

Hydrogen is now.

H-TEC SYSTEMS

PRESS RELEASE

H-TEC SYSTEMS supplies 5 electrolyzers to Germany's biggest hydrogen mobility project

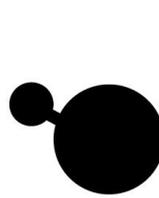
- **Made-in-Germany container solution provides an impressive decentralised and geographically flexible application for the production of hydrogen from wind power**

19 December 2018, Lübeck – H-TEC SYSTEMS supplies five ME 100/350 PEM electrolyzers to eFarm, Germany's biggest green hydrogen mobility project. eFarming GmbH & Co. KG is establishing a modular, expandable mobility infrastructure in North Frisia which will cover energy production, processing and usage for both local public transportation services and private transport. Hydrogen will be produced from wind power at five sites and then supplied as a fuel via the company's own logistics system to two new, public hydrogen filling stations in Niebüll and Husum, also operated by eFarm. The H-TEC SYSTEMS electrolyzers are the key technological component in refining power from renewable energy sources, opening up new and attractive markets beyond the EEG (German Renewable Energy Act), especially for wind farm operators. The compact structure of the unit in a 20-foot container makes the ME 100/350 highly flexible in terms of location: as part of the green hydrogen mobility project "eFarm" it can be set up close to the wind power plants and also close to heat sinks so as to tap into the heat generated during production for the purpose of sustainable local heat supply.



“The product meets the SAE J2719 standard for use in fuel cell vehicles and delivers the hydrogen at a pressure of 30 bar. This enables it to undergo further utilization via storage, transport and fuelling,” explains H-TEC SYSTEMS managing director Frank Zimmermann. He goes on to point out: “Hydrogen is the zero-emissions fuel of the future for all

types of mobility, in particular for public local transport and heavy vehicles such as buses, trucks, trains and ships. eFarm has the clear potential to act as a role model for other regions, showing how PEM electrolysis can be used to refine power from renewable energy sources for the purpose of regional value creation and using hydrogen to tap into new markets.”



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The ME 100/350 being deployed in this case is capable of converting up to 5.4 MWh of energy into 4 MWh of hydrogen and 1 MWh of heat per day. The overall efficiency is thus as high as 95 per cent. At an electrical load of 225 kilowatts each, the 5 PEM electrolyser stacks to be installed as part of the eFarm project will produce a total of up to 500 kilograms of green hydrogen per day, allowing up to 17 hydrogen-powered buses to be fuelled on a daily basis. H-TEC SYSTEMS' own PEM electrolysis stacks not only produce the hydrogen at a pressure of up to 30 bar but also at a very high level of purity of as much as 99.999%, including downstream drying.

André Steinau (eFarm Project Manager) explains the additional requirements that have to be met: "Professional service is needed so as to ensure secure operation over several years with a high degree of plant availability. H-TEC SYSTEMS develops and produces the central components – electrolysis stacks – in Braak/Schleswig-Holstein near Hamburg, so a team of experts can always be called in quickly and reliably."

Picture caption: Construction in progress: managing directors Frank Zimmermann and Dr. Joachim Herrmann (from left to right) provide an insight into the PEM electrolyser of the series ME 100/350, being manufactured for eFarm.

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Press contact:

H-TEC SYSTEMS GmbH, Marie-Goeppert-Straße 9a, 23562 Lübeck
h-tec-systems.com

Ms. Birka Friedrich
Head of Corporate Communications H-TEC SYSTEMS
(GP JOULE Group)
T +49 (0) 4671 6074-237
b.friedrich@gp-joule.de

About H-TEC SYSTEMS

H-TEC SYSTEMS belongs to the GP JOULE Group and offers high-quality electrolysis stacks and electrolysis systems, specialising in the polymer-electrolyte-membrane method. PEM technology ensures production of hydrogen in very high purity. With sites in Schleswig-Holstein and Bavaria, the company has been developing innovative techniques and new devices for industrial use on this basis since 2010.