



Economic Commission for Europe**Committee on Sustainable Energy****Group of Experts on Gas****Tenth session**

Geneva, 23-24 March 2023

Item 6 of the provisional agenda

Hydrogen**Hydrogen Task Force – Terms of Reference****Draft for discussion****Prepared by the Secretariat****I. Introduction**

1. At its thirty-first session (Geneva, 21-23 September 2022), the Committee on Sustainable Energy concluded that hydrogen could play a key role in building resilient energy systems and reaching carbon neutrality. For this to happen, the Committee further noted that it is important to define criteria for sustainable hydrogen that strike a balance between the emissions associated with its production and the sufficient flexibility needed to scale-up a nascent industry. Such a balanced and technology-neutral approach could strengthen the case for hydrogen as a reliable, renewable, affordable, and low-carbon energy carrier.

2. Hydrogen can be produced from various sources – water, hydrocarbons, ammonia – employing different, relatively mature technologies, such as water electrolysis or methane steam reforming. The mass media refer to these production pathways using colour coding. For example, “green hydrogen” comes from renewable energy via electrolysis of water, “blue hydrogen” is produced from hydrocarbons via steam reforming and includes carbon capture use and storage (CCUS) to store captured carbon dioxide, and so on. Although media-friendly, the colour coding provides little information and lacks the scientific rigour needed for effective policymaking on energy transition in the international arena.

3. For the above reasons, at its thirty-first session the Committee discussed the document “Comprehensive and science-based terminology, classification and taxonomy for hydrogen” (ECE/ENERGY/2022/8) that advocated the need to develop a classification for hydrogen that goes beyond colours and addresses the full life cycle of hydrogen production, transport, storage, trade, and use. The Committee agreed to support ongoing policy dialogue on hydrogen projects and, through it, foster cooperation within the United Nations Economic Commission for Europe (ECE) region and with the global resource community.

4. Hydrogen-related activities have thus far not been centralized in the sustainable energy subprogramme. Several of the Committee’s subsidiary bodies have been involved in various facets of hydrogen work, both regular budget and extrabudgetary, most notably the

Group of Experts on Gas, the Group of Experts on Cleaner Electricity Systems, the Group of Experts on Renewable Energy, and the Expert Group on Resource Management.

5. Following discussions at the thirty-first session, the Committee decided to ask the Group of Experts on Gas to lead the work on hydrogen and to do so in close collaboration with the other groups of experts. The Committee requested that a Terms of Reference for a Hydrogen Task Force be developed and presented to the Committee at its thirty-second session (Geneva, 13-15 September 2023), for the Committee's review and potential approval. This document has been drafted in response to the Committee's request.

II. Areas of Work

6. The Task Force catalyses dialogue on hydrogen, with emphasis on renewable and low-carbon hydrogen, at all levels of policymaking in the ECE region.

III. Concrete activities

7. The Task Force will:

- Promote and facilitate policy dialogue on hydrogen and foster cooperation on it within the ECE region
- Support current and future extrabudgetary projects on hydrogen managed by the Sustainable Energy Division
- Prepare a paper on existing international initiatives on hydrogen in the ECE region and beyond, to avoid duplication
- Prepare, for the Committee's consideration, a work plan for future hydrogen activities of the Committee aiming to:
 - Identify hydrogen-related activities to be carried out using the regular budget
 - Propose new hydrogen-related activities that require extrabudgetary resources
 - Pursue available resources to provide clarity on hydrogen and its potential viable applications
- In collaboration with the Expert Group on Resource Management:
 - Develop specifications for the application of the United Nations Framework Classification for Resources (UNFC) and the United Nations Resource Management System (UNRMS) to hydrogen projects and production technologies
 - Establish a taxonomy on hydrogen based on a life cycle analysis (LCA) approach
 - Work towards developing a Guarantee of Origin for Hydrogen (GOH)
 - Develop pilot hydrogen production projects applying UNRMS principles
- In collaboration with the Group of Experts on Gas and other Groups of Experts as relevant, discuss, develop, and promote good practices and recommendations on:
 - The business case for blending hydrogen with natural gas
 - Hydrogen purity requirements for its production, transmission, and use
 - The role of gas infrastructure to accelerate development of hydrogen projects
 - Issues related to hydrogen emissions in the context of climate change
- Help develop project proposals on any of the aforementioned items that may require extrabudgetary resources for presentation to potential donors.

IV. Membership

8. The Task Force is led by two Co-chairs, agreed on by the Bureau of the Committee. In its work, the Task Force engages government experts, the private sector, academia, civil society, international organizations, and other stakeholders from ECE member States. Task Force members will be selected by the two Co-chairs, in consultation with the Bureau of the Committee.

V. Reporting

9. The Task Force reports to the Group of Experts on Gas and to the Committee annually and to their Bureaux between annual sessions as needed.

VI. Duration

10. The Task Force is established for a period of two years effective September 2023. Its term is renewable, subject to the approval of the Committee.
