



# Hydrogen Europe: European Hydrogen & Fuel cell Project Database

## Project HEATSTACK

Production Ready Heat Exchangers and Fuel Cell Stacks for Fuel Cell mCHP

Fuel cells have shown great promise for residential micro-Combined Heat and Power (mCHP) generation due to their high electrical efficiency and ability to run on conventional heating fuels. Technology leaders in this sector are nearing commercial deployment following extensive field trials but high capital costs remain a key challenge to the advancement of this sector and mass market introduction in Europe. The HEATSTACK project focuses on reducing the cost of the two most expensive components within the fuel cell system; the fuel cell stack and heat exchanger, which together represent the majority of total system CAPEX. Cost reductions of up to 60% for each component technology will be achieved by: - Advancing proven component technologies through the optimisation of design, materials and production processes for improved performance and quality; - Developing and applying novel tooling for laser welding and automated production lines to remove manual processing steps; - Improving cycle times and reducing time to market; - Demonstrating design flexibility and production scalability for mass manufacturing (10.000 units per annum); and - Developing core supply chain relationships to allow for competitive sourcing strategies. The HEATSTACK project represents a key step towards achieving commercial cost targets for fuel cell mCHP appliances, bringing together leading technology providers in the fuel cell mCHP supply chain with extensive industrial expertise to accelerate the development towards volume production of the fuel cell stacks and heat exchangers. Cost reductions will be achieved through advanced design, development and industrialisation of core manufacturing processes. Improvements to component performance with advanced materials will reduce system degradation and improve overall system efficiency and lifetime.

## Project Information

**Type of project :** Research

**Timing :** 01/04/2016 > 30/06/2019

**Project website:** <http://www.heatstack.eu/news-and-events/heatstack-production-ready-heat-exchang...>

**Project Budget :** 2.899.760 €

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## Funding

European Union through FCH JU: **Grant agreement 700564 - CORDIS link**

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## Project partners

**Coordinator :**

I.C.I CALDAIE SPA

**Partners :**

**Sunfire**

**University of the Basque Country - Departamento de Ingeniería Química y del Medio Ambiente**

PNO CONSULTANTS LIMITED

SENIOR FLEXONICS CZECH S.R.O.

VAILLANT GMBH

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**Sub project(s)**

**Sub project 1**

**Country:** United Kingdom

**Address:**

59/61 HIGH STREET RICKMANSWORTH WD3 1RH LONDON HERTFORDSHIRE

**Sub project categories**

Research

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Project Id: 985

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