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Committee on Sustainable Energy

Group of Experts on Renewable Energy

Seventh session
Geneva, 22-25 September 2020

Report of the Group of Experts on Renewable Energy on its seventh session

I. Introduction

1. The seventh session of the Group of Experts on Renewable Energy was held for two and a half days during the period 22-25 September 2020.

2. In her welcome remarks, the Chair noted that this year's meeting was held in cooperation with a number of other groups of experts, namely the Group of Experts on Energy Efficiency, the Group of Experts on Gas and the Expert Group on Resource Management. The Chair observed that it would be valuable for such close cooperation to continue with all of the groups of experts reporting to the Committee on Sustainable Energy in view of the key role of renewable energy in the transition to a sustainable energy future.

3. The Chair also drew attention to the Group of Experts on Renewable Energy temporarily not having a programme officer in the ECE secretariat to support its work. Since 1 July 2020, due the liquidity crisis in the United Nations recruitment to fill the post has been frozen. It is anticipated that this situation will continue until at least early 2021, which would impact severely delivery of the Group of Expert's programme of work for 2020-2021.

II. Attendance

4. The meetings of the Groups of Experts reporting to the Committee on Sustainable Energy held during the period 22-25 September 2020 were attended by more than 350 experts from the following United Nations Economic Commission for Europe (ECE) member States: Albania, Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Kyrgyzstan, Latvia, Malta, Netherlands, North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America, and Uzbekistan.

5. Experts from Argentina, Australia, Brazil, Cameroon, Chad, the People's Republic of China, Colombia, Comoros, Ecuador, Egypt, Ghana, Guatemala, India, Indonesia, Iran (Islamic Republic of), Iraq, Kenya, Kuwait, Lebanon, Libya, Madagascar, Malaysia, Mali, Mexico, Mongolia, Morocco, Namibia, New Zealand, Nicaragua, Nigeria, Pakistan, the Philippines, Qatar, Saudi Arabia, South Africa, Thailand, Uganda, United Arab Emirates,

United Republic of Tanzania and Yemen participated under Article 11 of the Commission's Terms of Reference.

6. Representatives of the United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), UNEP-DTU Partnership, Copenhagen Centre on Energy Efficiency, World Meteorological Organisation (WMO) and International Atomic Energy Agency (IAEA) attended. The European Union was represented. Representatives from the European Commission (EC), from the EC Directorate-General (D.G.) for Energy, D.G. for Innovation, Research, Culture, Education and Youth, and D.G. Joint Research Centre, and the European Institute of Innovation and Technology (EIT) RawMaterials also participated.

7. Representatives of the following organizations participated: Coordinating Committee for Geoscience Programmes in East and Southeast Asia (CCOP), EuroGeoSurveys (EGS), International Energy Agency (IEA), and International Renewable Energy Agency (IRENA).

8. The meeting also was attended by representatives of non-governmental organizations, academia and the private sector, as well as by independent experts.

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III. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.7/2020/1 – Annotated provisional agenda.

10. In accordance with the Rules of Procedure of ECE, the first item of the provisional agenda is the adoption of the agenda.

11. Noting that its seventh session was held under unprecedented circumstances caused by COVID-19 in a different format and in collaboration with the Groups of Experts on Energy Efficiency, on Gas, and on Resource Management during the period 22-25 September, the Group of Experts on Renewable Energy adopted its agenda (ECE/ENERGY/GE.7/2020/1).

IV. Election of officers (agenda item 2)

12. The Group of Experts elected a new Bureau, with effect from the close of the seventh session for two years, comprising the following members: Mr. Kostiantyn Gura (Ukraine) as Chair, and Mr. Adrian Bylyku (Albania), Ms. Victoria Keshishyan (Armenia), Mr. Andrei Miniankou (Belarus), Mr. Admir Softić (Bosnia and Herzegovina), Ms. Margalita Arabidze (Georgia), Mr. Tibor Fischer (Germany), Ms. Ainur Sospanova (Kazakhstan), Mr. Georgy Ermolenko (Russian Federation), Mr. Miloš Banjac (Serbia), Mr. Paolo Frankl (International Energy Agency), Mr. Gurbuz Gonul (International Renewable Energy Agency), Ms. Rana Adib (Renewable Energy Policy Network for the 21st Century), and Ms. Michela Morese (Food and Agriculture Organization of the United Nations/Global Bioenergy Partnership) as Vice-Chairs.

