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Economic Commission for Europe

Committee on Sustainable Energy

Group of Experts on Energy Efficiency

First session
Geneva, 17–18 November 2014
Item 8 of the provisional agenda
Report of the meeting

Report of the Group of Experts on Energy Efficiency on its first session

I. Introduction

1. The first session of the Group of Experts on Energy Efficiency was held on 17–18 November 2014[1].

II. Attendance

2. The meeting was attended by over 60 experts from the following United Nations Economic Commission for Europe (ECE) member States: Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Croatia, Germany, Israel, Kazakhstan, Latvia, Poland, Romania, Russian Federation, the former Yugoslav Republic of Macedonia, Tajikistan, Turkey, Ukraine, the United Kingdom, and the United States of America.

3. A representative of the European Union (EU) also participated.

4. Experts from Bangladesh, Iran, and Pakistan participated under Article 11 of the Commission's Terms of Reference.

5. Representatives of the United Nations Environment Programme (UNEP), United Nations Framework Convention on Climate Change (UNFCCC), International Atomic Energy Agency (IAEA), Copenhagen Centre on Energy Efficiency, International Chamber of Commerce, International Finance Corporation (IFC), International Partnership for

[1] Official documents of the session are available at http://documents.un.org/. Informal documents and presentations delivered at the meeting are available on the ECE website at: http://www.unece.org/index.php?id=35855#/.

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Energy Efficiency Cooperation (IPEEC), ISGAN – International Smart Grids Action Network, International Organization for Standardization (ISO), Organization for Security and Co-operation in Europe (OSCE), and United Nations Foundation also participated.

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

III. Adoption of the agenda (agenda item 1)

Documentation: ECE/ENERGY/GE.6/2014/1

7. The Director of the ECE Sustainable Energy Division delivered an opening statement. He emphasized the importance of energy efficiency for achieving sustainable development. The Director drew attention to the overarching mandate of the Committee on Sustainable Energy to provide access to affordable and clean energy to all, in line with the "Sustainable Energy for All" initiative of the United Nations Secretary-General, and to help reduce greenhouse gas emissions and the carbon footprint of the energy sector. He emphasized the need for the Committee and its subsidiary bodies to carry out concrete and results-oriented activities. The Director then provided an overview of the work of other subsidiary bodies of the Committee on Sustainable Energy, including the Group of Experts on Renewable Energy, Expert Group on Resource Classification, the Group of Experts on Cleaner Electricity Production from Fossil Fuels, the Group of Experts on Coal Mine Methane, and the Group of Experts on Gas. He drew attention to the cross-cutting nature of the work of all the subsidiary bodies and the opportunities for cooperation and collaboration in relation to energy efficiency noting that the focus of the sustainable energy programme is on energy efficiency from source to use. Cooperation with other international organizations is very important. The Group of Experts has to adopt the Work Plan and decide on what is the right way to proceed.

8. In line with the remarks of the Director of the Sustainable Energy Division, that the ECE Sustainable Energy Sub-programme should focus on concrete and results-oriented activities, the representative of the EU and its Member States suggested to keep agenda items 4 and 5 (b) short and focused on the energy efficiency component (as item 4 is also on the agenda of the Committee on Sustainable Energy and 5 (b) covers the mandates of other groups of experts) and to keep agenda item 6 limited to a point of energy efficiency related information (because the ECE Executive Committee is responsible for oversight of the extra-budgetary projects).

9. The provisional agenda was adopted as contained in ECE/ENERGY/GE.6/2014/1.

IV. Election of officers (agenda item 2)

10. The Group of Experts elected Mr. Tim Farrell (Copenhagen Centre on Energy Efficiency) as its chair, and Mr. Asaf Rzayev (Azerbaijan), Mr. Andrei Miniankou (Belarus), Ms. Maria Raytcheva (Bulgaria), Mr. Zlatko Pavičić (Croatia), Mr. Christian Noll (Germany), and Mr. Yusuf Yazar (Turkey) as vice chairs for two years. The Group of Experts invited other stakeholders to join the Bureau for two years to strengthen its activities: Mr. Benoit Lebot (International Partnership on Energy Efficiency Cooperation), and Mr. Martin Kumar Patel (Energy Efficiency Chair, University of Geneva). Other stakeholders who express an interest may also participate in the Bureau meetings or may opt to be consulted regularly and closely associated with the ongoing work of the Bureau. The agendas, minutes, and background documents of the Bureau meetings will be posted on the ECE website.

