

Topics in the call 2023

Cross-cutting Issues

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Cross-cutting Issues Overview



Main Focus

- Raising the environmental sustainability of FCH systems by developing rules on how to measure the life cycle environmental performance of several FCH products categories
- Underpinning the build of a highly skilled workforce in FCH technologies and applications
- Assessing the potential effects of a hydrogen economy on the climate



What is new

- Development of Product Environmental Footprint Category Rules for several FCH Products
- Establishment of a large alliance of universities, educational institutions, and schools
- Assessment of the number, sources, release rates, etc. of hydrogen releases expected from the hydrogen value chain

Cross-cutting Issues Overview

| Topic | Type of Action | Ind. Budget (M€) |
|---|----------------|------------------|
| HORIZON-JTI-CLEANH2-2023-05-01: Product environmental footprint pilot for a set of FCH product categories | CSA | 1.5 |
| HORIZON-JTI-CLEANH2-2023-05-02: European hydrogen academy | CSA | 3 |
| HORIZON-JTI-CLEANH2-2023-05-03: Pre-Normative Research on the determination of hydrogen releases from the hydrogen value chain | RIA | 3 |

Cross-cutting Issues - Topics

HORIZON-JTI-CLEANH2-2023-05-01: Product environmental footprint pilot for a set of FCH product categories



Development of Product Environmental Footprint Category Rules (PEFCRs) for several FCH product categories

- PEFCRs for ≥ 3 FCH product categories, ≥ 3 case studies within each category (≥ 9 case studies in total).
- ≥ 1 product category on H₂ production, ≥ 1 product category on H₂ end-uses, ≥ 1 product category on another step of the H₂ chain.
- Build on lessons learned from similar activities with other tech., involve stakeholders, and provide datasets (LCI) into the “Hydrogen Node” of the Life-Cycle Data Network (LCDN) managed by the JRC.



HORIZON-JTI-CLEANH2-2023-05-02: European hydrogen academy



Setup a large alliance of universities, educational institutions, and schools

- Network capable to provide certified educational training, update the teaching materials, and supply the education/ training needed in the different educational levels (focus on “formal” education, from school education to higher education).
- Collect, revise, organize, translate, and develop content and training activities on FCH tech. at all education levels, and assess the coverage of FCH education/ training at EU and MS level, identify missing building blocks, obstacles/ barriers, etc.
- Provide free (digital) access through an online portal, create ≥ 10 high-quality free-access books, a repository/ reference library of materials, school-level workbooks, network of training laboratories, digital tools, develop novel approaches for creating learning materials/ online activities on FCH tech., etc.
- Strong cooperation with the ERASMUS+ project GreenSkills4H2, links/ synergies with existing platforms/projects.



Cross-cutting Issues - Topics

HORIZON-JTI-CLEANH2-2023-05-03: Pre-Normative Research on the determination of hydrogen releases from the hydrogen value chain



Further understanding of the (human-made) hydrogen releases expected from the hydrogen value chain



- Identify, quantify, and prepare an inventory of the types of H₂ releases along the H₂ chain in 2030 and 2050.
- Identify the most critical elements along the H₂ chain links regarding potential H₂ releases.
- Develop and validate methodologies and test methods/ protocols to gather data on H₂ releases from the critical elements.
- Develop simulation tools to quantify and characterize the (total) potential H₂ releases from the whole H₂ chain considering different scenarios of deployment/ integration in the energy mix.
- Identify mitigation measures, engineering solutions, technologies, R&I actions to minimize the releases.
- Provide recommendations to support the development of EU/ international standards.
- Strong cooperation with the project resulting from the Horizon Europe Work Programme 2023-2024 Cluster 5, HORIZON-CL5-2023-D1-01-03: Climate impacts of a hydrogen economy, links/ synergies with EU and International entities and institutions on climate, atmospheric and meteorological expertise, and metrology.

Questions?
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