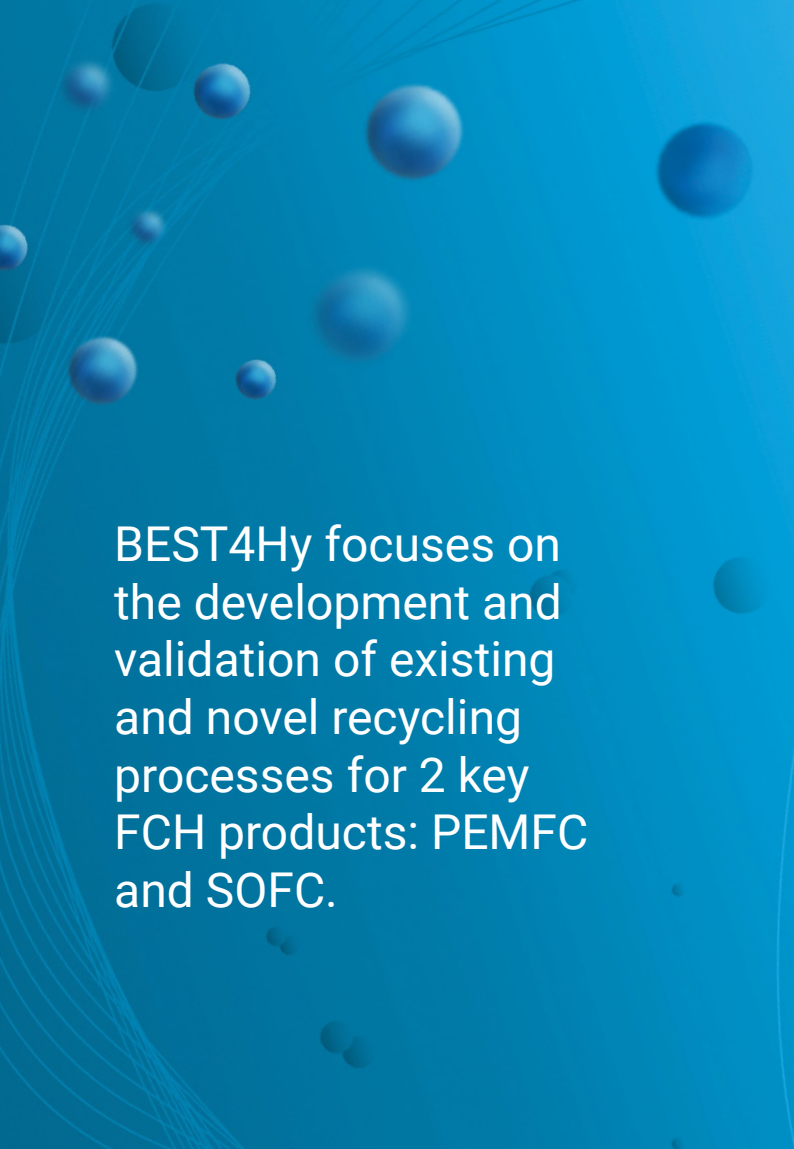




SUSTAINABLE SOLUTIONS FOR RECYCLING OF END-OF-LIFE HYDROGEN TECHNOLOGIES



This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grant Agreement No 101007216. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation program, Hydrogen Europe and Hydrogen Europe Research.

The background is a solid blue color. It features several semi-transparent blue spheres of various sizes scattered across the frame. Thin, light blue curved lines sweep across the background, primarily on the left side, creating a sense of motion or a molecular structure.

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. It features several semi-transparent, 3D-rendered spheres of varying sizes scattered across the frame. Some spheres are in sharp focus, while others are blurred, creating a sense of depth. Faint, thin white lines curve across the background, particularly on the right side, adding a dynamic, orbital feel to the composition.

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

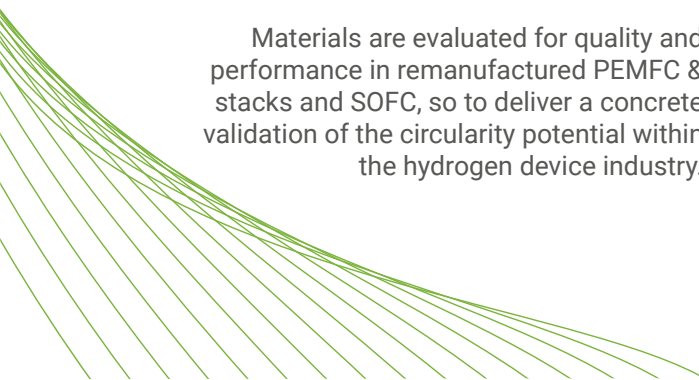


KEY ELEMENTS

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

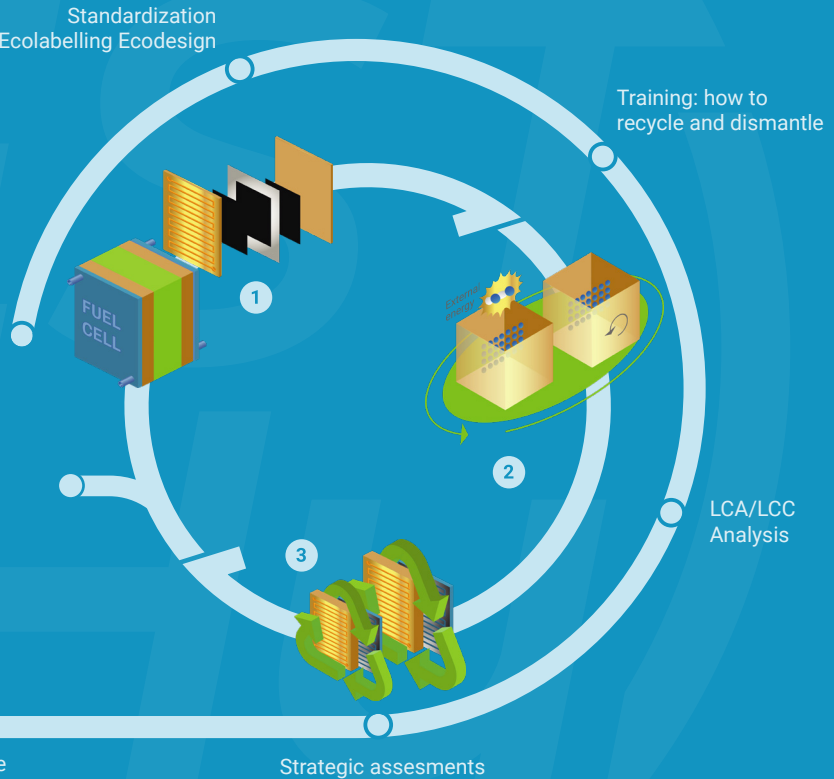
Training: how to
recycle and dismantle

LCA/LCC
Analysis

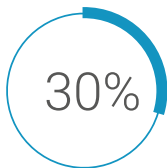
TRANSVERSAL ACTIVITIES

Business case

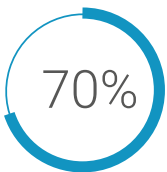
Strategic assesments



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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