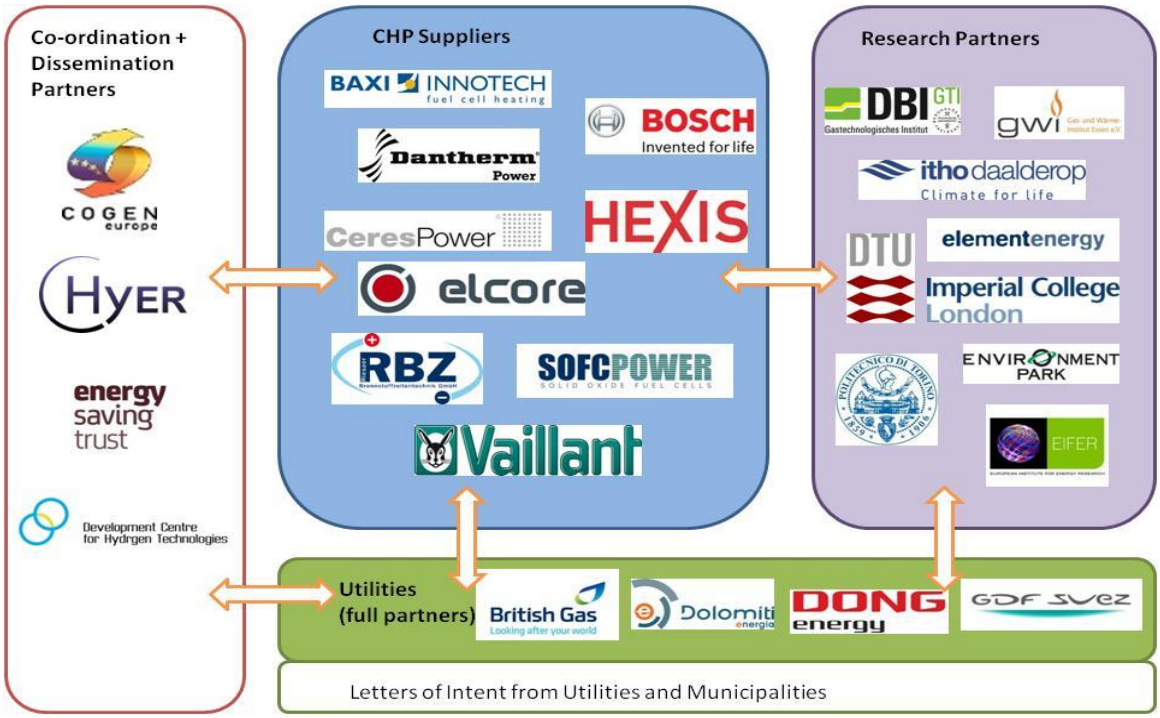
European-wide field trials for residential fuel cell micro-CHP

About the project

The ene.field project is the largest European demonstration of the latest smart energy solution for private homes, micro-CHP. It will see up to 1,000 households across Europe able to experience the benefits of this new energy solution.

The ene.field project consortium is shown in the following diagram:



The project deploys up to 1,000 residential FC-CHP installations across 12 EU Member States, and brings 9 European micro FC-CHP manufacturers into a common analysis framework to deliver trials across all major micro FC-CHP technologies.

To communicate clear national strategies on micro-CHP within Member States, ene.field establishes the macro-economics and CO2 savings of the technologies in their target markets and makes recommendations on the most appropriate policy mechanisms to support the commercialisation of domestic micro-CHP across Europe.

The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for the Fuel Cells and Hydrogen Joint Technology Initiative under grant agreement n° 303462

ene.field will also assess the socio-economic barriers to widespread deployment of micro-CHP and disseminate clear position papers and advice for policymakers to encourage further roll-out.

About the technology

Micro-CHP refers to the small-scale production of heat and power for commercial and public buildings, apartments and individual houses. These units meet the demand for both space heating and hot water whilst providing electricity to supplement or replace the grid supply.

A fuel cell is a device that converts the chemical energy from a fuel into electricity through an electrochemical process. It combines hydrogen produced from a fuel, in this case natural gas, and oxygen from the air to produce electricty and heat. The fuel cell systems offer many potential benefits as a distributed generation system.

This technology has benefits such as the electricity generation as a by-product of heat, the carbon savings, the easy instalation, a similar service and maintenance costs as the standard boilert, etc

Aims of the project

- **Create real world learning** – demonstration of market potential, segmentation, cost and environmental benefits of micro FC-CHP;
- **Develop market-oriented product** specifications and harmonised codes and standards;
- **Set up** a **more mature supply chain**, readied for deployment of micro FC-CHP in 12 Member States;
- **Provide evidence base on cost and environmental performance** that can be used to accelerate policy support from governments and adoption by channels to market.

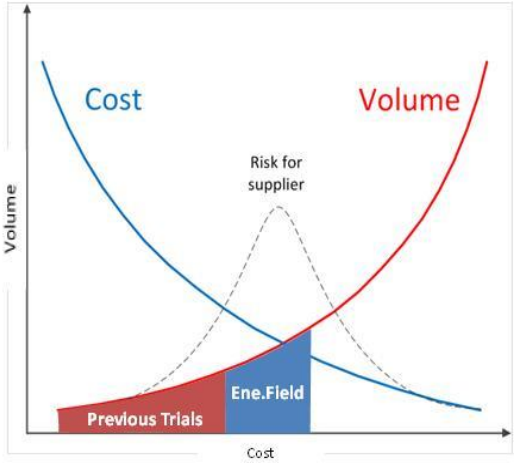


Figure - Cost, volume and risk

Funding sources

The ene.field project is co-funded by the partners and the European Commission's Fuel Cells and Hydrogen Joint Undertaking Programme (FCH JU). This project is a significant step to overcome the challenges of commercialising fuel cell technology used in micro-CHP mode in residential buildings.

For more information, visit www.enefield.eu or contact info@enefield.eu

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