11. The representative of the EU and its Member States welcomed the open nature of the Bureau and suggested that: i) other major stakeholders with an interest be allowed to participate in the Bureau as well; ii) the Bureau function in a fully transparent way and that its work be posted on the ECE website; and iii) all stakeholders be involved in drafting of major outcomes and deliverables (e.g. a menu of measures) by means of an interactive electronic exchange of views, experiences and best practices.

12. The Group of Experts appreciated the invitation by the Bureau of the Committee on Sustainable Energy to be represented on the Bureau *ex officio* by its Chair.

V. Options to improve energy efficiency: why energy efficiency is not improving fast enough (agenda item 3)

Documentation: Informal documents ECE/ENERGY/GE.6/2014/INF.1, ECE/ENERGY/GE.6/2014/INF.2, ECE/ENERGY/GE.6/2014/INF.3

13. The Chair of the Group of Experts provided introductory remarks and gave a keynote address on the role of the Global Energy Efficiency Accelerator Platform in increasing the uptake of energy efficiency. He listed the barriers to faster improvement in energy efficiency and highlighted that the multiple benefits of energy efficiency can be used to convince governments to support energy efficiency initiatives. He also emphasized the role ECE can play in helping to engage countries; supporting the existing accelerators and contribute to the development of new ones; identifying parts of markets for acceleration; providing leadership to build momentum across accelerators in countries, cities and private sector; promoting best practice and evaluate successes and failures; and making energy efficiency an integral part of energy policies and programmes.

14. In the panel discussion, representatives of Belarus, Germany, IPEEC, University of Geneva, and an independent expert made presentations. A presentation by a representative of Croatia is also available.

15. A representative of Belarus stated that barriers to improving energy efficiency exist in the country, even though it reduced its energy intensity three-fold compare to 1990 and it has a strong policy on energy saving. The most significant barriers are related to tariff policy, public financing, attracting foreign investments, and access to energy efficiency technologies. More effort is required in education and information provision to the public on the benefits of energy efficiency. He highlighted that international cooperation is important and more international projects that facilitate the exchange of experiences and know-how are needed. Cooperation with the World Bank is an example of successful implementation of socially-oriented projects.

16. A representative of Germany presented DENEFF (German Industry Initiative for Energy Efficiency), which represents more than 100 companies. Energy efficiency policy can only be effective if it is a part of overall industrial policy. Energy efficiency must become the largest energy resource, the “first fuel” according to the International Energy Agency (IEA). Germany has specific targets for 2020 and 2050. Final energy productivity needs to grow by 2.6% annually until 2020 but the rate of improvements has slowed partially – less because of the saturation effect – but also because of insufficient implementation of policy measures. He referred to the Odysee Database, which monitors trends in energy efficiency and shows significant improvement in countries of Central and Eastern Europe since 2000. He presented specific factors that can make energy efficiency policies successful: accountable actor, binding target, and stable funding. He provided examples of their implementation (separately and in combination) in the United States, the EU, Chile, and Denmark.

17. An independent expert analyzed investments in energy efficiency for the last 5 years highlighting that about two-thirds of the required investments are being made. Most of the investments are concentrated in the EU and other countries of the Organization for Economic Cooperation and Development (OECD) and China. A gap of about USD 150 billion needs to be filled in countries that are "less investment-ready". Two recent publications by the IEA highlight the importance of energy efficiency: "Energy Efficiency Market Report 2014" and "Capturing the Multiple Benefits of Energy Efficiency". Among the energy efficiency benefits are macroeconomic gains, less pressure on public budgets, health and social benefits, and productivity. The changing business model in utilities in the United State provides benefits for both utilities and consumers. Strategic actions are needed when subsidies were introduced for a valid reason. USD 500 billion per year of energy subsidies that undo energy efficiency can be reallocated by shifting subsidy from energy unit price to consumer service cost. Energy system distortions can be reduced. Operational actions are required at the national level: rapid market accelerators; durable market accelerators; and market transformers.

