



SUSTAINABLE SOLUTIONS FOR RECYCLING OF END-OF-LIFE HYDROGEN TECHNOLOGIES



FUEL CELLS AND HYDROGEN
JOINT UNDERTAKING

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under grant agreement No 101007216. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme, Hydrogen Europe and Hydrogen Europe research.

BEST4Hy focuses on the development and validation of existing and novel recycling processes for 2 key FCH products: PEMFC and SOFC.

The background is a solid blue color with several semi-transparent, light blue spheres of varying sizes scattered across it. On the right side, there are several thin, white, curved lines that sweep across the frame, creating a sense of motion or a futuristic aesthetic.

An international
partnership developing
technologies for the
recovery of critical raw
materials from
hydrogen
technologies.

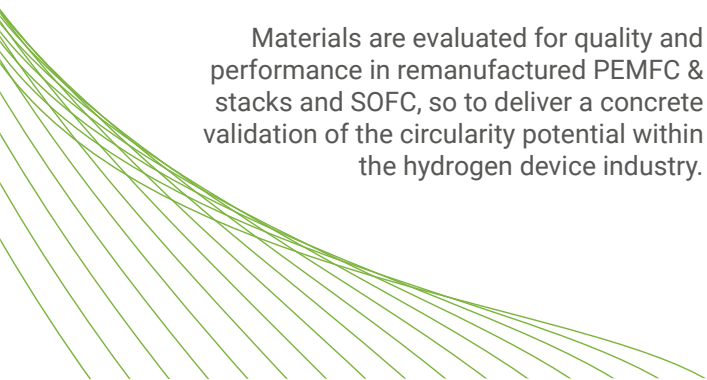


KEY ELEMENTS

BEST4Hy overall objective is to bring to TRL5 recycling technologies adapted specifically for PEMFC and SOFC which would ensure the maximization of recycling of critical raw materials including Platinum Group Materials (PGMs), rare earth elements, cobalt and nickel.

The End of Life (EoL) strategy supported is accompanied by LCC and LCA evaluations to ensure it delivers the best (cost effective and low environmental impact) material for closed loop and open loop recycling.

Materials are evaluated for quality and performance in remanufactured PEMFC & stacks and SOFC, so to deliver a concrete validation of the circularity potential within the hydrogen device industry.





- 1 **DISMANTLING OF FUEL CELLS STACK**
- 2 **IMPLEMENTATION AND VALIDATION OF RECYCLING TECHNOLOGY (CHEMICAL AND MECHANICAL PROCESSES)**
- 3 **PRODUCT VALUE CHAIN: QUALITY TESTING, CLOSED & OPEN LOOP ANALYSIS**

Regulatory aspects
Authorization replicability
for upscaling

Standardization
Ecolabelling
Ecodesign

Training: how to
recycle and dismantle



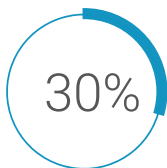
LCA/LCC
Analysis

TRANSVERSAL ACTIVITIES

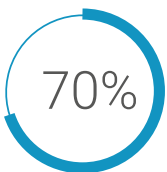
Business case

Strategic assesments

HIGHLIGHTS



Recycled critical raw materials in SOFC cells manufacturing.



Ionomer in the manufacturing of PEMs stacks.



Platinum in the manufacturing of PEMs stacks.



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