



International Partnership
for Hydrogen and Fuel Cells
in the Economy

Moving Towards a Global Market for Clean Hydrogen

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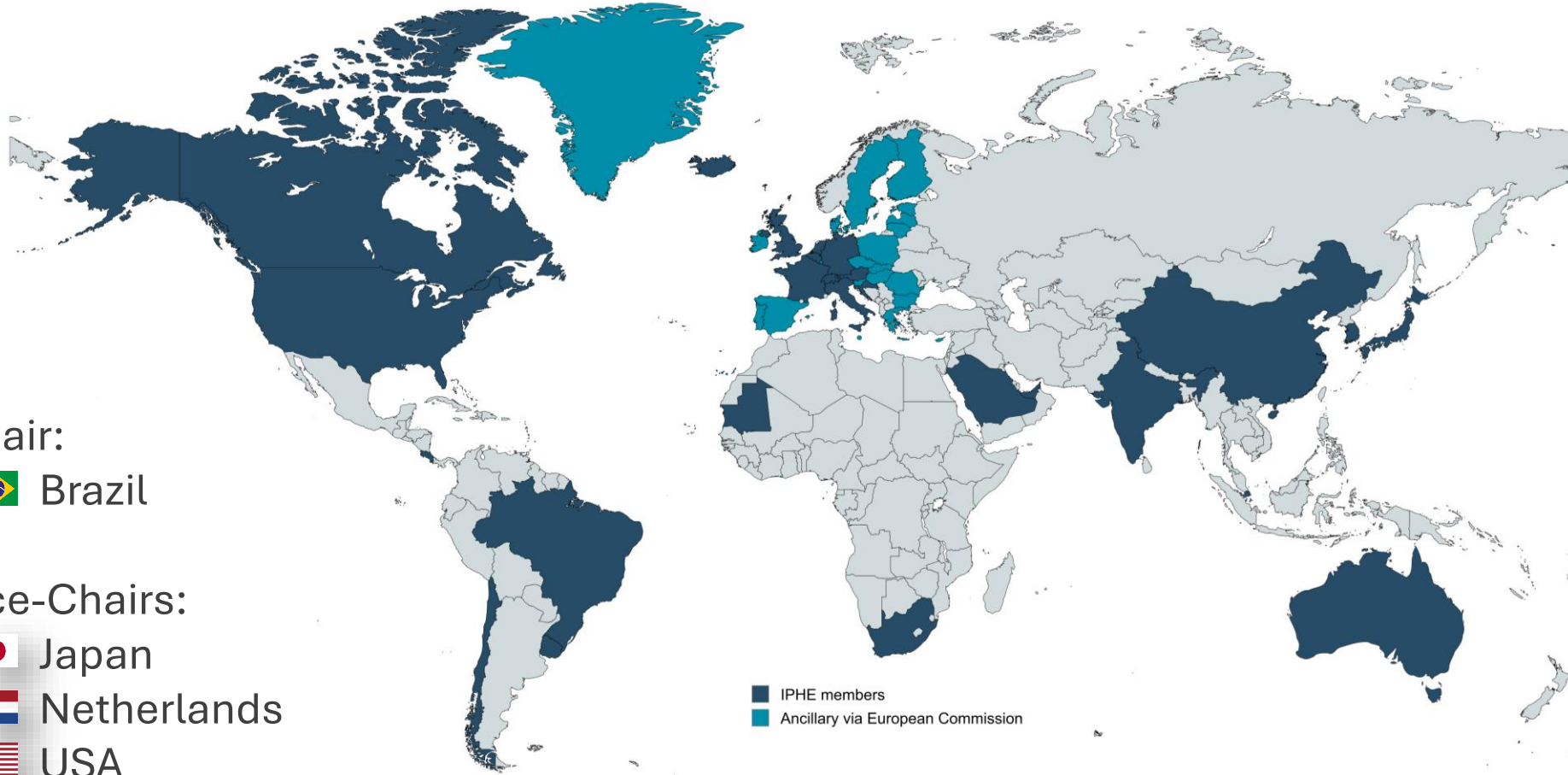
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A Government-to-Government Partnership to develop a Hydrogen Economy



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26 Countries & European Commission | Founded in 2003



Introduction

❖ Hydrogen's role in global decarbonization

- ❖ Decarbonization: Hard-to-abate sectors (steel, chemicals, heavy transport, shipping, aviation)
- ❖ Energy Security: Diversification away from fossil fuel dependencies
- ❖ Economic Opportunity: Creation of new export industries and “green” jobs

→ Hydrogen is more than just a new fuel; it is a potential cornerstone of the future energy system (clean molecules).