18. The Head of IPEEC informed the delegates that its 16 member countries represent 80% of global gross domestic product (GDP) and energy efficiency potential. International collaboration can help countries deliver energy efficiency faster. In the EU the biggest driver for energy efficiency is EU policy. However energy efficiency must go beyond energy policy, it must be mainstreamed into sectoral policies and brought to the attention of the top decision makers in numerous line ministries such as building, city planning, industry, agriculture, finance, transport, etc. Challenges for data collection still exist. IPEEC is cooperating with the UN Economic Commission for Latin America and the Caribbean (ECLAC) on data collection using Odyssee Database. Energy efficiency is gaining momentum. The success of UNEP en.lighten programme was highlighted. There is a number of international players and actions occurring globally: Clean Energy Ministerial, Major Economies Forum, Sustainable Energy for All (SE4All), International Forum on Energy for Sustainable Development in Hammamet. At the UNFCCC the debate is moving to renewable energy and energy efficiency. G8 and G20 are discussing what policy mechanisms can be implemented. At the G20 Summit 20 in Brisbane, Australia in November 2014, Heads of States approved the G20 Energy Efficiency Action Plan (https://www.g20.org/sites/default/files/g20_resources/library/g20_energy_efficiency_action_plan.pdf). Of six areas of collaboration there are three new areas: in transport (heavy-duty vehicles); networked appliances; and finance ("Enhancing capital flows to energy efficiency investments"). Tariffs and investments are crucial for energy efficiency. Human and financial resources are required. Delivering energy efficiency takes time, and patience is required.

19. A representative of the University of Geneva referred to the draft publication "Analysis of National Case Studies on Policy Reforms to Promote Energy Efficiency Investments" in analyzing obstacles to energy efficiency improvements. Under legal, institutional and regulatory obstacles he stressed the lack of non-binding energy efficiency objectives. In economic and financial obstacles both market failures and non-market failures play a significant role. Socio-political obstacles are also present. These obstacles also present opportunities to improve energy efficiency. Examples are penalties for non-compliance, energy efficiency obligations (10 times more cost-effective than tariff increases), and partial decoupling of sales from revenue. The public sector must have an exemplary and leading role. Standards should be not only for energy efficiency but for total energy consumption, however it takes a long time to prepare ecodesign standards (about 5 years). Energy efficiency networks in industry, e.g. in Germany and China, are useful (among non-competing companies). Energy benchmarking especially for energy-intensive products are important, as well as energy audits and energy management systems (EMS). There is a need for coordination and division of tasks among UN regions and countries.

20. The representative of the EU and its Member States indicated that energy efficiency and renewable energy are key to the EU's long-term energy and climate policies. He stated that it was important to indicate clearly what we want, why we want it and how we want to achieve it. On the first question (what), the EU and its Member States had a positive experience with setting out an overall strategy with clear targets. The 2008 EU's 20-20-20 strategy is likely to deliver, by 2020, on the targets of 20% of energy consumed generated by renewable sources and on around 18-19% of energy efficiency improvements relative to 1990 levels. In October 2014, the European Council adopted a new strategy to seek, by 2030, to reduce greenhouse gas emissions by 40% below the 1990 level, reach a share of at least 27% from renewable energies, and increase energy efficiency by at least 27% relative to 1990. On the second question (why), a positive political message and a positive narrative is required. Energy efficiency is good for sustainable energy, is a key for reversing climate change, and is instrumental for diversified energy system. It also makes perfect economic sense because it reduces production costs and creates jobs and growth in a greening economy. On the third question (how), decision makers, both in the public sector (national, provincial and municipal) and in the private sector, should have a menu of very concrete successful high-impact energy efficiency measures and technologies. The menu should cover all areas (lighting, cars, heating, utilities, industry, buildings, etc.) and significant results could be achieved in the short term on buildings and industry, which use 40% and 25% of total energy in the EU respectively, and utilities. The EU possesses valuable support instruments like the Eastern Partnership, the "Central Asia Sustainable Energy Programme", the Covenant of Mayors initiative, the INOGATE programme, the Eastern Europe Energy Efficiency and Environmental Partnership (E5P), the Neighbourhood Investment Facility and the Investment Facility for Central Asia (IFCA). Work on policy frameworks and financial measures should not be done by ECE but should be left to other international actors such as the IEA and international finanical institutions.

