

PROJECT

eGHOST

Establishing Eco-design Guidelines for Hydrogen Systems and Technologies

Funding: European (Horizon 2020)

Duration: Jan 2021 - Dec 2023

Status: Ongoing

Total project cost: €1,133,541

EU contribution: €998,991



Call for proposal: H2020-JTI-FCH-2020-1

[CORDIS RCN : 232693](#)

Objectives:

eGHOST will be the first milestone for the development of eco-design criteria in the European hydrogen sector. Two guidelines for specific FCH products (PEMFC stack and SOE) will be completed and the lessons learnt will be integrated in the eGHOST White Book, a reference guidance book for any future eco-design project of FCH systems.

eGHOST aims to support the whole FCH sector. Therefore, it addresses the eco-(re)design of mature products (PEMFC stack) and those emerging with TRLs around 5 (SOE) in such a way that sustainable design criteria can be incorporated since the earliest stages of the product development.

eGHOST will go a step beyond the current state of the art of eco-design by incorporating eco-efficiency assessment, i.e. combining environmental and economic decision-making tools, and social life cycle assessment to determine the social impacts of the products. Therefore, eGHOST proposes a sustainable (re)design looking at minimizing the economic, environmental and social impacts of the products along their life cycle. Other innovation will be the use of prospective approach for the life cycle thinking tools used to assess the products performance, i.e. to determine the impacts of all the life cycle stages of the product at the time of its occurrence. This is required to get valid information of those products at early stages of development.

The European Commission considers eco-design as a key factor to fulfil its commitment to a climate-neutral and circular economy in 2050 as identified in different documents (EU Green Deal, New Industrial Strategy for Europe, Circular Economy Directive). eGHOST will contribute to positioning FCH in this context by developing the first preparatory study of a hydrogen product under the guiding principles of the Eco-design Directive. As well, eGHOST will improve the understanding of FCH technologies as a sustainable investment under the EU Taxonomy, and will enhance Corporate Social Responsibility studies.

Parent Programmes:

[H2020-EU.3.3. - Horizon 2020: SOCIETAL CHALLENGES - Secure, clean and efficient energy](#)

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Funding type: Public (EU)

Other programmes: FCH-04-3-2020 Development of eco-design guidelines for FCH products

Lead Organisation:

Fundacion Imdea Energia

Address:

AVENIDA RAMON DE LA SAGRA 3
28935 MOSTOLES MADRID

Spain

Organisation Website:

<http://www.imdea.org/energia>

EU Contribution: €275,890

Partner Organisations:

Commissariat A L Energie Atomique Et Aux Energies Alternatives

Address:

RUE LEBLANC 25
75015 PARIS 15
France

Organisation Website:

<http://www.cea.fr>

EU Contribution: €150,914

Fundacion Para El Desarrollo De Las Nuevas Tecnologias Del Hidrogeno En Aragon

Address:

CR ZARAGOZA N 330A KM 566 CUARTE
22197 HUESCA
Spain

Organisation Website:

<http://www.hidrogenoaragon.org>

EU Contribution: €169,000

Symbio

Address:

14 RUE JEAN PIERRE TIMBAUD
38600 FONTAINE
France

Organisation Website:

<http://www.symbiofcell.com>

EU Contribution: €225,250

Univerza V Ljubljani

Address:

KONGRESNI TRG 12
1000 LJUBLJANA
Slovenia

Organisation Website:

<http://www.uni-lj.si>

EU Contribution: €177,938

Technologies:

Fuel cells and hydrogen fuel
Development of new Fuel Cells and Hydrogen (FCH) technologies

Development phase: Demonstration/prototyping/Pilot Production

Low-emission alternative energy for transport, Other

STRIA Roadmaps: specified

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport
Societal/Economic issues, Environmental/Emissions aspects, Other

Transport policies: specified

Geo-spatial type: Other