



Economic Commission for Europe**Committee on Sustainable Energy****Thirty-second session**

Geneva, 13-15 September 2023

Item 9 (b) of the provisional agenda

Looking ahead: Future work of the Committee on Sustainable Energy**Approval of documents****Work Plan of the Group of Experts on Energy Efficiency for
2024-2025****Prepared by the Group of Experts on Energy Efficiency****I. Introduction**

1. The Group of Experts on Energy Efficiency (the Group of Experts) is mandated to carry out concrete, results-oriented activities to help significantly improve energy efficiency in the region, thus contributing to climate change mitigation efforts, and strengthen regional cooperation in energy efficiency, with a view to reducing greenhouse gas (GHG) emissions (ECE/EX/2013/L.15). According to its Terms of Reference, the Group of Experts concentrates on: (a) Regulatory and policy dialogue addressing financial, technical and policy barriers to improve energy efficiency; and (b) Collecting and sharing experience and best practices in the field of energy efficiency in the United Nations Economic Commission for Europe (ECE) region, including on strengthening institutional capacity in energy efficiency to reduce GHG emissions.
2. The Group of Experts supports ECE member States in broadening and accelerating the deployment of energy efficiency and decarbonization measures across buildings, industry, transport, and other end-use sectors while embracing sector-wide digitalization. While striving to achieve as broad a geographical representation as possible by engaging major groups and relevant stakeholders active in areas related to sustainable development, the Group of Experts also maintains its focus on ensuring gender equality in the energy sector and on enabling intergenerational dialogue.
3. Recognizing the challenges that the ECE region is facing, the Committee on Sustainable Energy (the Committee), at its thirty-first session, agreed to prioritize and implement special activities that coordinate and promote efforts related to energy resilience across the ECE region, providing an ECE Platform on Resilient Energy Systems for inclusive dialogue ([ECE.ENERGY/143](#)).
4. The Group of Experts requests the Committee to renew its mandate until 31 December 2025, with the possibility of extension.



II. Concrete activities

5. In the report on its ninth session (ECE/ENERGY/GE.6/2022/2), the Group of Experts underscored that energy efficiency should be valued as an energy resource in its own right, and should be pursued as a priority in production, transmission, distribution, and consumption of energy.

6. Possibilities and solutions to improve systemic efficiency, optimize resources use, and reduce associated carbon footprint (including by means of digitalization), should be prioritized, duly assessed, and implemented if feasible for economic recovery. Additionally, system efficiency needs to be an integral element when planning to build new, or to modernize and restore older, damaged or destroyed existing buildings, industry, and infrastructure.

7. The Group of Experts will undertake the activities described below and, within the scope of its expertise, will contribute, under the leadership of the Committee and in cooperation with its other subsidiary bodies, to the work on increasing resilience of energy systems in the ECE region, and will continue to promote gender-related activities and intergenerational dialogue jointly with the other subsidiary bodies of the Committee.

8. To increase the relevance and strengthen the impact of the work undertaken by the Group of Experts, its activities will be guided by the following three pillars:

(a) Content creation: where there are critical gaps that need to be addressed that do not duplicate existing work by other bodies;

(b) Content adaptation to regional and national circumstances: existing and new content with an emphasis on ensuring as wide a geographical coverage within the ECE region as reasonably justified, to make research outcomes tangible and relevant and thus ease the adoption of findings;

(c) Communication of activities and collaboration: knowledge sharing and raising awareness of the activities and outcomes among policymakers and other stakeholders that are likely to benefit from it, and thus to increase the impact of the activities undertaken; working in collaboration with the Committee on Sustainable Energy and other relevant ECE sectoral Committees and their respective subsidiary bodies, as well as ECE member States, other relevant organizations, and the expert community.

9. Activities requiring additional resources, will be delivered by the Group of Experts if such additional resources, be they supplementary regular budget means, in-kind contributions, or extrabudgetary funds, are available.

A. Supporting energy efficiency improvement and decarbonization in industry

Description:

10. The Group of Experts activities on industrial energy efficiency and on-site decarbonization are carried out by the Task Force on Energy Efficiency in Industry, through which the Group of Experts works with relevant institutions and maintains a forum to exchange know-how and best practices in those fields.

