



# Enapter

CORPORATE NEWS

## Enapter presents the world's first AI-powered electrolyzer

- Artificial intelligence - AI - ensures a continuous improvement process in the production of green hydrogen
- Unique data set from over 2.7 million operating hours forms the basis for the first market-relevant AI application in hydrogen production
- Overall system efficiency is significantly increased
- All Enapter Electrolyzer are always up to date with "Over the Air" software updates

Hamburg, 27 March 2025: Enapter AG (ISIN: DE000A255G02) has developed a innovative AI software that enables it`s customers to further optimize the performance of their AEM electrolyzers. Artificial Intelligence analyzes the data from the measuring sensors installed in the electrolyzer, which record temperature, pressure and power consumption at various points, for example. The AI control the devices in real time and intervene where necessary, enabling an improved energy flow and increasing the efficiency of the devices. The AI models are transmitted "over the air" to the electrolyzers and automatically optimize the performance of the end device. Multiple sensors on each stack also measure wear and tear and can determine the optimal maintenance cycle in comparison with similarly configured devices and site conditions. This predictive approach avoids costly breakdowns and increases the overall lifespan of each connected device. By incorporating data from the connected energy sources such as PV systems and wind power, as well as additional components such as batteries, the overall energy management of the system can be improved. By predicting fluctuations in the availability of these fluctuating energy sources, the operation of the electrolyzers can be adjusted, improving overall sustainability and cost efficiency. The first version of the AI will be available to existing and new Enapter customers from April 17, 2025.

The new AI software is based on Enapter`s self-developed Energy Management System (EMS). Over the past six years, real data from 2.7 million operating hours has been collected from thousands of Enapter electrolyzers delivered worldwide. The devices, which are stationed in almost all climate zones, have provided extensive data for a large number of different applications.

At the Hannover Messe from March 31 - April 4, 2025, the company will present the pre-release of the AI to interested parties at the following Enapter Partner booths:

H2Core Systems (Stand D07)

JA-Gastechnology (Stand C09)

Fuel Cell Systems (Stand D11/1)

Hephas Energy (Stand B20/1)

Cosber Hydrogen (Stand C22)

Dr. Jürgen Laakmann, CEO of Enapter: "Thanks to the unique networking of literally thousands of devices, all Enapter units are constantly learning from each other. Our AI creates numerous opportunities to further improve the electrolyzers and makes the results available to all our customers

in real time. This creates a permanently learning swarm intelligence that recognizes patterns, enables innovation boosts and reduces the hydrogen production costs of every Enapter user

## **About Enapter**

Enapter is the market leader in the field of AEM electrolyzers - innovative devices that produce green hydrogen. The company's patented and proven anion exchange membrane (AEM) technology eliminates the need for expensive and rare raw materials such as iridium and enables maximum yield from fluctuating renewable energies such as solar and wind through a unique modular design, resulting in highly efficient production of green hydrogen. Thousands of Enapter AEM electrolyzers are already in use at around 360 customers in more than 55 countries in the fields of energy storage, industrial applications, refueling, power-to-X and research. The Enapter Group is headquartered in Germany and has a research and production site in Italy.

Enapter AG (H2O) is listed on the regulated market of the Frankfurt and Hamburg stock exchanges, ISIN: DE000A255G02.

## **Further information:**

Website: <https://www.enapter.com>

Twitter: <https://www.twitter.com/Enapter>

LinkedIn: <https://www.linkedin.com/company/enapter>

Facebook: <https://www.facebook.com/enapterenergystorage>

Instagram: <https://www.instagram.com/enapter>

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