H2o renewable energy solutions

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Green hydrogen (H2) is a versatile energy carrier that can be applied to decarbonize a wide range of sectors. It can be used directly or in the form of its derivatives like e-Methanol, e-Ammonia, or e-Fuels to replace fossil fuels like coal or gas. Only around 40% of global carbon dioxide (CO2) emissions originate from power generation which can be decarbonized via electrification. The other 60% of CO2 emissions originate from industry, mobility, buildings and others. These can be decarbonized via sector coupling, using green hydrogen and its derivatives to make renewable energy available to those sectors. This is why the production of sustainable hydrogen is so important for the energy transition.

Discover the new name of our electrolysis portfolio by watching the video!

Elyzer is designed for industrial-scale applications of renewable hydrogen in both industry and mobility sectors.

With our product, Elyzer P-300, we emphasize our innovative strength and commitment to scaling the hydrogen economy within the energy transition. The "P" denotes Proton Exchange Membrane technology.

With our new name, we strengthen our position as a leading provider in this important field and invite you to become part of the hydrogen revolution.

Generating green hydrogen efficiently from water and renewable energy requires high-end technology and innovative solutions -- like our electrolyzer product family from Siemens Energy. Using Proton Exchange Membrane (PEM) electrolysis, our electrolyzer is ideally suited for harnessing volatile energy generated from wind and solar. Combining high efficiency and high power density, our PEM electrolyzers ensure gas products of superior quality. It is easy to operate and requires low maintenance. Using a modular design strategy that splits the electrolysis system into skids, we are able to optimize costs, reduce installation costs, and make the electrolysis system transportable.

The prefabricated PEM electrolyzer, with stacks combined in groups, allows for modular and rapid on-site installation. It serves as a cornerstone in the Trailblazer project, highlighting the capabilities of our advanced electrolyzer core system.

Our commitment to grid integration and safety is evident in our approach, encompassing transformers and in-house developed rectifier configurations. The successful upscaling to a higher power level is demonstrated in the depicted 50 MW reference plant.

Leveraging our extensive energy industry experience, we ensure seamless implementation of large-scale

projects and deliver comprehensive electrolysis plant services. Our modular electrolyzer core system design enables the creation of plants up to gigawatt capacity.

The new gigawatt electrolyzer plant in Berlin is highly automated with robotics and digitalization.

Carbon emission targets in the European Union and other industrialized countries will require massive scaling-up and acceleration of renewable hydrogen production and imports.

That"s why we have joined forces with Air Liquide to create a joint venture dedicated to the series production of industrial-scale renewable hydrogen electrolyzers. In 2023, we started production of electrolysis stacks at our multi-gigawatt electrolyzer facility in Berlin and will ramp up the production. The factory will supply stacks to Siemens Energy and Air Liquide for our broad range of customers and serve the rapidly growing market.

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