11. The Task Force on Energy Efficiency in Industry acts with a view to enhance collaboration between policymakers and the industrial sector itself. Thus, helping to achieve more sustainable and energy-efficient production, logistics, and consumption, and to increase industrial energy productivity while supporting the ambition to reduce the sector's carbon footprint. The activities of the Task Force on Energy Efficiency in Industry include cross-disciplinary research and exchange of information and capacity-building aiming to increase awareness about the existing means of support.

Work to be undertaken:

12. In 2024-2025, the Task Force on Energy Efficiency in Industry will undertake the following activities, which are dependent on in-kind contributions and/or extrabudgetary

resources, and are subject to changes, amendments, and augmentation in the course of consultations with the Group of Experts, as well as the Committee and its other subsidiary bodies:

(a) Assess industrial energy demand, identify and develop approaches to implement best practices in increasing energy efficiency, energy resiliency and systemic efficiency in industry, and explore policy actions to foster implementation of energy efficiency, resiliency, and decarbonization measures;

(b) Expand membership and broaden expertise of the Task Force on Energy Efficiency in Industry, encouraging increased cooperation between organizations leading industrial energy efficiency and/or decarbonisation initiatives, and other relevant bodies;

(c) In collaboration with relevant organizations, organize workshops to exchange experience and share information on barriers, drivers, and options for improving energy efficiency, systemic efficiency, energy resiliency, and energy productivity in industry, as well as for reducing the carbon footprint of industry and its produce;

(d) Support closer cooperation on cross-cutting issues such as improvements of systemic efficiency, between the subsidiary bodies of the Committee on Sustainable Energy and other ECE sectoral Committees and their respective subsidiary bodies, as well as establish and support productive partnerships with other United Nations regional commissions and other relevant organizations;

(e) Provide support to ECE sustainable energy projects and initiatives, within its scope of expertise, resources, and in line with its Terms of Reference;

(f) Engage, within the scope of the Task Force's mandate and expertise, in cooperation with the Group of Experts on Coal Mine Methane and Just Transition and under the leadership of the Committee, in work facilitating transformation and greening of ECE member States' industries along the coal value chain and of coal-dependent regions in accordance with the principles of just transition.

Deliverables and Timeline:

13. The following deliverables for 2024-2025 will orientate the work of the Task Force on Energy Efficiency in Industry:

(a) Two reports on industrial energy efficiency and/or decarbonisation, in line with the activities of the Committee and in cooperation with other subsidiary bodies; by the eleventh and the twelfth sessions of the Group of Experts, respectively;

(b) Workshops and information sharing sessions on relevant topics of interest; ongoing, 2024-2025;

(c) Contribution, within the scope of the Task Force's expertise and upon the Committee's request indicating the expected input, to the work on building resilient energy systems in the ECE region undertaken under the umbrella and leadership of the Committee, by December 2025 in accordance with the Committee's request;

(d) Established working engagement with the other Groups of Experts operating under the umbrella of the Committee ensuring that the just transition angle is properly reflected in their respective work on building resilient energy systems in the ECE region, by December 2025;

(e) Contribution, within the scope of the Task Force's mandate and expertise, to a study on how the regions currently dependent on legacy industries based on coal can transform towards the green economy in accordance with principles of carbon neutrality and just transition, by December 2025 (under the lead of the Group of Expert on Coal Mine Methane and just Transition).

B. Develop, update, and disseminate energy efficiency standards aimed at raising energy performance of buildings and improving the built environment**Description:**

14. The work of the Group of Experts on improving energy efficiency in buildings is carried out by the Joint Task Force on Energy Efficiency Standards in Buildings, established and coordinated jointly by the Committee on Sustainable Energy and the Committee on Urban Development, Housing and Land Management (the parent bodies), and hosted by the Group of Experts.

15. Guided by recommendations and decisions of its parent bodies, the Joint Task Force on Energy Efficiency Standards in Buildings undertakes dissemination, education and research, consultation, and engagement activities on high-performance buildings, and supports member States in development and deployment of normative instruments to improve energy efficiency in buildings (E/ECE/1500).

16. Mandate of the Joint Task Force has been continuously extended since 2018. Building on the progress made by the Joint Task Force and acknowledging its ongoing activities, its mandate is proposed to be extended for the period of 2024-2025 with a possibility of further extension. The Terms of Reference that will guide activities of the Joint Task Force on Energy Efficiency Standards in Buildings, are contained in the Annex to the present document.