❖ Current barriers

- ❖ Cost gap versus fossil fuels, including unabated fossil hydrogen
- ❖ Infrastructure
- ❖ Policy uncertainty

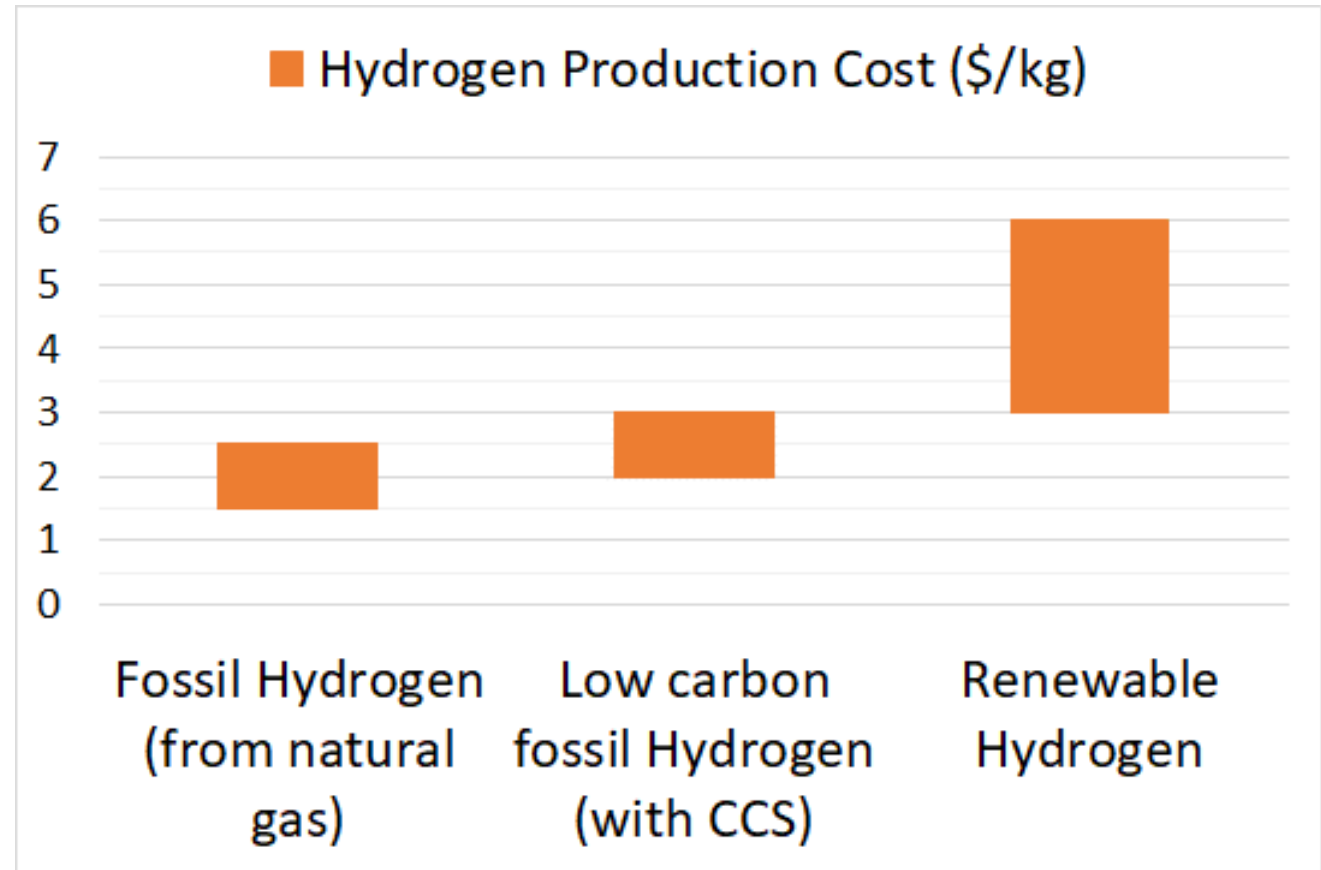
❖ Objective: highlight international initiatives and propose policy recommendations

The Core Challenge: The Cost Gap for Clean Hydrogen

Drivers of cost reduction:

- Scaling
- Renewables/electricity costs
- Technology learning

Infrastructure and demand creation remain bottlenecks.

