



Economic Commission for Europe**Committee on Sustainable Energy****Thirtieth session**

Geneva, 22-24 September 2021

Item 7(d) of the provisional agenda

Future work of the Committee on Sustainable Energy:**Approval of documents****Work Plan of the Group of Experts on Gas for 2022-2023****Prepared by the Bureau of the Group of Experts on Gas****I. Introduction**

1. The mandate of the Group of Experts on Gas (Group of Experts) is to provide a forum for multi-stakeholder dialogue on promoting sustainable and clean production, distribution, and consumption of gas in the United Nations Economic Commission for Europe (ECE) region.
2. The areas of work of the Group of Experts are policy dialogue and exchange of information and experiences among ECE member States on gas issues of regional relevance, including the ever-increasing share of gas in the total primary energy supply and its economic, social and environmental impacts.
3. The Group of Experts requests the Committee on Sustainable Energy to renew its mandate until 31 December 2023, with the possibility of extension.

II. Concrete activities

4. The concrete activities of the Group of Experts are intended to help ECE member States deliver on key political commitments, including the 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, and the Paris Agreement.
5. Following the successful implementation of the work plan for 2020-2021 and the recommendations from the Group of Experts and its Bureau, the Group of Experts will continue to undertake activities broadly related to the enabling role of gas in achieving carbon neutrality and other goals of the 2030 Agenda, as well as with assisting ECE member States with post-COVID-19 recovery.
6. Most of the activities listed hereafter represent a continuation, adjusted as needed, of past activities. Several new and cross-cutting activities, in line with the mandate of the Group of Experts and emerging priorities, are also included.

A. Gas and Sustainable Development Goals

Description:

7. This activity, at the core of the Group of Experts' mandate, is a long-term, holistic exploration of the role of gas in attaining Sustainable Development Goals (SDGs). In addition to its central theme SDG 7 (Access to affordable, reliable, sustainable, and modern energy for all), in every two-year cycle the Group focuses on a subset of SDGs. In 2022-2023 the Group of Experts will take a deeper look at SDG 3 (health), SDG 9 (Industry and Innovation) and SDG 11 (sustainable cities). Other activities of this work plan (such as gas and air quality, methane emissions, synergies with renewable energy, or use of gas in transportation) could be considered as deep dives into specific, more focused topics covered by an individual SDG or a subset of SDGs. As before, the Group of Experts will continue to focus on how gas and liquefied natural gas (LNG) can help attain SDG 5 (Achieve gender equality and empower all women and girls).

Work to be undertaken:

8. Explore and promote the role of gas and liquefied natural gas (LNG) in attaining SDGs, with a focus on SDG 3 (health), SDG 5 (Achieve gender equality), SDG 7 (energy access), SDG 9 (industry and innovation) and SDG 11 (sustainable cities) in the ECE region and beyond.

Deliverables and timeline:

(a) Policy dialogues on the enabling role of gas in attaining SDG 3, SDG 7, SDG 9 and SDG 11, by December 2023;

(b) Policy brief(s) on the enabling role of gas in attaining selected SDGs, by December 2023.

B. Gas and post-COVID-19 recovery

Description:

9. Judging from the events in 2020 and 2021, the post-COVID-19 recovery is bound to be a long and bumpy road paved with uncertainty. In both short- (combating the pandemic) and longer- (economic and social recovery) terms, innovative uses of gas(es)¹ may increase the resilience and robustness of the energy system while enabling a just and inclusive transition to a sustainable society. The scope and extent of this activity will depend on the availability of resources.

Work to be undertaken:

10. In the light of the COVID-19 pandemic and recovery, organize technology and policy dialogues to explore innovations and investments needed to accelerate the transition to a post-COVID-19 society and the role of gas(es) in it.

Deliverables and timeline:

(a) Technology and policy dialogues on post-COVID-19 recovery, by December 2023;

(b) Policy brief on the role of gas in post-COVID-19 recovery, by December 2023.

C. Methane management in the gas sector

Description:

11. Methane is a short-lived climate pollutant, with significantly higher radiative forcing than that of carbon dioxide (CO₂). During the 2018-2019 and 2020-2021 work cycles, the

¹ Gases include compressed natural gas, biogas, biomethane, LNG, bio-LNG, and various decarbonized mixture of methane and hydrogen..

Group of Experts successfully developed, published, and disseminated the principles-based Best Practice Guidance for Methane Management in the Oil and Gas Sector (BPG). This work has been supported by the United States Environmental Protection Agency (USEPA) on behalf of the Global Methane Initiative (GMI), through an extrabudgetary project on reducing methane emissions from the extractive industries. In 2022-2023, the Group of Experts will strive to inject new life into this activity. For example, a “long-term action against short-lived climate pollutants” may need an “International Decade for Methane Management” as the principal intergovernmental framework for action. The scope and extent of this activity will depend on the availability of resources.