17. To help transform the built environment and the manner in which it delivers quality of life, supports achievement of the goals of the Paris Climate Agreement and the 2030 Agenda for Sustainable Development, and improves the quality of life and energy performance of buildings, ECE launched the High Performance Buildings Initiative.

18. The activities of the Group of Experts on improving energy efficiency in buildings are dependent on in-kind contributions and/or extrabudgetary resources, and are subject to changes, amendments, and augmentation in the course of consultations with the Committee on Sustainable Energy, the Committee on Urban Development, Housing and Land Management, and their respective subsidiary bodies including the Group of Experts.

Work to be undertaken:

19. In 2024-2025, the Joint Task Force on Energy Efficiency Standards in Buildings will undertake the following activities:

(a) Maintain and update, as needed, the Framework Guidelines on Energy Efficiency Standards in Buildings;

(b) Conduct workshops and training seminars on the application of the Framework Guidelines on Energy Efficiency Standards in Buildings in collaboration with partners;

(c) Manage and provide secretariat support to the ECE High Performance Buildings Initiative;

(d) Provide support to ECE ongoing projects, within the scope of its expertise and in line with its Terms of Reference;

(e) Contribute to relevant activities and initiatives on sustainable energy activities and initiatives, participate in developing project proposals, and provide guidance, as appropriate, within the scope of its expertise and in line with its Terms of Reference;

(f) Explore the potential of the municipal energy management systems for contribution to measuring, reporting, and verification of the energy efficiency measures and energy savings on the municipal level.

Deliverables and Timeline:

20. The following deliverables for 2024-2025 will orientate the work of the Joint Task Force on Energy Efficiency Standards in Buildings:

(a) A set of workshops and training seminars on the application of the Framework Guidelines on Energy Efficiency Standards in Buildings; ongoing, 2024–2025 (subject to availability of extrabudgetary resources);

(b) Contribution, within the scope of its expertise, to activities of the Group of Experts, as well as the Committee on Sustainable Energy and its other subsidiary bodies; ongoing, 2024-2025;

(c) Engagement with relevant partners to support and advance the principles of energy efficiency set forth in the Framework Guidelines on Energy Efficiency Standards in Buildings, under the ECE High Performance Buildings Initiative cooperation framework; ongoing, 2024-2025.

C. Unlocking the potential of energy system efficiency through digitalization

Description:

21. The increasing complexity of the energy sector due to growing decentralized intermittent generation, the influx of electric vehicles, and other smart assets at the grid edge, requires a combination of digital innovations to manage it.

22. Digitalization, as a catalyst for expeditious and more effective action for decarbonization and achieving Sustainable Development Goal 7 and other Goals of the 2030 Agenda for Sustainable Development, offers new ways of looking at many energy challenges and finding exceptional ways to address them. Digitalization serves as an enabler to: increased systemic efficiency, optimization of energy resource use and reduced energy costs (in a layered view), cleaner electricity systems, and equilibration when policy balance between energy security, affordable, reliable, sustainable and modern energy services, and environmental sustainability of energy use is challenged by the changing energy landscape.

23. The Task Force on Digitalization in Energy is mandated to explore the role of digitalization to improve the efficiency of the overall energy system and ensure progress toward its continuous improvement, with the aim to provide a clear and balanced view on the matter to policymakers and stakeholders. The goal is to develop evidence-based policy recommendations and guidelines on digitalization, with the objective to achieve higher levels of efficiency in the energy system while ensuring its security and sustainability. The Task Force on Digitalization addresses such matters as technology compatibility issues, balancing both data access and data privacy and cybersecurity, and assessing impacts on economies and societies.

