

OxiGEN

Next-generation Solid Oxide Fuel Cell (SOFC) stack and hot box solution for small stationary applications



Key Facts



Funding Agency
EU FCH 2 JU



Project Call
FCH-02-9-2017



Duration
01/2018 - 12/2020



Coordinator
Société Européenne des
Produits Réfractaires [SG SEPR]



Partners

- Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA)
- ICI Caldaie SPA
- ENGIE
- Fraunhofer Institute for Ceramic Technologies and Systems IKTS
- SINTEF
- Saint-Gobain Centre de Recherche et d'Études Européen [CREE]
- Saint-Gobain Recherche [SGR]



Website
<http://oxigen-fch-project.eu/>

Project Objectives

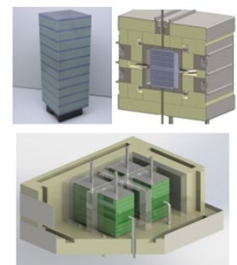
OxiGEN aims at developing an innovative SOFC technical set-up for small stationary applications. It includes i.a. an all-ceramic stack design and a modular hotbox balancing the system's heat requirements. With its higher durability and simpler design, this novel stack can fulfill the customers' needs for long lifetime, high efficiency and low cost in micro-CHP and other segments.

The projects' technical objectives address all the call challenges:

- Define, with input from the Advisory Panel, the most suitable hotbox functional specifications for residential and commercial segments;
- Develop a higher power stack to reach the call's technical targets;
- Develop a modular hotbox concept and build a 1kWe prototype (in practice, 500We to 1500We depending on preferred micro-CHP power specification);
- Assess the performance of the prototype in system-like conditions;
- Study the cost-of-ownership of the solution;
- Propose material-based solutions for future long-term improvements;
- Ensure the manufacturability and compatibility of the new hotbox with the EU supply chain;
- Disseminate results and build the exploitation plan.

EIFER's Contribution

EIFER is mainly responsible for the manufacturing of advanced cell layers and cell testing and contributes to the definition of test protocols and to the stack design.



All-ceramic stack and modular hotbox for small power applications (<10kW)

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (JU) under grant agreement No 779537.



FUEL CELLS AND HYDROGEN
JOINT UNDERTAKING

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