13. The Group of Experts noted with appreciated the contributions of the outgoing Chair, Mr. Nazir Ramazanov (Azerbaijan). Mr. Felice Cappelluti (Italy) also was thanked for his contribution during his time as Vice-Chair.

V. Understanding renewable energy resource projects, portfolios and investments – applying the United Nations Framework Classification for Resources (special session) (agenda item 3)

14. A special session on "Overcoming barriers to scaling up Renewable Energy" was held in cooperation with the ECE Expert Group on Resource Management.

15. The on-line discussion generated a rich dialogue in the chat room, in particular related to the benefits and applicability of the United Nations Framework Classification for Resources (UNFC) to renewable energy. The Group of Experts requested that the messages exchanged in the "chat" and a summary be posted on the website.

16. Following the presentations and discussions, the Group of Experts on Renewable Energy:

(a) Noted the benefits of standardised renewable energy resource classification and management, including: the tracking of common milestones by project developers; harmonised monitoring of project pipelines by portfolio managers in utilities and integrated energy companies; having improved information on project maturities and risks for investors, banks and regulators; and, directly comparable information on resource potentials for policy makers;

(b) Noted that the use of standardised resource classifications including common project milestones and harmonised reporting, promises to reduce transaction costs while improving the quality of information being shared between businesses and governments and further noted the importance of this in the post-COVID-19 green recovery;

(c) Noted the importance of further testing the classification of renewable energy projects using the United Nations Framework Classification for Resources (UNFC) and agreed to facilitate case studies or pilot projects by ECE member States for presentation at its eighth session;

(d) Agreed that a member of the Bureau of the Group of Experts will join the Renewable Energy Working Group of the Expert Group on Resource Management;

(e) Agreed to work with the Expert Group on Resource Management to prepare and issue a joint study on the benefits and challenges for governments applying UNFC to renewable energy projects and resources. Such a study would serve to highlight the alignment of UNFC with the Sustainable Development Goals;

(f) Requested the secretariat to facilitate coordination between the two Groups of Experts.

VI. Joint Task Force on Energy Efficiency Standards in Buildings - the role of renewable energy in high performance buildings (agenda item 4)

Documentation: ECE/ENERGY/GE.6/2020/4 – Updated Framework Guidelines for Energy Efficiency Standards in Buildings

ECE/ENERGY/121 – Promoting Energy Efficiency Standards and Technologies to Enhance Energy Efficiency in Buildings (ECE Energy Series No. 60)

17. This session was held in cooperation with the ECE Group of Experts on Energy Efficiency.

18. With its renewed mandate for the period 2020–2021, the Joint Task Force on Energy Efficiency Standards in Buildings continued its efforts to help accelerate transformation of the world's building stock through dissemination of the Framework Guidelines for Energy Efficiency Standards in Buildings (ECE/ENERGY/GE.6/2017/4). As the 2020–2021 Work Plan set the objective to further review ECE/ENERGY/GE.6/2017/4 as deemed necessary to keep it updated, the document ECE/ENERGY/GE.6/2020/4 was developed and presented to the Group of Experts during its joint meeting under this agenda item with the Group of Experts on Renewable Energy.

19. The on-line discussion generated a rich dialogue in the chat room. The Group of Experts requested that the chat and a summary be posted on the website.

20. Following the presentations and discussions, the Group of Experts on Renewable Energy:

(a) Welcomed the improvements to the United Nations Framework Guidelines for Energy Efficiency Standards in Buildings, specifically those related to taking account of the buildings' value chain for more accurate calculation of energy efficiency (i.a., the amount of energy consumed to produce building materials); orientation on low-carbon technologies to encourage utilization of clean and potentially renewable energy-based technologies to lower greenhouse gas emissions, and; recognition of the impact that buildings have on human health;

