

PROJECT

BEST4Hy

SustainaBIE SoluTions FOR recycling of end of life Hydrogen technologies

Funding: European (Horizon 2020)

Duration: Jan 2021 - Dec 2023

Status: Ongoing

Total project cost: €1,586,015

EU contribution: €1,586,015



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

[CORDIS RCN : 232493](#)

Objectives:

BEST4Hy – SustainaBIE SoluTions FOR recycling of EoL Hydrogen Technologies has the main objective of bringing to TRL5 recycling technologies adapted or developed specifically for PEMFC and SOFC which would ensure the maximisation of recycling of critical raw materials including PGMs, rare earth elements, cobalt and nickel.

Methodology:

The technologies are evaluated for cost efficiency and environmental impact to ensure the materials bring value to the European economy without harmful emissions or high energy costs. The output of the recycling technologies maximise opportunities for both closed loop and open loop recycling.

More specifically, Pt and membrane materials are delivered back for manufacturing MEAS to be tested in full stacks, while both anode and cathode materials from EoL SOFCs are treated for direct recycling into cells. The whole EoL device is considered, with technologies validated for open loop recycling and opportunities for recovery of other components of the cells/stacks explored.

BEST4Hy involves a strong consortium inclusive of FCH devices manufacturers, a leading recycling centre already aware of the market opportunities for PEM recycling, leading research organisations and innovation support specialists to deliver a recycling strategy with wide buy-in, accompanied by LCA and LCC full assessments, consideration on regulatory issues and a training program to support its take up.

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-04-4-2020 Development and validation of existing and novel recycling technologies for key FCH products

Lead Organisation:

Parco Scientifico Tecnologico Per Ambiente Environment Park Torino Spa

Address:

GALLERIA SAN FEDERICO 54 CO FINPIEMONTE
10100 TORINO
Italy

Organisation Website:

<http://www.envipark.com>

EU Contribution: €236,500

Partner Organisations:

Hensel Recycling Gmbh

Address:

MUEHLWEG 10
63743 Aschaffenburg
Germany

EU Contribution: €302,813

Aktsiaselts Elcogen

Address:

VALUKOJA 23
11415 TALLIN
Estonia

Organisation Website:

<http://www.elcogen.com>

EU Contribution: €80,000

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: €327,971

Rina Consulting Spa

Address:

VIA SAN NAZARO 19
16145 GENOVA
Italy

Organisation Website:

<http://www.dappolonia.it>

EU Contribution: €142,125

Politecnico Di Torino

Address:

Corso Duca Degli Abruzzi
10129 Torino
Italy

Organisation Website:

<http://www.polito.it>

EU Contribution: €272,813

Elringklinger Ag

Address:

MAX EYTH STRASSE 2
72581 DETTINGEN AN DER ERMS
Germany

EU Contribution: €98,544

Univerza V Ljubljani**Address:**

KONGRESNI TRG 12
1000 LJUBLJANA
Slovenia

Organisation Website:

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

EU Contribution: €125,250

Technologies:

Life cycle analysis
End of life recycling technologies

Development phase: Validation

Vehicle design and manufacturing, Other

STRIA Roadmaps: specified

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport

Transport policies:

Societal/Economic issues, Environmental/Emissions aspects, Deployment planning/Financing/Market roll-out

Geo-spatial type: Other