UNECE Hydrogen Task Force Webinar Series:

Opportunities for hydrogen demand creation in hard-to-abate industry

18 June 2024, 15:00 – 17:30 CET, Geneva, Palais des Nations, room H-307-1 and online

UNECE Hydrogen Task Force repeatedly pointed out that hydrogen could play an important role in the decarbonization of hard-to-abate industry, such as cement, steel, or ammonia production. This view is shared by many UNECE member States who are increasingly recognizing the potential for hydrogen to contribute to meeting the objectives of the Paris Climate Agreement. Some of them – Germany, Netherlands, Russian Federation, Spain, United States, and the European Union – have developed national or regional hydrogen strategies that feature the use of hydrogen in hard-to-abate sector. Other UNECE member States are also showing a strong interest in looking into how hydrogen could become part of their national net zero strategies.

These efforts are often directed towards production of low emissions hydrogen; there seems to be a lack of policies for *demand creation* which is necessary for hydrogen value chain to develop and grow. According to the International Energy Agency (IEA), only 5% of the announced hydrogen projects progressed to the final investment decision. Most of the projects that do get financed deal with production of low emissions hydrogen; very few of them deal with its use. The discrepancy between projected supply and demand of low emissions hydrogen slows down the development of hydrogen value chain.

The unwillingness of end users to embrace hydrogen as a feedstock reflects anxiety about costs, technological challenges, risks and their perception, fluid regulatory environment, geopolitical uncertainties, and a deficit in infrastructure necessary for delivering hydrogen to end-users. As IEA recently concluded[1], although hydrogen demand keeps growing, it remains concentrated in traditional applications. New applications in heavy industry account for less than 0.1% of hydrogen demand, whereas in the Net Zero Emissions by 2050 Scenario they are supposed to account for one-third of global hydrogen demand by 2030. Navigating this long, winding, and perilous road to net zero (that is, from 0.1% to 30% low emissions hydrogen) will require significant effort, investment, audacity and a shared vision and commitment.

This webinar is based on the premise that in the first phase of value chain development, hydrogen supply and demand should be relatively near each other, to avoid additional costs associated with long-distance transport and large-scale storage in compressed gas or liquified forms. The webinar will explore opportunities for hydrogen demand creation in hard-to-abate industry such as steel, cement, or ammonia production. (Hydrogen demand in maritime and road transport and heat and power production will be discussed at separate webinars dedicated to these industries.)

We hope that the webinar would yield some concrete recommendations to UNECE member States. The Chair of the Hydrogen Task Force will present the findings of the workshop at the annual session of the UNECE Committee on Sustainable Energy in September.

[1] https://www.iea.org/energy-system/low-emission-fuels/hydrogen

AGENDA

15:00	Welcome and Opening Remarks	Mr Uwe Wetzel, Chair, Hydrogen Task Force Ms Ilaria Conti, Vicechair, Group of Experts on Gas Mr Torstein Indrebø, Vicechair, Group of Experts on Gas [Ms Siobhan McGarry, Policy Officer, European Commission]
15:15	Panel: Case studies on hydrogen in hard-to-abate industrial applications • The first large scale green hydrogen-based steel production • Financing the establishment of a full hydrogen value chain in Europe • Fostering hydrogen demand through innovative engineering solutions • Low emissions ammonia production • Hydrogen in heavy industries in Mexico	Moderator: Mr Andrei Tchouvelev, Vicechair, Group of Experts on Gas Panelists: Ms Kajsa Ryttberg-Wallgren, H2 Green Steel, Sweden Ms Johanna Schiele, DG CLIMA, European Commission Mr Gerrit Riemer, thyssenkrupp, Germany Mr Jonathan Flynn, CF Industries, United States Mr Oleksiy Tatarenko, RMI, United States Mr Ulises Neri, Mexico (Bank Interamericano de Desarrollo)
16:30	Open-floor discussion: How to create demand for hydrogen in the UNECE region and beyond?	Moderator: Branko Milicevic, Secretary, UNECE HTF Participants: Members of the UNECE Hydrogen Task Force Other representatives of UNECE member States
17:15	Conclusions and close of the meeting	Mr Uwe Wetzel, Chair, Hydrogen Task Force

About us

The United Nations Economic Commission for Europe's Group of Experts on Gas (GEG) is a forum where UNECE member States discuss sustainable and clean production and consumption of gas and explore whether and how gas could help them deliver on key commitments – the UN 2030 Agenda for Sustainable Development and the global agreements on climate change.

The Hydrogen Task Force (HTF) catalyses dialogue on hydrogen, with emphasis on low emissions hydrogen, at all levels of policymaking in the ECE region. HTF's aspiration is to establish, in collaboration with other partners, a taxonomy on hydrogen based on a life cycle analysis (LCA) approach and to work towards developing a Guarantee of Origin for Hydrogen (GOH).