Work to be undertaken:

(a) In collaboration with USEPA, GMI, Environmental Defense Fund (EDF), Oil and Gas Climate Initiative (OGCI), Climate and Clean Air Coalition (CCAC), IPIECA, Gas Infrastructure Europe (GIE) and other stakeholders, solicit, collect, edit, publish and disseminate illustrative case studies on reporting, measuring and reducing methane emissions;

(b) Identify other potential partners that undertake methane emissions action beyond the ECE region.

Deliverables and timeline:

(a) Case studies on reducing methane emissions from the gas sector in the ECE region, by December 2023;

(b) If the initiative for an International Decade for Methane Management is endorsed by the United Nations General Assembly, support its activities, by December 2023.

D. Carbon neutrality through synergies between gas(es) and renewable electricity

Description:

12. As part of its previous work, the Group of Experts demonstrated how gas and LNG could accelerate deployment of renewable electricity. Recognizing that a solution to achieving a sustainable and decarbonized energy system could be found within the triangle “gas(es)-renewable-energy efficiency”, the Group of Experts concluded that the least-cost and fastest path to creating a sustainable energy system of the future requires: (i) increasing energy efficiency to reduce energy requirements, and then (ii) meeting the remaining energy requirements through a combination of gas (including natural gas, low carbon, decarbonized, and renewable gases) and renewable energy. The Group of Experts offers its support to ECE member States in developing policies needed to harness synergies between renewable electricity and gases. This activity will be undertaken in cooperation with the Group of Experts on Renewable Energy and the Group of Experts on Cleaner Electricity Systems. The scope and extent of the activity will depend on the availability of resources.

Work to be undertaken:

13. Case studies and policy dialogues.

Deliverables and timeline:

14. In cooperation with the Group of Experts on Renewable Energy and the Group of Experts on Cleaner Electricity Systems,

(a) Policy dialogues on synergies between renewable electricity and gas in the future energy system, by December 2023;

(b) Case studies on gas as an enabler of the integration of variable renewable energy sources, by December 2023.

E. Hydrogen: An innovative solution for carbon neutrality

Description:

15. Hydrogen is widely recognized as the key bridge to achieving carbon neutrality, especially in hard-to-abate sectors. In the future hydrogen might be used in industry, power generation, transport and homes, as the world moves closer to an integrated service-based society. However, hydrogen, although clean and versatile, is not an energy source but an energy vector: it must be produced, transported and stored before being converted to other forms of energy. In this activity the Group of Experts and its Task Force on Hydrogen will explore hydrogen production, transmission, storage and use, both as it is today and as is hoped to be in 2050. This activity will build upon the 2020 recommendations to ECE member States on how ECE could accelerate the transition to a hydrogen economy.

16. In late 2021, the Executive Committee of ECE will be invited to approve a new extrabudgetary project “Sustainable hydrogen production in the ECE region and its role in the development of a global hydrogen economy and export potential”. The project will focus on Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, and Uzbekistan. Should the project be approved, the Group of Experts on Gas will help to deliver on the key expected accomplishments, such as:

- (a) Identification of how the project countries could develop a hydrogen economy;
- (b) Strengthening national capacity in understanding the potential of cost-effective hydrogen production and transport;
- (c) Enhanced knowledge of policymakers and other stakeholders about barriers to developing a hydrogen economy and options for overcoming them.

Work to be undertaken:

- (a) In close collaboration with the Group of Experts on Renewable Energy and the Group of Experts on Cleaner Electricity Systems, disseminate recommendations to ECE member States, the energy industry, and the financial institutions on how to achieve carbon neutrality through harnessing hydrogen;
- (b) Explore how gas infrastructure could accelerate the development of hydrogen projects;
- (c) Analyse how to update the existing infrastructure construction, operation and safety regulations to make infrastructure “hydrogen-ready”;
- (d) Help implement the extrabudgetary project: “Sustainable hydrogen production in the ECE region and its role in the development of a global hydrogen economy and export potential”.

Deliverables and Timeline:

- (a) Disseminate recommendations to ECE member States on how to achieve carbon neutrality through harnessing hydrogen, by December 2023;
- (b) Explore the role of gas infrastructure in hydrogen projects, by December 2023;
- (c) Analyse “hydrogen-readiness” of pipelines, by December 2023.

