

Second Generation ITM Power PEM Electrolyser System Deployed

ITM Power (AIM: ITM), the energy storage and clean fuel company, is pleased to announce that it has successfully delivered the rapid response Power-to-Gas PEM electrolyser system sold to RWE Deutschland AG (“RWE”) within 10 weeks of receiving the order.



Having already completed factory acceptance testing, this is the third rapid response Power-to-Gas energy storage system installed by ITM Power in Germany. It is the first second generation unit and represents another reference site for ITM Power’s world leading technology.

On the 11 December 2014 the Company announced that it had won a competitive tender for the supply of a rapid response Power-to-Gas PEM electrolyser system issued by RWE. As part of the Company’s drive to increase productivity, and as a result of product standardisation, delivery timescales have been significantly reduced and the Company can confirm today that assembly, factory acceptance testing and delivery were all achieved in less than 10 weeks.

The system is a second generation ITM Power PEM electrolyser system using a higher current density, permitting higher hydrogen output per stack. The system efficiency is also increased by simplification of the balance of plant. The system incorporates the very first deployment of the new AEG advanced power conversion electronics, the benefits of which include: ultra-high power factor, rapid response time and higher efficiency over full operating range.

RWE will be injecting hydrogen into the gas network as part of their Power-to-Gas installation and evaluating the very fast electrolyser system response and exploring its exploitation in grid balancing. The following press release was issued by RWE:

**Pilot Project for Power-to-Gas Energy Storage in Ibbenbüren
A Central Component was Delivered Today**

“Today an electrolyser was delivered, which forms the technical core of a Power-to-Gas demonstration plant currently being installed by RWE Deutschland in Ibbenbüren. Following further preparatory work and a short test operation, the plant is expected to go into operation in the first half of 2015. The new plant will produce hydrogen from renewable electricity, which in turn will be injected locally into the gas grid.

On the basis of its ability to be operated in a variety of modes and various applications, Power-to-Gas technology will play a key role in the Energiewende. Electricity from wind and solar, which is not immediately consumed, can be used to produce gas, which is then stored for later use. By deploying this technology in the gas network, renewable energy can also be deployed in both the mobility sector and/or the heat sector.”

Dr. Stefan Kempen, Product Manager, AEG, commented: “ITM Power is the first recipient of our new generation Thyrobox power converter technology. Integrated with ITM Power’s rapid response PEM electrolyser, this enables very rapid modulation, best in class power conversion efficiency together with high power factor over the fullest operating range; all important attributes for electrolyser systems to be deployed in energy storage applications.”

Phil Doran, MD, ITM Power GmbH, said: “The delivery of this second-generation electrolyser unit within ten weeks has been enabled by an ongoing production run of standard electrolyser systems and is testimony to the great working relationship which has been developed between ITM Power and RWE. We are also delighted to be integrating the best technology available.”