Hydrogen Europe:
European Hydrogen & Fuel cell Project Database

Project MEGASTACK

Stack design for a Megawatt scale PEM electrolyser.

Water electrolysis based on PEM technology has demonstrated its applicability to produce hydrogen and oxygen in a clean and safe way on site and on demand. Systems have been demonstrated in a wide range of niche applications with capacities from << 1 Nl/h to 30 Nm^3/h. PEM electrolysers offer efficiency, safety and compactness benefits over alkaline electrolysers. However, these benefits have not been fully realised in distributed hydrogen generation principally due to high capital costs. In order for PEM electrolysers to fit with the need for large scale on-site production of hydrogen for hydrogen refuelling stations (HRS), renewable energy storage, grid balancing and "power to gas" the capacity of PEM electrolysers should be increased to at least 3-4 MW. The main goal of this project will be to develop a suitable stack design for PEM electrolysers in the MW range using large area cells and the necessary CCMs/MEAs, current collectors and seals for the large area cells.

Project Information

Type of project : Research
Timing : 01/10/2014 > 30/09/2017
Project website: http://www.megastack.eu
Project Budget : 3.912.286 €

Funding

European Union through FCH JU: **Grant agreement 621233 - CORDIS link**

Project partners

Coordinator :
Stiftelsen SINTEF
Partners :
Fraunhofer ICT-IMM Fraunhofer Institute for Chemical Technology ICT, Branch IMM
CEA - Commissariat à l'énergie atomique et aux énergies alternatives
ITM POWER (TRADING) LIMITED

Sub project(s)

Sub project 1

Country: Norway
Address:
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Sub project categories
Research

Project Id: 1044
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