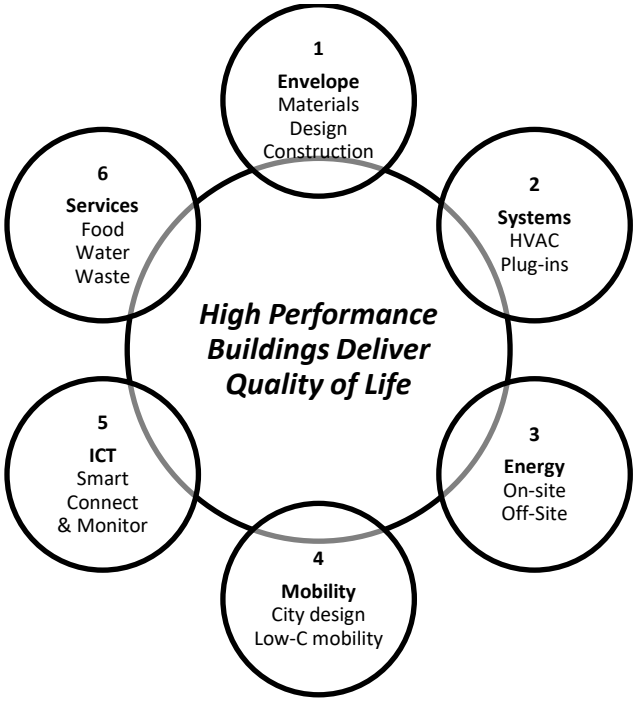
(b) Recognized the potential for its collaboration with the Group of Experts on Energy Efficiency on buildings' energy supply, with a view to apply a holistic, systems approach to building design, delivery and operation and thereby align buildings with the highest standards of health, comfort, well-being and sustainability (including improving energy productivity and reducing emissions);

(c) Requested the secretariat to facilitate coordination between the two Groups of Experts.

21. The Joint Task Force on Energy Efficiency Standards in Buildings was established in 2015 by the Committees on Sustainable Energy and on Urban Development, Housing and Land Management (previously the Committee on Housing and Land Management) with the participation of the Working Party 6 on Regulatory Cooperation and Standardization Policies (WP 6) for 2016-2017 with a possibility of extension. Its mandate was extended for the period of 2018-2019, and further for the period of 2020-2021 with a possibility of extension.

22. The Joint Task Force on Energy Efficiency Standards in Buildings developed the Framework Guidelines for Energy Efficiency Standards in Buildings (the Framework Guidelines, ECE/ENERGY/GE.6/2017/4). In 2017, the parent Committees endorsed the Framework Guidelines. To deploy the Framework Guidelines, ECE launched its high-performance buildings initiative to accelerate the transformation of the world's building stock. A six-circle diagram captures the essence of the ECE high performance buildings initiative (Figure).

Figure:
The Essence of the ECE High Performance Buildings Initiative



23. The first circle is about getting the building envelope done correctly – design, materials, and perfect construction techniques. Done right, energy requirements in the building are reduced to very low levels, levels at which the remaining energy requirements

can be met with low or no carbon energy sources. Building materials should feature both reduced embedded carbon and energy and components that can be recovered in the future.

24. The second circle addresses systems: heating, ventilating, and air conditioning as well as water heating and plug-in equipment. The challenges are sizing the equipment to the building's needs and ensuring both reduced embedded carbon and energy and components that can be recovered in the future.

25. The third circle explores the energy needed to drive the systems – rooftop solar, storage in the basement, or a connection to the wind farm down the road. It is possible to source a building's energy service requirements from low or no carbon energy sources because energy requirements have been minimized.

26. The fourth circle contributes to reducing the carbon intensity of mobility. It begins with proper design of urban transport systems but connects to the buildings equation through coordination of building sites with transport infrastructure and through connection of buildings energy and energy storage systems with mobility options.

27. The fifth circle is information and communications technology. A building is a complex system embedded in a community that is in a city that is part of a national network. If those systems and information can communicate seamlessly, suddenly system optimization brings distributed generation, smart energy use, energy service providers, and consumers to deliver an efficient set of outcomes. Further, with ICT the monitoring and control of the systems, indoor air quality, and comfort levels is enabled. Demonstrably healthy and comfortable homes attract higher valuations that can support financing options.

28. The sixth circle on services brings in the remainder of what dwellings provide to its occupants, including water, food, and waste removal or treatment. Properly conceived, buildings can contribute substantially to each through waste re-use and recycling, water recovery and treatment, and on-site food production. The circles represent distinct professions that, when connected, can deliver outcomes far superior to and more resilient than current practice.

29. ECE continues to maintain the Framework Guidelines and keep them updated. In view of this, the Work Plan of the Group of Experts on Energy Efficiency for 2020-2021 (ECE/ENERGY/2019/8) set the objective of further review and update of the Framework Guidelines, as needed. The draft improved Framework Guidelines are presented in the document ECE/ENERGY/GE.6/2020/4.

