG and the TU Bergakademie Freiberg in the third project. At the Salzgitter flat steel plant, we will integrate our state-of-the-art Sunfire SOEC technology into the existing hydrogen network.

¹) source: "Growing Green"-Strategie von RWE: <https://www.rwe.com/presse/rwe-ag/2021-11-15-rwe-startet-investitions-und-wachstumsoffensive/> – Die Elektrolysetechnik von Sunfire am RWE-Standort ist Teil des Wasserstoff-Leuchtturmprojekts GET H2

²) source: P2X Website: <https://p2x.fi/en/>

About Sunfire

Sunfire is a global leader in the production of industrial electrolyzers based on pressurized alkaline and solid oxide (SOEC) technologies. With its electrolysis solutions, Sunfire is addressing a key challenge of today's energy system: Providing renewable hydrogen and syngas as climate-neutral substitutes for fossil energy. Sunfire's innovative and proven electrolysis technology enables the transformation of carbon-intensive industries that are currently dependent on fossil-based oil, gas, or coal. The company employs more than 650 people located in Germany and Switzerland.

For more information visit www.sunfire.de

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