

CLEAN HYDROGEN MISSION

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MISSION

Update to IPHE Steering Committee Meeting November 16, 2021

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Clean Hydrogen Mission

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CLEAN HYDROGEN MISSION

More than 17 Member countries

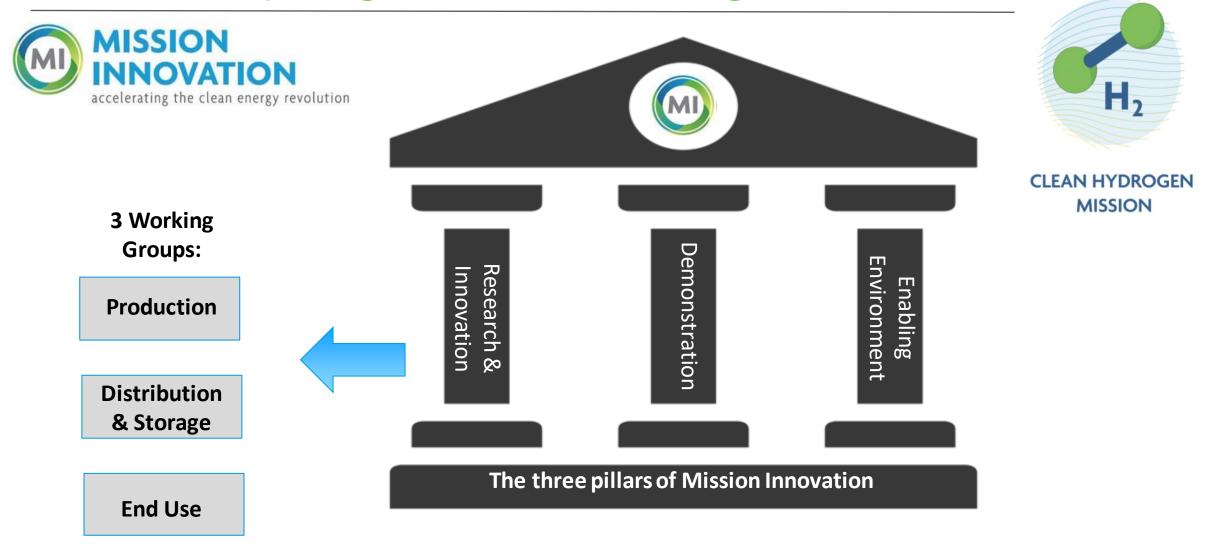
Leads: UK, EC, Australia, Chile, Saudi Arabia, US

Launched June 2021

- The Challenge: Clean hydrogen has the potential to decarbonise hard to abate sectors, such as industry and heat, which are responsible for two thirds of global emissions and help unlock the full potential of renewable energy. However, today it is up to three times more expensive than hydrogen produced directly from fossil fuels.
- The Goal: To increase the cost-competitiveness of clean hydrogen by reducing end-to-end costs to USD 2 per kilogram by 2030.
- The Mission: We will catalyse cost reductions by increasing research and development in hydrogen technologies and industrial processes and delivering at least 100 hydrogen valleys covering production, storage and end-use worldwide by 2030, to unleash a global clean hydrogen economy.



MI Clean Hydrogen Mission Background





Mission Blueprint

A Replicable, Five-step Approach that Can Be Tailored to Each Mission



Set a global goal

▶ Identify tipping point

- Analyse what will shift topic from RD&D to deployment
- ► Convene high-ambition coalition with commitments
- Identify key governments critical to achieve mission
- Identify key partners (e.g. private sector, IEA, etc)
- Mission Pact: Agree commitments to demonstrate ambition and 'skin in the game'
- ► Put in place Mission Team

Ensure Director and sufficient support in place

- ► Strong narrative & comms
- ► First 'sprint'

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Discussion Paper

► Develop roadmap to

meet the mission goal

· Map existing initiatives

and national activities

(e.g. pilot, demo

domestic and/or

· Assess and prioritize

critical innovation gaps

· Identify what enhanced

international effort is

· Identify policy, finance &

demand prerequisites to

projects)

required

support goal

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Mission Action Plan

► Agree milestones and sprints to deliver mission.

