



Agenda Item 8 – 8th Session of the Group of Experts on Renewable Energy

Agenda Item 4 – 17th Session of the Group of Experts on Cleaner Electricity Systems

Potential of hydrogen to contribute to sustainable development

6 October 2021, 15h00 – 16h30 CEST (Geneva time)

Objective: to launch activities related to sustainable hydrogen production in the UNECE region

Context: Hydrogen can be used as a fundamental backbone to a modern society, for example, as chemical feedstock, energy carrier and storage medium. It has vast applications across a range of sectors, such as transport, industry, power generation and buildings. Despite all these vast opportunities, the potential of hydrogen also brings vast challenges that need to be tackled: i) shifting of production of large quantities of hydrogen to more sustainable production methods; ii) transforming domestic and industrial users to be able to directly use hydrogen; iii) provision of ample storage of hydrogen to guarantee energy security at a regional level.

This session will be delivered jointly by the Group of Experts on Renewable Energy and the Group of Experts on Cleaner Electricity Systems and will be supported by the Group of Experts on Gas

15h00 Setting the scene Secretariat

- Overview of the technology brief
- Recommendations from the Committee
- New hydrogen related project

15h05 Case studies from UNECE region focusing on hydrogen production and use

- What clean hydrogen pathways have greatest potential in the UNECE region?
- What technologies and business models are emerging?
- What works and where are identified barriers?

Electrolysers – unlocking the potential for renewable energy

Constantine Levoyannis, Head of EU Affairs, NEL Hydrogen, Norway

Integrated energy system for hydrogen production

Richard Boardman, Fuel Cell and Hydrogen Technology Office, Idaho National Laboratory, United States

Off-grid hydrogen power solutions in Russia

Enel and Rusano (TBC)

Coal-based gasification & fuel cells for production of chemicals and specialist products

Dr Andrew Minchener, General Manager, IEA Clean Coal Centre and Vice-Chair of the Bureau of the Group of Experts on Cleaner Electricity Systems

15h45 Discussion with panellist and wider expert community

Moderator: Tatiana Mitrova, Research Director at Energy Center Skolkovo, Independent Director positions at Novatek and Schlumberger

- How can hydrogen be included in climate change strategies, sustainable investment policies and mechanisms?
- What policy framework is needed?
- What can UNECE do to help and accelerate towards an integrated regional hydrogen ecosystem?

16h25 Wrap up & Next steps