



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project PURE

Development of Auxiliary Power Unit for Recreational yachts

In Europe there is a very narrow technology base in portable fuel cell systems which can be applicable for various areas like emergency and remote power, recreational applications, personal portable power and educational devices. The PURE project targets these markets with the primary focus on maritime applications with a device, which will be portable, low weight and volume, based on improved HT PEM fuel cell technology. This proposal describes the project in which a fuel cell system will be designed, build, tested and demonstrated with emphasis on meeting all major technical requirements the codes and standards required to be integrated in a maritime application. The objective of the PURE project is to create a system fueled by propane/LPG, which is converted into a hydrogen rich stream and subsequently fed into a HT PEM stack based on PBI technology. In the end the system delivers electric power to a cover the hotel power demand of a small yacht. The use of off-the-shelf, mass-produced components and design practices both developed in previous European funded projects will result in a small system which is low cost and able to reach the specifications. The consortium gathered to work in this project is a combination of partners who have experience in: 1. Defining the market requirements, codes and standards of the system 2. Translating these requirements into technical specifications and models 3. Designing and building prototype systems 4. Testing and validating the systems in laboratory environment and through real life demonstration in a yacht. This covers the value chain of the system under discussion. The final result will be two working prototypes of the PURE system, which will be demonstrated under laboratory environmental condition and in a real ship to show that it is robust enough to be ready for the next phase of field trials.

## Project Information

**Type of project :** Demonstration

**Timing :** 01/01/2013 > 30/06/2016

**Project website:** <http://pure-project.eu/>

**Project Budget :** 2.884.875 €

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## Funding

European Union through FCH JU: **Grant agreement 303457 - CORDIS link**

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## Project partners

**Coordinator :**

[HyGear Fuel Cell Systems B.V.](#)

**Partners :**

[DVGW - German Technical and Scientific Association for Gas and Water](#)

[CERTH \(National Centre for Research and Technology Hellas\) with CPERI](#)

JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION

SCHEEPSWERF DAMEN GORINCHEM BV

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**Sub project(s)**

**Sub project 1**

**Country:** Netherlands

**Address:**

Westervoortsedijk 73 6802 EG Arnhem

**Sub project categories**

Demonstration

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Project Id: 1072

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