30. In the course of 2017-2019, the Group of Experts on Energy Efficiency and its Joint Task Force on Energy Efficiency Standards in Buildings implemented several projects that were funded by the Governments of Denmark and the Russian Federation and by the Black Sea Economic Cooperation Organization (BSEC). A training programme on high-performance energy efficiency standards in buildings for building sector practitioners, policy makers, and trainers was conducted, the studies "Mapping of energy efficiency standards and technologies in buildings in the ECE region" and "Mapping of existing technologies to enhance energy efficiency in buildings in the ECE" region were completed, and a "Compendium of best practices on standards and technologies for energy efficiency in buildings in the UNECE region" was developed. Building upon the outcomes of these projects, and taking stock of the results of other activities undertaken by the Joint Task Force on Energy Efficiency Standards in Buildings, a publication entitled "Promoting Energy Efficiency Standards and Technologies to Enhance Energy Efficiency in Buildings" (ECE/ENERGY/121, ECE Energy Series No. 60) was prepared.

31. A successive activity of the Joint Task Force is a recently approved and launched extrabudgetary project "Enhancing national capacities to develop and implement energy efficiency standards for buildings in the UNECE region" funded by the Russian Federation. Its expected duration is from July 2020 to March 2022. Among its activities are conducting a gap analysis between the performance objectives set forth in the Framework Guidelines and current energy efficiency standards and their implementation in the countries of South-Eastern and Eastern Europe, the Caucasus, Central Asia, and in the Russian Federation; developing national studies with a more detailed gap analysis in three pilot countries; and

organizing national training seminars in these three countries on high-performance energy efficiency standards in buildings.

VII. Guidelines and best practices for micro-, small and medium enterprises in delivering energy-efficient products and in providing renewable energy equipment in the post-COVID-19 recovery phase (agenda item 5)

Documentation: GEEE-7/2020/INF.4 – Guidelines and best practices for micro-, small and medium enterprises in delivering energy efficient products and in providing renewable energy equipment in the post-COVID-19 recovery phase

32. This session was held in cooperation with the ECE Group of Experts on Energy Efficiency.

33. The Group of Experts was presented with the report GEEE-7/2020/INF.4, developed in the framework of implementation of the United Nations Development Account project "Global Initiative towards post-Covid-19 resurgence of the MSME sector" to which ECE is one of the implementing partners. In its subject field, the report explores the environment that MSME face as a result of the COVID-19 pandemic, analyses the case studies from MSME in response to it, identifies best practices, and provides guidelines and recommendations on relevant measures.

34. A presentation was delivered on the findings of the research on the environment the clean energy MSME face as a result of the COVID-19 crisis and on examples of best practices in the energy efficiency sector and in the area of renewable energy relevant to a response of MSME to COVID-19 and post-crisis recovery, providing guidelines to MSME on access to financing, markets and advanced technologies, and recommendations to governments for developing policy guidelines and establishing financial incentives schemes. The results of the online training session on the subject area, held 14 September 2020 in the frames of the project implementation, were also reported to the Group of Experts.

35. Following the presentations and discussions, the Group of Experts on Renewable Energy:

(a) Took note of the recommendations to governments for developing policy guidelines and establishing financial incentives schemes for micro-, small and medium enterprises (MSMEs). The Group acknowledged that these recommendations, if tailored to the national contexts of ECE member States, could enable a more secure development environment for MSMEs to deliver energy-efficient products and provide renewable energy equipment;

(b) Welcomed development of a publication on this topic based on the findings of the study being undertaken by ECE;

(c) Expressed appreciation to the Group of Experts on Energy Efficiency for its participation in the discussions under this agenda item and reiterated the request to the secretariat to facilitate further cooperation between the two Groups of Experts.

VIII. Achieving carbon neutrality on the pathway to sustainable energy (agenda item 6)

Documentation: Extrabudgetary project on "Enhancing understanding of the implications and opportunities of moving to carbon neutrality in the UNECE region across the power and energy intensive industries by 2050" approved at the 109th ECE Executive Committee meeting on 17 February 2020

36. The Group of Experts:

(a) Outlined its intention to engage in the joint work on the transition of the energy sector in line with the results of the ECE project "Pathways to Sustainable Energy" and

objectives of the "Carbon Neutrality" project, supporting member States to meet their commitments under international agreements and the 2030 Agenda for Sustainable Development;

(b) Noted with appreciation the implementation of the project on "Carbon Neutrality" being overseen by the Group of Experts on Cleaner Electricity Systems and agreed to support further development and to engage in a technology and policy dialogue on attaining carbon neutrality in the ECE region, taking into account the significant role that renewable energy is expected to play in a future energy system;

(c) Noted with appreciation the interventions by delegates on their experiences and views on how to improve integration of renewable energy into energy systems, in particular given the interlinkages and synergies among renewable energy, natural gas and cleaner electricity production.