Work to be undertaken:

24. Noticing the growing recognition of the importance of digitalization policy and its contribution to sustainable energy development strategy, and in line with the decisions adopted by the seventieth session of the Economic Commission for Europe under the designated theme “Digital and green transformations in the region of the Economic Commission for Europe”, in 2024-2025, the Task Force on Digitalization in Energy will undertake the following activities, which are dependent on in-kind contributions and/or extrabudgetary resources, and are subject to changes, amendments, and augmentation in the course of consultations with the Group of Experts and the Committee and its subsidiary bodies:

(a) Continue constructive technical and policy dialogue on digitalization to help bridge the gap between academic research, industrial innovations, and policy needs to achieve higher levels of efficiency in the energy system;

(b) Continue carrying out comprehensive work assessing opportunities and challenges that digitalization represents across the whole energy system, notably the impact of digitalization on sectors that are key for decarbonization and increased energy efficiency, and coordinate research and activities related to digitalization in energy across the subsidiary bodies of the Committee;

(c) Develop and maintain a dictionary of digitalization terms, as well as a list of digitalization-enabled solutions and improvement opportunities relevant to the work of the subsidiary bodies of the Committee;

(d) Develop case studies on digitalization in energy that have significant potential of replication;

(e) Organize workshops and information sharing sessions on relevant topics of interest, with the aim to bridge the gap between academic research, industrial innovations, and policy needs;

(f) Contribute, within the scope of its expertise, to sustainable energy activities and projects overseen by the Committee. Disseminate results through regional workshops, policy recommendations and viable business models for ECE member States, subject to availability of extrabudgetary resources;

(g) Seek opportunities for joint activities with other relevant organizations.

25. Following the earlier emphasis on content creation, work on digitalization in 2024-2025 will add a focus on collaboration and outreach. The following three pillars will be the foundation of the work on digitalization:

(i) Content creation: complement the existing content especially in cybersecurity, use of Artificial Intelligence in the energy system, technology compatibility, energy system resiliency, electrification, and other selected areas;

(ii) Outreach based on the existing content and content adaptation to national circumstances: organization and conduct of webinars, development of background materials and infographics, with an emphasis on ensuring as wide a geographical coverage within the ECE region as reasonably justified;

(iii) Communication and collaboration: working in collaboration with the Committee on Sustainable Energy and other ECE sectoral Committees and their respective subsidiary bodies, as well as establishing and supporting productive partnerships with other United Nations regional commissions and other relevant organizations.

26. This activity will mutually support activities outlined in the Work Plan of the Group of Experts on Cleaner Electricity Systems for 2024-2025 (ECE/ENERGY/2023/9), Section C.

Deliverables and Timeline:

27. The following deliverables for 2024–2025 will orientate the work of the Task Force on Digitalization in Energy:

(a) Two reports covering different topics on digitalization in energy, also involving other subsidiary bodies of the Committee; by the eleventh and the twelfth sessions of the Group of Experts, respectively;

(b) Case studies on digitalization in energy, feeding into a compendium of case studies (publication); by the eleventh session of the Group of Experts and by December 2024, respectively;

(c) Workshops and information sharing sessions on relevant topics of interest, including jointly with the United Nations regional economic commissions and other relevant organizations; ongoing, 2024-2025;

D. Development of approaches for a balanced integration of electric mobility

Description:

28. The electric vehicles (EVs) fleet grows significantly, alongside expansion of charging infrastructure. Coupled with technology advances and supported by favourable regulatory and fiscal measures, the uptake of EVs is expected to only accelerate in the future. It is also

argued that e-mobility will have as much impact on the design and operation of the electric grid as it will on transportation systems themselves. Electric loads will grow significantly, and location, operation, and standards of EVs chargers (private or public) need to ensure interoperability and be integrated with grid and resource planning. Moreover, EVs have zero tailpipe emissions and are locally carbon-neutral, yet they virtually emit carbon when being charged, as electricity has its GHG footprint that varies depending on multiple factors including the source of energy used for electricity production.

29. Electrification of transport hence requires harmonized approaches in advance of larger EVs deployments, to ensure that the transport electrification is supported by the power system and its reliability performance and brings net benefits to all energy system actors. Enhanced collaboration, awareness-raising, and information sharing is required, along with greater emphasis on cybersecurity.

30. The below activities will be delivered by the Group of Experts jointly with the Group of Experts on Cleaner Electricity Systems and with the Working Party on Transport Trends and Economics (WP.5) and the World Forum for Harmonization of Vehicle Regulations (WP.29) of the Inland Transport Committee, in support of cross-sectoral cooperation and closer engagement envisaged in ECE/TRANS/328 (paras.76- 77).

