Brief description

Energiepark Mainz is a joint project of Stadtwerke Mainz AG, the Linde Group, and Siemens Energy, and was created under the scientific supervision of RheinMain University.

Since July 2015, three SILYZER 200 PEM electrolysis systems have been converting wind energy to hydrogen and making the hydrogen storable. The hydrogen generated on site from renewable resources is fed into the local gas grid or delivered to surrounding industry and hydrogen filling stations via tank trailers – with green certification on request.

3.75 MW

6 MW maximum temporary power consumption

“Power-to-gas is the essential key technology for utilizing renewable energy in the heating and transport sectors.”

Jonas Aichinger, project manager at Stadtwerke Mainz

“As operators, we’re very satisfied with the plant and service from Siemens Energy.”

Christoph Stiller, project manager at Linde AG
Use case

Energiepark Mainz uniquely demonstrates the concept of sector coupling. The power-to-gas plant produces sustainable hydrogen for mobility and industry and is able to provide reserve power in the event of bottlenecks in the power grid.

The combination of feeding hydrogen into the natural gas grid (Mainzer Stadtwerke) and utilizing it by filling tank trailers (Linde) is worth highlighting.

Industry
Delivery to surrounding industrial companies, with “green” certification on request.

Mobility
Provision of highest-quality hydrogen to regional hydrogen filling stations.

Energy
Feeding of green hydrogen into the local natural gas grid.

Challenge
Provision of hydrogen in industry standard 5.0

- Installation of world’s first PEM electrolysis plant in the multiple megawatt range
- Provision of balancing energy
- High degree of automation

Solution
Installation of PEM electrolysis

- Installation of three SLYZER 200 with a maximum power consumption of 6 MW
- Highly dynamic power consumption
- Hydrogen processing, condensing, and storage (provided by Linde)

Published by
Siemens Energy Global GmbH & Co. KG
New Energy Business
Freyeslebenstr. 1,
91058 Erlangen, Germany

For more information, please visit our website:
siemens-energy.com/electrolyzer

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

Siemens Energy is a trademark licensed by Siemens AG.