The Hydrogen TCP for WHEC 2022

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What is the Hydrogen TCP?

• The Hydrogen Technology Collaboration Programme was established in 1977 to pursue international collaborative research in the hydrogen field under the auspices of the International Energy Agency.

• It carries out R,D&D activities through projects focused on specific topics called Tasks.

• Its Executive Committee is formed by representatives and alternates of its 24 Member Countries, the European Commission, UNIDO and 7 Sponsors.
In a nutshell

Members
24 Member Countries
7 Sponsors
European Commission + UNIDO

Tasks
3 Ongoing
39 Finished
≥ 8 in definition

Experts involved
In collaborative research on hydrogen and hydrogen technologies

Members
33

Tasks
40+

Experts involved
250+
Strategic Plan 2020 - 2025

A future where **hydrogen plays a key, cross-cutting role** for the world economy in a sustainable, global, integrated & flexible energy system.

Facilitate, coordinate and maintain innovative RD&D activities as a **hub for international cooperation and Knowledge exchange**.

Accelerate the implementation and widespread **efficient use of hydrogen** to minimize global warming, optimize environmental protection, improve energy security and contribute to sustainable economic development - and preserving the hydrogen TCP as a **leading global source for hydrogen expertise**.
Collaboration
Joint activities with entities within the IEA Network and external
Collaboration within the IEA Network
Collaboration with other organizations
Dissemination and outreach

Activities to increase awareness and understanding and inform the interested public
Dissemination activities

- **Meetings** (at ExCo and Task level)

- Dissemination through website and social media
  - Blog
  - Twitter
  - LinkedIn

- **Events** (organization + participation)
  - Workshops, conferences, plenary sessions, and webinars
Hydrogen TCP website
Hydrogen TCP website

www.ieahydrogen.org

Tasks in Definition information

Live calendar with relevant events

Relevant hydrogen-related documents repository
Other dissemination
Strategic Activities
TRL Assessment on H₂ technologies

• In collaboration with...

• Short term
  • Update TRLs on IEA’s Clean Energy Technologies Guide

• Mid term
  • Two pagers on H₂ technologies
  • Annual update of TRL and new technologies to be tracked
  • Specialized document reviewing
Hydrogen TCP Awards of Excellence

2022 Topic: “Integrating electrolysis with wind, solar and/or nuclear energy”

Main goals:

✓ To recognize excellence in international collaboration in research, development, and application of H₂ technologies.
✓ To leverage innovation in H₂ technologies and applications.
✓ To promote and increase the outreach for winning and finalist projects.

Who can participate?

✓ Public/private energy companies, start-ups, universities, and research institutions.

Criteria:

✓ Minimum installed capacity of 1 MW ELY + in operation for at least 6 months as of the 1st of July 2022.
✓ Evaluation based on technological and environmental impact; potential for replication and scaling-up; innovation; economic impact; other benefits.

Timeline:
Tasks

Main Hydrogen TCP activities
What is a Task?

- Collaborative research **project** among parties related to hydrogen
- Usually **3-year** duration
- Led by one or more **Task Manager(s)**
- Each one has a different scope, framework and is structured in **Subtasks**
- Any member can propose a **Task**
- Participation in is indicated by submittal of a **Letter of Participation**
- Task's **Work Plan** includes scope, goals, milestones, participation requirements, structure, deliverables…
- When approved by the Executive Committee, the Task is assigned the next consecutive number and becomes part of the Hydrogen Implementing Agreement (HIA) as an **Annex**
Types of Tasks

**Closed**
Tasks that already finished. List and related reports can be found [here](#).

**Open**
Tasks that are currently active. Information about them and related documents can be found [here](#).

**In definition**
Potential Tasks in the process of defining scope and terms of their work. Information and requirements to join can be found [here](#).
Benefits of joining a Task?

✓ Join a network of international experts

✓ Contribute to defining the state-of-the-art for hydrogen technologies

✓ Participate on cutting-edge hydrogen R,D&D

✓ Visit facilities and laboratories from other Task participants

✓ Set the ground for joint demonstration projects

✓ ...
Task portfolio status (June 2022)

- Sustainable aviation fuels (with AMF)
- E-fuels (with AMF)
- Hydrogen in Islands
- Marine Applications + Ports

Preliminary Idea → Project Definition Phase → Kick-off → Active → Closing Steps → End

- Hydrogen Certification
- Natural Hydrogen
- Hydrogen Export Value Chains
- Off-shore Hydrogen Production
- Hydrogen from Nuclear Energy
- Renewable Hydrogen

- Safety and RCS of Large-Scale Hydrogen Energy Applications

- Task 40 – Energy Storage and Conversion
- Task 41 – Analysis and Modelling of Hydrogen Technologies
- Task 42 - Underground H2 Storage

- Task 37 – Hydrogen Safety
- Task 38 – PtH & HtX
- Task 39 – Hydrogen in the Maritime

Natural Hydrogen

27th June
Thank You!

For more information, contact the Technical Secretariat:

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