IX. Decarbonization that harnesses synergies between renewable energy (electricity and gas) while using gas infrastructure as the backbone of a low-carbon energy system (agenda item 7)

37. This special session was held in cooperation with the Group of Experts on Gas.

38. The on-line discussion generated a rich dialogue in the chat room. The Group of Experts requested that the chat and a summary be posted on the website.

39. Recognizing the drive towards decarbonization and electrification of end-use and noting that, increasingly, decarbonized gases will be a key energy vector for the foreseeable future, the Group of Experts welcomed the opportunity to collaborate with the Group of Experts on Gas on this topic.

40. The Group of Experts:

(a) Noted the importance to facilitate international and cross-sectoral collaboration to increase awareness and public acceptability of hydrogen and accelerate the transition towards a future hydrogen economy;

(b) Recognized the critical role of gas in decarbonising the energy sector and achieving carbon neutrality by 2050;

(c) Acknowledged that the concept of "gas" should be broader and include not only natural gas but also low-carbon, decarbonized and renewable gases. Technology development and economies of scale will foster progressive growth in the use of decarbonized and renewable gases. The use natural gas with carbon capture (use) and storage CC(U)S technology also could lead to desired outcomes;

(d) Acknowledged that biogas/biomethane and hydrogen could make significant contributions. Biogas/biomethane has the added benefits of contributing to the circular and rural economy and valuing waste. Hydrogen is expected to increase its contribution progressively with multiple potential sources of hydrogen production;

(e) Offered support to ECE member States to disseminate best practices in the achievement of the interlinked model and to develop effective policies to support, when necessary, technological developments and to accelerate decarbonisation of the energy system;

(f) Requested the secretariat to facilitate continued coordination between the two Groups of Experts.

X. Work Plan of the Group of Experts on Renewable Energy for 2020-2021 (agenda item 8)

Documentation: ECE/ENERGY/2019/9 – Work Plan of the Group of Experts on Renewable Energy for 2020-2021

41. The Group of Experts:

(a) Noted with appreciation the work of the Bureau and the secretariat and their efforts to manage and direct the Group's work plan between annual sessions despite human and financial resource constraints and the unprecedented situation caused by the COVID-19 pandemic;

(b) Further noted with appreciation the concrete activities the Group has implemented to help increase the uptake of renewable energy significantly across the ECE region.;

(c) Noted the significant progress in implementing its work plan for 2020-2021;

(d) Noted with appreciation the cooperation with the ECE Subprogramme on Environment in helping to achieve better management of resources, including an increase in the share of renewable energy, taking into consideration intersectoral opportunities and effects in the water-energy-food-ecosystems nexus. The Group welcomed the tool for policymakers "Towards sustainable renewable energy investment and deployment: Trade-offs and opportunities with water resources and the environment" (ECE/ENERGY/127, ECE Energy Series No. 63) and agreed to continue further strengthening the potential role of renewable energy in promoting the nexus approach as well as links to the 2030 Agenda for Sustainable Development and the implications for climate change mitigation. The Group supported continued cooperation with the Task Force on the Water-Food-Energy-Ecosystems Nexus under the ECE Water Convention to disseminate the tool for policymakers across the ECE region and beyond;

(e) Noted with appreciation implementation of the project on "Transboundary energy cooperation through introduction of wind and solar energy into power systems of the CIS countries to support achievement of Sustainable Development Goal 7". The Group of Experts agreed to continue supporting market development of renewable energies in ECE countries through identification of obstacles to renewable energy uptake and promotion of multi-stakeholder dialogue.

42. The Group of Experts noted that delivery of its Work Plan for 2020-2021 would be negatively impacted if the Group was no longer supported by an ECE Programme Officer due to the liquidity crisis in the United Nations.

XI. Other business (agenda item 9)

43. No issues were raised.

XII. Dates of the next meeting (agenda item 10)

44. The eighth session of the Group of Experts on Renewable Energy is scheduled to take place in Geneva on 5-6 October 2021. The Group of Experts confirmed its proposal from previous sessions that its meetings may take place in venues outside Geneva.

XIII. Adoption of conclusions and recommendations (agenda item 11)

45. The conclusions and recommendations were adopted.

XIV. Adoption of the Report and close of the meeting (agenda item 12)

46. The report of the meeting was adopted, including conclusions and recommendations, subject to any necessary editing and formatting.