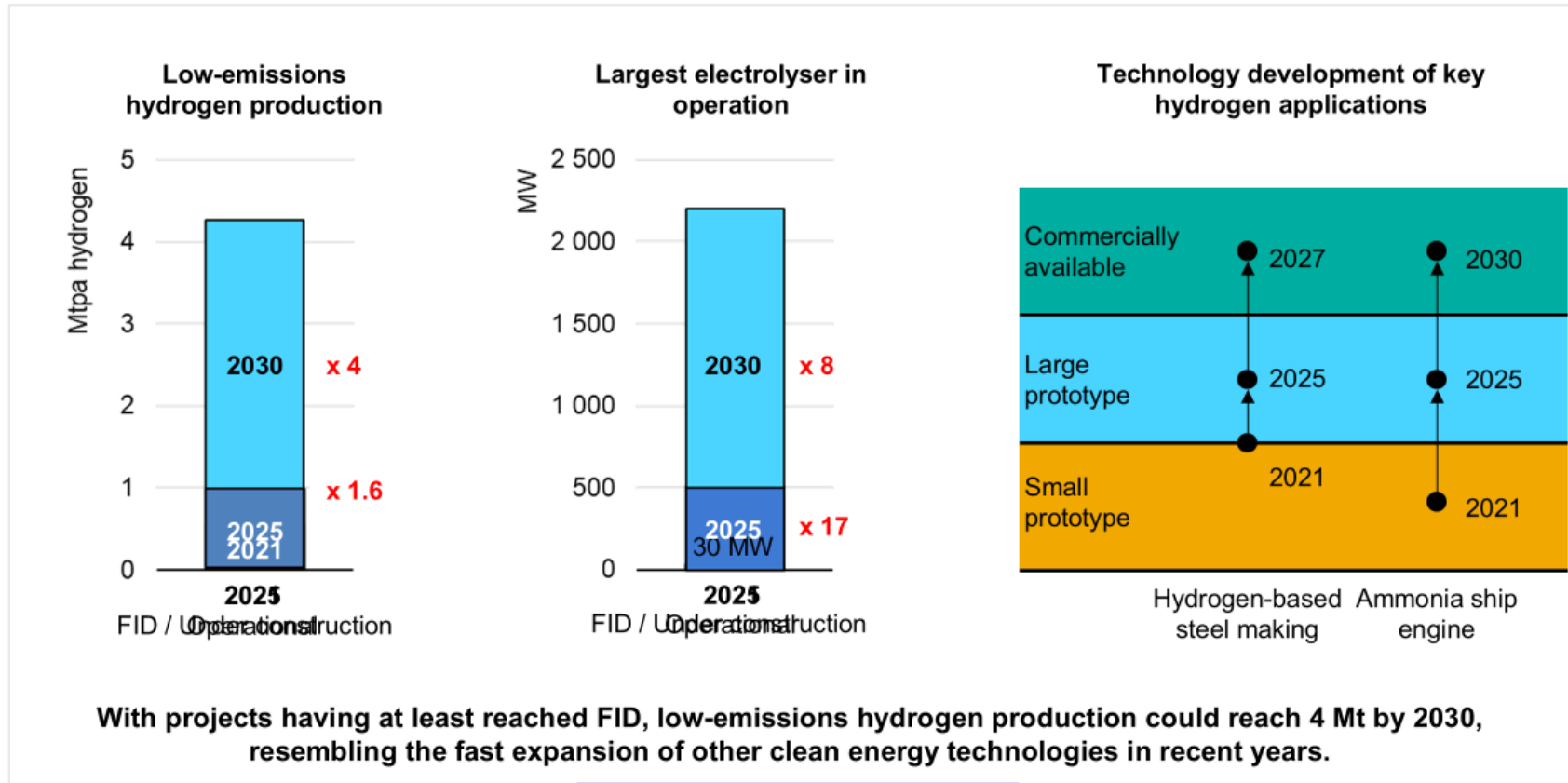


The need for international cooperation

- ❖ National strategies are necessary but **not sufficient**. No country can do it alone.
- ❖ Without **international cooperation**, there is a risk of a fragmented market with incompatible standards, hindering the economies of scale that are crucial for cost reduction.
- ❖ Four main mitigation pillars:
 1. **Common Definitions and Standards:** Defining “low-emission/clean/renewable and low-carbon” Hydrogen to ensure credibility & trust and to prevent any greenwashing
 2. **Global Trade:** Developing trade rules and infrastructures
 3. **Financing and Risk Sharing:** Role of public financing (grants, loans, guarantees), blended finance with private capital, carbon pricing mechanisms
 4. **R&D Collaboration:** Shared innovation in electrolysis, CCS, storage, and safety to accelerate cost reduction for everyone.

Is the glass half-full or half-empty for hydrogen?