31. All activities and outputs are subject to regular consultations with the Group of Experts and other subsidiary bodies of the Committee on Sustainable Energy, the Informal Working Group on Electric Vehicles and the Environment and its parent bodies, partner organizations, and donors, and might be subject to adaptations.

32. This activity is dependent on extrabudgetary resources and/or in-kind contributions.

Work to be undertaken:

33. Work of the Group of Experts on this track in 2024–2025 will support dialogue among the energy and the vehicle experts, and will involve the following activities:

(a) Explore issues of energy infrastructure readiness for the increasing EVs fleet, as well as opportunities and constraints of turning EVs into energy system assets (usage profile, storage, etc.);

(b) Explore interaction modalities between EVs, charging infrastructure, and the broader electricity grid, including cybersecurity threats;

(c) Continue facilitating consultations on electrification of mobility, to explore opportunities and challenges for transport, energy and spatial planning;

(d) Assess how digital technologies could enable more accurate measurement and reporting of real-time emissions of connected EVs, and provide decision-making support for more economically rational and environmentally favourable EVs recharging options.

34. This activity will mutually support activities outlined in the Work Plan of the Group of Experts on Cleaner Electricity Systems for 2024-2025 (ECE/ENERGY/2023/9), Section D.

Deliverables and Timeline:

35. The following deliverables for 2024-2025 will orientate the work of the Group of Experts on matters related to transport:

(a) A set of workshops and seminars on the relevant selected topics of interest; ongoing, 2024-2025;

(b) A background document containing considerations on viable pathways for a balanced integration of electric mobility; first draft by the eleventh session of the Group of Experts, final draft by the twelfth session of the Group of Experts.

E. Regulatory and policy dialogue addressing barriers to improve energy efficiency

Description:

36. A few legislative, policy, economic, and financial barriers to significantly improve energy efficiency remain. The Group of Experts will continue its regulatory and policy dialogue to address these barriers, while also focusing on activities that can make an important contribution to foster circular, energy-resilient, and more resource-efficient economies in the ECE region and beyond.

37. In its document ECE/ENERGY/GE.6/2020/5, the Group of Experts outlined possible ways of accelerating the transition to sustainable energy systems in the ECE region from the energy efficiency standpoint (para. 17) and set forward related policy recommendations (para. 18).

38. With reference to the above, and in view of its deliberations in the course of implementation of activities under Sections A-D of this Work Plan, the Group of Experts will undertake further work to promote energy efficiency “as the first fuel” and assist international efforts to convert this notion into uptake and adequate investment in energy efficiency improvements in both: demand side and supply side.

Work to be undertaken:

39. In 2024-2025, the Group of Experts will undertake the following activities, in close consultation with the Committee on Sustainable Energy and its subsidiary bodies:

(a) Continue regulatory and policy dialogue addressing barriers to improve energy efficiency;

(b) Consider solutions towards practical implementation of its policy recommendations and explore other policy actions to overcome the identified challenges;

(c) Continue monitoring and assessing barriers for delivery of energy efficiency and associated energy resiliency improvements in the ECE region, notably in the areas of resource efficiency, energy productivity, energy performance standards, management of energy supply chains, and other that serve advancement of a circular economy and impact favourably on (including, but not limited to) Sustainable Development Goal 7 on Ensuring access to affordable, reliable, sustainable and modern energy for all.

Deliverables and Timeline:

40. Work of the Group of Experts on addressing legislative, policy, economic, behavioural, and financial barriers will deliver on the following results:

(a) A set of workshops and seminars to enable policy dialogue addressing barriers to improve energy efficiency; ongoing, 2024-2025;

(b) A report on barriers for delivery of energy efficiency and associated energy resiliency improvements in the ECE region, notably in the areas of resource efficiency, energy productivity, energy performance standards, management of energy supply chains, and other, subject to availability of extrabudgetary resources; first draft for discussion by the eleventh session of the Group of Experts and final draft by the twelfth session of the Group of Experts;

(c) A report on the existing mechanisms promoting energy efficiency uptake and more efficient use of energy resources, including through subsidies as well as carbon pricing options, in the ECE region, subject to availability of extrabudgetary resources; first draft for discussion by the eleventh session of the Group of Experts and final draft by the twelfth session of the Group of Experts.

