



Hydrogen Europe: European Hydrogen & Fuel cell Project Database

Project HYPER

Integrated hydrogen power packs for portable and other autonomous applications

The proposed HYPER System is a scalable and flexible portable power platform technology representing significant advances in terms of fuel cell development, hydrogen storage and associated supply. R&D will generate both new scientific knowledge and new technologies for exploitation. Specifically the project will: • Focus on developing a system based on application specific operational and performance targets, informed by early and ongoing end user intelligence; • Embed cost improvement and design for manufacture within the development pathway to optimise material and assembly costs and meet key cost targets; • Demonstrate complete application specific prototypes in the field with end users; • Deliver a market ready system that is flexible in design, and cost effective, for rapid roll out across multiple applications. The HYPER System can be readily customised to meet a range of application specific requirements including: power output, energy (or runtime), fuelling options, and cost (capex and opex). The system is based on a modular LT PEM fuel cell system with a common interface to use with alternative hydrogen supply modules. Two generic types of (interchangeable) hydrogen storage module will be developed: a bespoke gaseous hydrogen storage module; and a solid-state hydrogen storage module based on nanostructured hydrogen storage materials. Two proof of concept HYPER Systems will be developed and demonstrated; 100 We portable power pack/field battery charger, and a 500 We (continuous) range extender for a UAV. This will validate the scalability and robustness of the system whilst addressing early market opportunities that are aligned with the direct commercial interests of the Consortium Partners. The Consortium will provide a European supply chain, and early routes to market, for the subsequent commercial exploitation of the HYPER System.

Project Information

Type of project : Research

Timing : 03/09/2012 > 02/09/2015

Project website: <http://not provided PRD 2016>

Project Budget : 3.923.909 €

Funding

European Union through FCH JU: [Grant agreement 303447 - CORDIS link](#)

Project partners

Coordinator :

Orion Innovations (UK) Ltd

Partners :

[IEN - Instytut Energetyki](#)

[McPhy](#)

PAXITECH

UNIVERSITY OF GLASGOW

AIRBUS DEFENCE AND SPACE GMBH

JRC - JOINT RESEARCH CENTRE - EUROPEAN COMMISSION

Sub project(s)

Sub project 1

Country: United Kingdom

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Sub project categories

Research

Project Id: 1008

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