F. Improving urban air quality

Description:

17. This activity is a continuation of the work done in the 2018-2019 and 2020-2021 work plans. At its previous sessions the Group of Experts took note of the alarming reports on the worsening air quality and increased pollution in urban areas in many ECE member States. The Group of Experts concluded that replacing more polluting fuels with gas in electricity generation, heating and transportation is an effective way to address air pollution. An increased share of gas in the energy mix would significantly and immediately reduce concentrations of airborne pollutants (nitrogen oxides, carbon monoxide, methane, volatile

organic compounds, sulphur dioxide, and particulate matter) that impact health, the environment and the economy. To reduce air pollution and improve air quality ECE member States already work closely through the ECE Convention on Long-range Transboundary Air Pollution and its eight protocols. The scope and extent of this activity will depend on the availability of resources.

Work to be undertaken:

(a) In collaboration with relevant partners, offer support to affected member States in addressing air quality concerns by promoting fuel-switching to natural gas;

(b) Coordinate activities with the secretariat of the ECE Convention on Long-range Transboundary Air Pollution and its principal stakeholders.

Deliverables and Timeline:

(a) Policy dialogues on the impact of gas in improving urban air quality, by December 2023;

(b) Dissemination of case studies and best practices (pending available resources) on the impact of gas in improving urban air quality, by December 2023.

G. Use of gas in transportation – challenges and opportunities

Description:

18. Compressed natural gas (CNG) and LNG provide significant environmental and economic advantages that make them a serious alternative to liquid hydrocarbons in road and maritime transportation. Yet, CNG and LNG currently command tiny shares of the transportation fuels market. Their use in transportation still face significant obstacles that need to be better understood. This activity will be a continuation of the extrabudgetary project supported by the Russian Federation “Improving capacities of the ECE member States to decarbonize the transport sector by increasing the use of natural gas as a motor fuel”² And will develop recommendations and policy guidelines on removing regulatory, legal, economic, technical, and public perception barriers to the use of gas in transportation. This activity will be undertaken in cooperation with the Sustainable Transport Division. The scope and extent of this activity will depend on the availability of resources.

Work to be undertaken:

(a) Develop and disseminate recommendations and policy guidelines on removing regulatory, legal, economic, technical, and public perception barriers to the use of gas in transportation;

(b) Participate in events to present and promote the results of the project and raise awareness of the benefits of natural gas in transportation.

Deliverables and timeline:

(a) Develop and disseminate recommendations and policy guidelines, by December 2023;

(b) Present and promote the results of the project and raise awareness, by December 2023.

H. Carbon capture, utilisation, and storage: The role of gas infrastructure

Description:

19. To meet the objectives of the Paris Agreement and deliver on the 2030 Agenda for Sustainable Development, ECE member States need to capture 90Gt of CO₂ by 2050. The Committee on Sustainable Energy, through its Group of Experts on Cleaner Electricity Systems has for several years been engaged in carbon capture and storage (CCS), as a process

² <https://unece.org/sustainable-energy/project-gas-transport>

of capturing CO₂ emissions from fossil power generation and industrial processes, for its re-use or subsequent storage in underground formations.

20. Today, over 80 per cent of primary energy in the ECE region come from fossil fuels. Achieving carbon neutrality will require a rapid deployment of CCS. Gas infrastructure, including underground gas storage and the possible use of depleted fields, on- and off-shore, may accelerate the development of technologies needed to transport and sequester CO₂. Undertaken in collaboration with the Group of Experts on Cleaner Electricity Systems, this activity would complement activities of the Group of Experts on Cleaner Electricity Systems which will continue to be the ECE lead on CCS.

Work to be undertaken:

21. This work will focus on the role of gas and gas infrastructure in pilot and commercial scale CCS projects. It will deal mostly with the downstream aspects of CCS – namely, sequestration.

Deliverables and timeline:

(a) Policy dialogues on the role of gas and gas infrastructure in CCS, by December 2023;

(b) Presentations of case studies on the use of gas infrastructure, depleted gas fields, and underground storage for carbon sequestration, by December 2023.

I. Promoting sustainable and clean production, distribution, and consumption of gas and LNG in the ECE region

Description:

22. This activity stems from the Group of Experts' core mandate to provide a forum for multi-stakeholder dialogue on promoting the sustainable and clean production, distribution, and consumption of gas in the ECE region. This activity addresses a basket of topics that bring together producer, consumer and transit countries, the gas industry and other stakeholders, facilitating dialogue among them on transit and security of supply and demand for pipeline gas and LNG, including trade in carbon-neutral gas and LNG.

Work to be undertaken:

23. Present, at annual sessions and other occasions, relevant policy papers on various gas production, transit and consumption issues.

Deliverables and timeline:

(a) Policy dialogues on gas and LNG supply, transit and demand, by December 2023;

(b) Presentations at annual sessions of policy papers on topical issues, for in-depth consideration by the Group of Experts, by December 2023.