Annex

Terms of Reference for the Joint Task Force on Energy Efficiency Standards in Buildings for 2024-2025

I. Background

1. United Nations Economic Commission for Europe (ECE) promotes the development and the dissemination of international standards in energy efficiency in buildings.
2. Joint Task Force on Energy Efficiency Standards in Buildings (Joint Task Force) was established under the Group of Experts on Energy Efficiency (Group of Experts), by the Committee on Sustainable Energy and the Committee on Urban Development, Housing and Land Management (jointly referred to as parent bodies), for the period of 2016-2017 with a possibility of extension of mandate.
3. Mandate of the Joint Task Force was since then extended on three occasions for: 2018-2019, 2020-2021, and 2022-2023. Building on the progress made by the Joint Task Force and acknowledging its ongoing activities, the mandate is proposed to be extended for the period of 2024-2025 with a possibility of further extension.

II. Reporting

4. The Joint Task Force is guided by recommendations and decisions of parent bodies.
5. The Joint Task Force reports to the parent bodies and to the Group of Experts.

III. Objective

6. In line with the ECE programme of work in the field of sustainable energy with a view to improve access to affordable and clean energy for all, and help reduce greenhouse gas emissions and the carbon footprint of the energy sector in the region, including by promoting international policy dialogue and cooperation among governments, the energy industry and other stakeholders, the objectives of the Joint Task Force are:

(a) To promote the development and the dissemination of international standards in energy efficiency in buildings, as expressed in the Framework Guidelines on Energy Efficiency Standards in Buildings (Framework Guidelines, ECE/ENERGY/GE.6/2020/4) and in the “Geneva UN Charter on Sustainable Housing”;

(b) To engage with relevant partners to support and advance the principles of energy efficiency and to further develop and disseminate international standards as expressed in the Framework Guidelines, as well as to enable collaboration with stakeholders active in the area of energy efficiency in built environment (within a cooperation framework set forth for this purpose, the ECE High Performance Buildings Initiative);

(c) To collect and disseminate knowledge in the thematic area, and to provide a neutral platform for dialogue among ECE member States on approaches to increase energy performance of buildings and for exchange of relevant experiences.

IV. Planned activities and outputs

7. To achieve its objectives, the Joint Task Force will undertake the following activities, which are subject to adaptations:
 - (a) Continue mapping key stakeholders and maintain a network of experts on energy efficiency in buildings;
 - (b) Support partnerships with relevant organizations;

(c) Support collaborative efforts for assessing the opportunities to improve energy performance of buildings, while reducing their environmental impact, over entire life cycle of buildings and throughout their supply chain;

(d) Assess barriers and evaluate options for the development, adoption or promotion of energy efficiency standards in buildings;

(e) Organize capacity-building events and training seminars on energy efficiency standards in buildings;

(f) Explore the contribution that introduction of energy management systems can make to scale up the energy savings and reduction of GHG emissions at the municipal level;

(g) Further explore the contributions that the built environment can make to the 2030 Agenda for Sustainable Development and the Paris Climate Agreement.

V. Funding

8. Activities of the Joint Task Force are expected to be supported by in-kind contributions and (or) extrabudgetary resources.

9. Planned activities and outputs are therefore subject to availability of such resources.

VI. Timeline

10. The mandate of the Joint Task Force will cover the period of 2024-2025.

VII. Methods of work

11. Joint Task Force will have two Co-Chairs representing its parent bodies.

12. Joint Task Force will hold its meetings in connection with the regular sessions of the Group of Experts on Energy Efficiency. During intersessional period, Joint Task Force will work via electronic communication.

13. Joint Task Force will report on its achievements and ongoing activities to the parent bodies, as appropriate, at their respective regular sessions.

VIII. Membership

14. Membership is open to representatives of all ECE member States, as well as to representatives of other Member States, educational and academic entities, non-governmental organizations, scientific and technological community, business and industry, and other relevant stakeholders.

IX. Secretariat support

15. Secretariat support will include:

(a) Coordination and programming of the activities of the Joint Task Force;

(b) Servicing meetings of the Joint Task Force, including the preparation of meeting agendas and reports;

(c) Consolidation of information received in the framework of implementation of the ECE High Performance Buildings Initiative, and its dissemination through the Committee on Sustainable Energy and the Group of Experts at their annual sessions.

16. Provision of secretariat support is dependent on the availability of additional resources as described in Section V.