

Twenty-fourth meeting of the Council
Abu Dhabi, 27-28 October 2022

Background Note

Accelerating Hydrogen – Opportunities for International Cooperation

Background

1. In response to Members' requests, IRENA has been building knowledge since 2018 on the role of green hydrogen in the energy transition. Green hydrogen has been identified as a key solution to replace fossil fuels in the sectors that cannot be electrified, namely heavy haulage, shipping, aviation and industry. Through the Collaborative Framework on Green Hydrogen (CFGH) launched in 2020, IRENA has been sharing its knowledge, facilitating dialogue and lessons learned between Members, partners and industry and developing its work programme to suit the priorities of Members.¹
2. IRENA together with partners has issued The Breakthrough Agenda Report in September 2022, an independent assessment of the status of hydrogen that provides recommendations for international collaboration. Launched by 45 world leaders at COP26, it is supported by international collaboration. The G7 Hydrogen Action Pact draws on the Breakthrough Agenda report. Upon the request of the 2022 G7 Presidency, Germany, IRENA has developed a more detailed set of recommendations for the G7 Hydrogen Action Pact that aims to strengthen the joint action on power-to-x, hydrogen and derivatives, and streamline the implementation of existing multilateral initiatives.² The recommendations include actions needed to agree on international sustainability criteria for green hydrogen, harmonise standards and certification, match supply and demand, promote industrial use and, above all, collaborate closer to jointly accelerate the new market needed for green hydrogen.
3. The work was conducted by reviewing G7 hydrogen strategies, policies and announcements, and incorporating knowledge gained from previous analyses, including deep dives into the topics of geopolitics, cost, shipping, methanol and ammonia, as well as the key findings of the Enabling Measures Roadmaps for Green Hydrogen, developed jointly in 2021 with the WEF,³ and the three-part report series on Global Hydrogen Trade to Meet the 1.5°C Climate Goal.
4. The assessment also included a gap analysis of global hydrogen certification (conducted jointly with RMI), which showed that the current certification systems are incompatible and will hinder the development of an international market for green hydrogen certificates, thus creating a need for harmonised sustainability criteria for green hydrogen and international standards. This is the topic of discussion at the sixth CFGH meeting on 5 October 2022, the outcomes of which will be shared.

¹ Strategic Partners under the Collaborative Framework on Green Hydrogen include IPHE, WEF and Hydrogen Council.

² The HAP was announced in the G7 Climate, Energy and Environment Ministers' Communiqué, Berlin, 27 May 2022 (Point 70). The IRENA report on the analyses and recommendations will be issued at COP27.

³ Roadmaps for the EU and Japan were issued at COP26 and a roadmap for China is currently underway.

5. The analysis highlighted the need for comprehensive quality infrastructure (QI) to enable green hydrogen certification. IRENA has started a project to develop guidelines for countries to develop comprehensive QI to support hydrogen certification systems (funded by Germany).
6. The recommendations that were set out in the Breakthrough Agenda Report for enabling measures and international collaboration to accelerate the development of hydrogen are applicable to the whole IRENA Membership.

Objectives of the session

- Present an overview of the assessments conducted for the Breakthrough Agenda and G7 Hydrogen Action Pact and share the recommendations.
- Present a snapshot of future planned Agency activities in the area of green hydrogen.
- Receive feedback from Members and guidance on the priority areas for ongoing Agency work on green hydrogen.

Guiding questions

- Is your country undertaking activities in line with the recommendations to accelerate a green hydrogen market nationally?
- What are the priority areas to enable the development of green hydrogen in your country?
- How can IRENA support your work in these areas?

Associated Publications

- [Enabling Measures Roadmap for Green Hydrogen – EU and Japan](#) (2022)
- [Global Hydrogen Trade to Meet the 1.5°C Climate Goal: Trade Outlook for 2050 and Way Forward](#) (2022, three-part series)
- [The Breakthrough Agenda](#) (2022)
- Accelerating Hydrogen Deployment in G7: recommendations for the Hydrogen Action Pact, due to be launched at COP27 (*Forthcoming*)
- Differentiating Green Hydrogen: gap analysis of hydrogen certification schemes due to be issued before COP27 (*Forthcoming*)