- Agree what additional efforts the mission will deliver:
- Early-stage RD&D
- · Prizes / challenges
- · Demonstration projects
- Further analysis and set theory of change
- · Investment levels needed

Demand-pull actions required (to be delivered in partnership with others): Procurement, Policies

► Agree on relevant KPIs

 Identify key metrics to track progress towards the mission goal

Roundtable to agree Action Plan & announce specific commitments to develop activities

► Build partnerships to deliver actions

쑶 Implementation

- Collaborative R&D
- Blueprint for zero-carbon value chain demos
- Roundtables, working groups to develop proposals
- Deliver through existing frameworks e.g. IEA TCPs
- Knowledge sharing
- Partnership with demand-pull initiative

► Monitor progress

against KPIs

- · Monitor commitments
- Monitor global progress towards goal
- Integrate metrics into existing reporting

► Maintain momentum

- Events
- New commitments
- New participants
- · New projects

← COP-26→ · Identify key r

progress towards the mission goal $\leftarrow Post-COP-26 \rightarrow$

ommitments to

tivities

Ongoing work

programme

Annual Ministerial Roundtables to review progress and agree new actions and activities

Launch Mission —

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Publish report

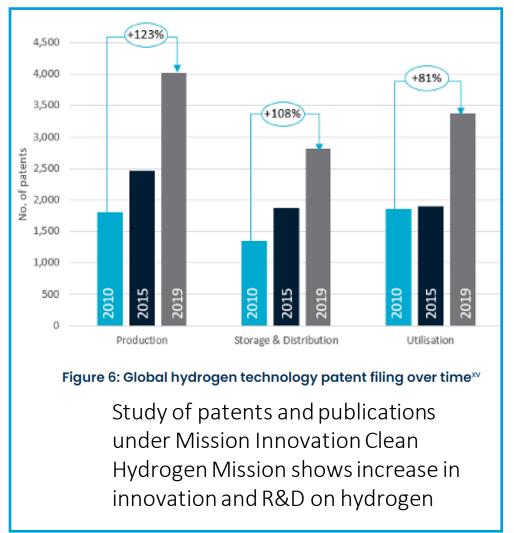
Examples of Recent Accomplishments

- Released Discussion Paper at COP 26
- CSIRO released Report
- Carbon Trust published report on innovation
- Stakeholder engagement on partnerships
- End Use Working Group workshop on mining/offroad vehicles





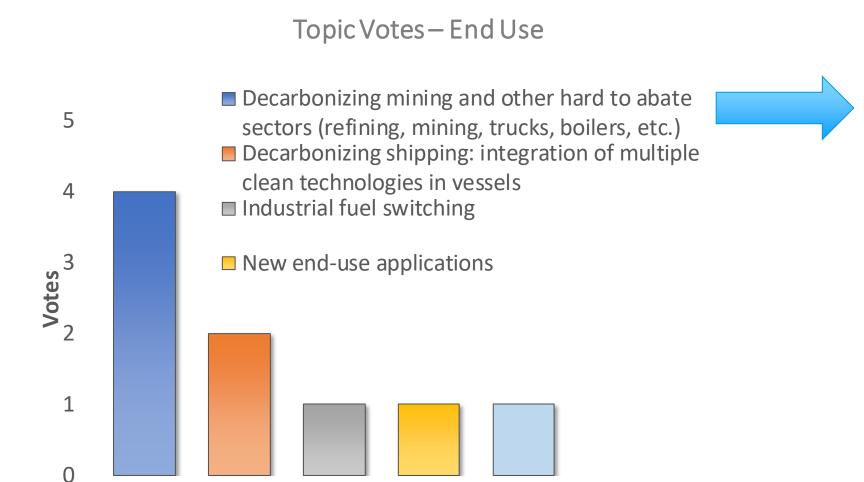






Example: Basis for Workshop - Mining, construction, agricultural equipment

17 Member Countries provided feedback on high priority areas of RD&D



First MI End Use WG Workshop focused on topic voted highest priority

Overarching goal
Enable \$2/kg clean H2
from production to end
use. Includes scaling up.

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Thank you

Dr. Sunita Satyapal
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On behalf of Mission Innovation Clean Hydrogen Mission

www.energy.gov/fuelcells www.hydrogen.energy.gov

