

Roadmaps for Hydrogen in Industries

A Task in Definition from the Hydrogen TCP

Timing

Expected start date: October 2023; Expected end date: June 2026

Main goals

- ✓ Harmonisation of the different roadmaps of the individual industrial sectors.
- ✓ Attempting to map greenhouse gas-free hydrogen production technologies as they are used in different sectors.
- ✓ Developing a timeline for the use of hydrogen in different sectors and continents.
- ✓ Start-up curves for the consumption and, derived from this, the production of greenhouse gas-free hydrogen.

Scope

In many national strategies, hydrogen is vital in plans to reduce greenhouse gas emissions, particularly in hard-to-abate sectors.

Roadmaps presenting plans to transition to lower carbon are available for most industries, but overarching objectives are scarce. In this proposed Task, the diverse roadmaps will be reviewed and compiled, and we will consider hydrogen production and consumption technologies across respective industrial sectors.

These sectors are,

- use in the high-temperature sector,
- use as a reducing agent,
- use in CCUS processes and
- us as a feedstock for building new chemical feedstocks.

Structure

The expected results can only be achieved if there is close cooperation between a wide range of stakeholders along the entire innovation chain and regular discourse on a wide range of topics.

The work will be done in three subtasks. Their results should be discussed in a Taskforce.

- **Subtask A:** Data collection and monitoring
 - Collection of roadmaps of the agreed industry sectors
 - Monitoring of the implementation steps of the different roadmaps
- **Subtask B:** Exchange of results
 - Close cooperation with Mission Innovation
 - Close cooperation with other relevant TCPs
 - Transformation of results to emerging countries
- **Subtask C:** Coordination of Outreach
 - Information events (workshops, seminars, conferences)
 - Publications

- **Taskforce**

A Taskforce consisting of representatives from Net Zero Industry Mission, Clean Hydrogen Mission, UNIDO, TCP IETS, TCP Hydrogen and other involved IEA Working Parties will meet twice a year, preferably before the ExCo meetings, and comment on progress from their perspective.

Deliverables

	Goal	Target audience	Extension
Report Subtask A	Harmonized results from the roadmaps	Decision makers in government, companies, funding organizations... in developed countries	Up to 15 pages
Protocol Stakeholder workshops	Summary of the different views	Hydrogen TCP Members	Up to 4 pages each
Protocol Taskforce meeting	Find common approach	Hydrogen TCP Members	Up to 4 pages each
Report Transformation to emerging countries	Guidance not to make the same mistakes as developed countries made in the past	Governments of emerging countries; funding organizations like the World Bank	Up to 8 pages for each sector
Proceeding Final conference	Final Report of the Task	Decision makers in government and companies.	2 pages for each slot

Collaboration

In addition to the cooperation of relevant research institutions, the involvement of the production industry as well as individual market leaders from the fields of industrial plant construction, mechanical and apparatus engineering as well as technology users is also sought.

What are we looking for?

	Requirements	Responsibilities
Co-Task Manager	25% of working time Good organization and communication skills	Report to ExCo (2/year), and Technical Secretariat (regularly, to keep the website updated, create social media content...) Co- coordinate Participation Letters Co-organize Task Meetings (1-2/year) Review subtask deliverables
Subtask A Leader	15% of working time	Organize subtask meetings (2-3/year)
Subtask B Leader	Extensive experience in roadmaps	Participate in Taskforce Meetings
Subtask C Leader	Knowledge of the expert network, important events, key publications...	Coordinate subtask deliverables Curate a group of active experts
Task experts (All subtasks)	10% of working time Active work on R&D&I	Take part in the stakeholder meetings
Taskforce members	High-level representatives from the organizations involved	Will meet twice a year, and comment on progress from their perspective.

Why should you join this Task?

- ✓ Join a network of international experts.
- ✓ Contribute to defining the state of the art for hydrogen technologies in industry.
- ✓ Your participation will be publicly acknowledged in deliverables and the Hydrogen TCP website, enhancing visibility for your work.
- ✓ Participate in cutting-edge hydrogen R,D&D.

Any organization, institution, entity, or individual expert from a member Country / Sponsor can participate in the Task upon approval of the Task Manager(s) and corresponding ExCo representatives.