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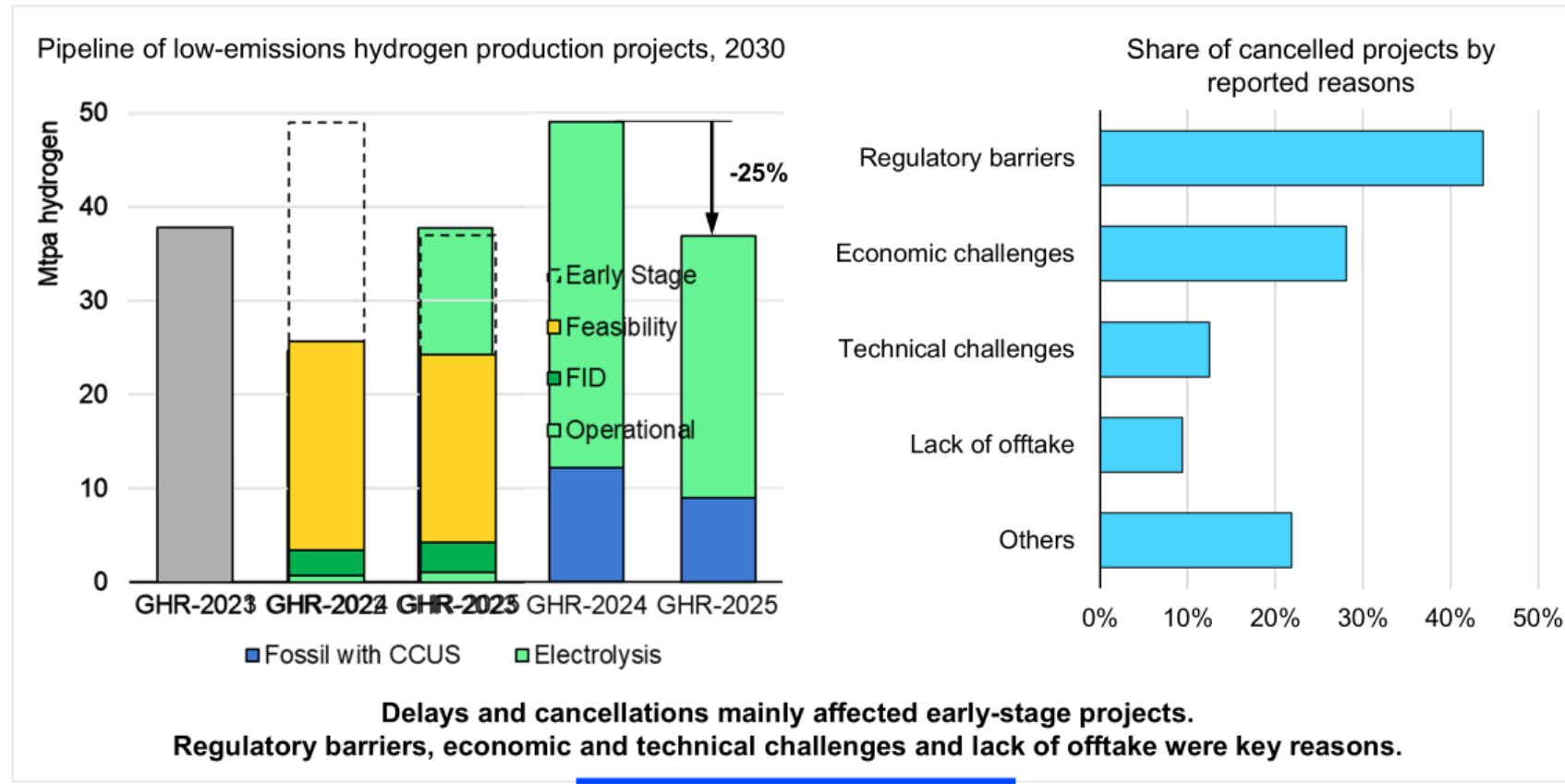
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Signs of consolidation in the hydrogen industry

Signs of consolidation in the hydrogen industry



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IEA Recommendations

- **Maintain support schemes for low-emissions hydrogen production**, with a focus on shovel-ready projects that target existing applications.
- **Accelerate demand creation** for low-emissions hydrogen and hydrogen-based fuels through regulations and support schemes in key sectors.
- **Expedite deployment of hydrogen infrastructure** by removing barriers and leveraging early opportunities.
- **Enhance public support to reduce technology risk** and facilitate project financing.
- **Support emerging and developing economies in moving up the value chain** for low-emissions hydrogen-based products.

Policy Recommendations (summary)

1. Provide long-term price signals (carbon price, CCfDs, tax credits)
2. Support demand creation via mandates and procurement
3. Accelerate infrastructure investment and permitting
4. Harmonize international standards, certification and trade rules
5. Increase public–private financing mechanisms
6. Continue and even enhance the support for Innovation

Conclusions

- ❖ The cost gap is significant but bridgeable through scale, innovation, and smart policy
- ❖ International collaboration and coordination are key
- ❖ International coordination on standards and trade is as important as national strategies
- ❖ Policies must bridge the economic gap and de-risk investment
- ❖ Clean hydrogen is on the path to becoming a globally traded commodity

The coming 2-3 years are critical.

The policies we enact now will determine if clean hydrogen remains a niche technology or becomes the backbone of a decarbonized global economy.

Thank you



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