Rolling out cross-border hydrogen trade for the European Union

30 June 2022

International Energy Agency

Workshop agenda

Format: Chatham House rules │ Virtual │ Invitation-only │4.5 hours

Published on 18 May 2022, the REPowerEU Communication from the European Commission envisages a rapid scale up of the role of hydrogen to 2030, in particular as a substitute for imported fossil fuels. The stated plan is to enter the 2030s with 250 bcm less natural gas demand in the EU compared with 2020; a 60% reduction. On 30 May 2022, the European Council agreed to ban seaborne imports of crude and oil products from Russia by early 2023. The hydrogen target to meet these goals goes beyond the 5.6 million tonnes of hydrogen from renewable electricity that was included in the Fit for 55 package in 2021, raising it to 20 million tonnes consumed within the EU by 2030. Of the additional 14.4 million tonnes, 10 million tonnes are foreseen to be imported from third countries.

The European Commission and the International Energy Agency are joining forces to help EU countries reduce their reliance on Russian fossil fuels. In the framework of this common endeavour, the Commission is offering support to Member States to reduce their dependence on Russian fossil fuels through the Technical Support Instrument (TSI). This workshop will look at the practical aspects of setting up a market for hydrogen and hydrogen-based fuels[1], including the policies that can unlock investment both inside and outside the EU in a phased manner. The material will be targeted to EU member state governments, with workshop contributions from external subject-matter experts and perspectives from project developers.

Sessions will be structured around member states' questions, submitted in advance, and organised as a moderated discussion with subject matter experts that can share the latest thinking in each area.

The workshop will focus on four critical questions facing governments across Europe:

- In what sectors can hydrogen displace large amounts natural gas and other fossil fuels in a hurry?
- How quickly can significant quantities of hydrogen and hydrogen-based fuels be imported, and in what configurations?
- What policies are still needed to enable investments in low-emissions hydrogen[2] supply for export within or to the EU?
- How will the necessary EU infrastructure for trading hydrogen get built and on what terms?

Building on the context of the Commission TSI for Member States on REPowerEU, the workshop will seek to cover the strategic and practical aspects of these policy questions, and also direct decision-makers to further technical resources. Certain technical topics that are well covered elsewhere will not be within the workshop scope, including: technologies for producing and trans-forming hydrogen; the methodologies for certifying hydrogen's environmental credentials; economics of hydrogen production from local renewables; and onshore hydrogen pipeline network requirements.

Morning session	
09h30	**Welcome** • Tim GOULD, IEA Chief Energy Economist • Kaspar RICHTER, European Commission Directorate-General for Structural Reform Support

09h45	**In what sectors can hydrogen displace large amounts natural gas and other fossil fuels by 2030?** **Moderator:** Simon BENNETT, IEA • Refining (Ruben VAN GRINSVEN, General Manager for Integrated Hydrogen Projects, Shell) • Fertiliser manufacture (David HERRERO FUENTES, Chief Operating Officer, Fertiberia) • Synthetic transport fuels (Jacob STERLING, Senior Director, Head of Ocean Decarbonisation and Innovation, A.P. Moller - Maersk) • Iron and steel (Göran NYSTRÖM, Senio Advisor, Ovako AB; Hans-Jörn WEDDIGE, Chair of the Environment and Energy Committee of Business at OECD) Questions to the experts from government stakeholders
10h45	**How quickly can significant quantities of hydrogen and hydrogen-based fuels be imported, and in what configurations?** **Moderator:** Abdullah AL-ABRI, IEA • How much hydrogen can come via international pipelines? (Giulia BRANZI, Head of Climate Policies, Snam) • What seaborne trade routes could make sense for Europe (Anne GEURTS, Programme manager External Affairs, Energy transition and Hydrogen, Port of Rotterdam) • What has Japan learned from extensive programmes in recent years? (Eiji OHIRA, Director, New Energy and Industrial Technology Development Organization) • What types of projects are potential exporters most serious about? (Andrew DICKSON, Development Director, CWP) Questions to the experts from government stakeholders
12h00	**End of morning session**

Afternoon session	
14h30	**Welcome and introductions**
14h40	**How will the necessary EU infrastructure for trading hydrogen get built and on what terms?** **Moderator:** Barbara JINKS, Programme Manager Green Gas Delivery and Use, IRENA • What is needed to get a new port terminal built? (Sebastian VOGEL, Head of Hydrogen Strategy, RWE) • What do we know about possible contractual models? (Graham WEALE, Professor, Ruhr-Universität Bochum) • What will determine where the value chain for electrolysers is located? (Andrei ZSCHOCKE, Head of Green Hydrogen Strategy, ThyssenKrupp Nucera) • Possible EU funding instruments (Zita CSOKA, European Commission DG Energy) Questions to the experts from government stakeholders
15h35	**What policies are still needed to enable investments in low-emissions hydrogen supply for export within or to the EU?**

	Moderator: Rebecca SCHULZ, IEA • Investing in the interim period before global certificates and standards (Andrei TCHOUVELEV, Director Safety / Regulatory and Daria NOCHEVNIK, Director for Policy and Partnerships at Hydrogen Council) • How can auction models be used to create a market for hydrogen? (Kirsten WESTPHAL, H2Global) • How can tools like carbon contracts-for-difference help create markets? (Jan Bouke AGTERHUIS, Senior Advisor, Netherlands Enterprise Agency, RVO) Questions to the experts from government stakeholders
16h30	**Closing remarks**

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[1] i.e. ammonia, synthetic methane, methanol or synthetic hydrocarbons.
[2] i.e. hydrogen with very low life cycle emisions, for example from renewable or nuclear electricity or from fossil fuels with very hight levels of CO_2 capture and storage, plus low upstream methane emissions.