21. A representative of HEP ESCO (Croatia) stated that it is often difficult for countries to start implementing energy efficiency, both in the public and private sector. The first step is the introduction of energy management. After that, it is easier to proceed with energy efficiency measures that do not cost anything, then small investments, and afterwards with investments on a larger scale.

22. The Director of ECE Sustaianble Energy Division reiterated that the Group of Experts must decide what it wants to do. It can include the menu of options for policy makers and specific standards on energy efficiency.

23. A representative of Israel stated that it is important to set specific targets.

24. The Group of Experts was informed of two discussion papers and one draft publication that had been prepared for the meeting including: 1) Initial Review of Energy Efficiency in the ECE Region; 2) A Balanced Matrix of Energy Efficiency and Renewable Energy Policies to Pursue SE4All Objectives and Drive Sustainable Energy for Sustainable Development; and 3) Analysis of National Case Studies on Policy Reforms to Promote Energy Efficiency Investments. It was highlighted that significant gaps in data availability and quality still exist for many ECE member States. The Group of Experts recommended preparation of further work as specified below.

25. The Group of Experts invited the secretariat to prepare a draft matrix or menu of effective and economic energy efficiency improvement measures/technologies (and flanking policies). This process will allow the experts, in an interactive electronic exchange of views, to draw up a menu of high impact and easy to apply short- and long-term measures from which decision makers can choose when drawing up customized energy efficiency action plans. The draft menu could be based on the energy efficiency measures already identified by key partners (e.g. Copenhagen Centre on Energy Efficiency, UNEP and IEA) and should serve as a concrete tool aimed at significantly improving energy

efficiency in the region. The Group of Experts invited governments and other organizations to provide, in an interactive electronic exchange, any information on effective and economic energy efficiency improvement measures and technologies to help with the preparation of this menu.

VI. Outcomes of the Fifth International Forum on Energy for Sustainable Development (agenda item 4)

Documentation: Joint Statement of the Executive Secretaries of the United Nations Regional Commissions for the Fifth International Forum on Energy for Sustainable Development

26. The Group of Experts was informed of the Joint Statement of the Executive Secretaries of the United Nations Regional Commissions at the Fifth International Forum on Energy for Sustainable Development, held in Hammamet, Tunisia, on 4–7 November 2014 and, in particular, of its energy efficiency aspects.

VII. Draft Work Plan of the Group of Experts on Energy Efficiency for 2014–2015 (agenda item 5)

Documentation: ECE/ENERGY/GE.6/2014/3

27. The secretariat presented the Draft Work Plan of the Group of Experts on Energy Efficiency for 2014–2015 and proposed that the Group of Experts proceed to discussions under specific items of the draft Work Plan.

28. Representatives of Israel, United Nations Foundation, ISGAN, IPEEC, CINTECH, UNEP, Smart Grid Solutions, Germany, University of Geneva, EU and its Member States, and an independent expert participated in the discussion on the role this Group of Experts can play in the work on smart grids. Presentation on smart grids was delivered by a representative of ISGAN under agenda item 5 (c).

29. The Group of Experts agreed on the Work Plan of the Group of Experts on Energy Efficiency for 2014-2015. The Work Plan was further updated following discussions. The Group of Experts requested the secretariat to submit the Work Plan for endorsement by the Committee on Sustainable Energy and subsequent approval by the Executive Committee of ECE. The Group of Experts requested the secretariat, in coordination with the Bureau of the Group of Experts, to prepare a Draft Work Plan of the Group of Experts on Energy Efficiency for 2016–2017 for the next session of the Group of Experts.

VIII. Best practices in energy efficiency in the United Nations Economic Commission for Europe region (agenda item 5 (a))

30. Presentations were made by representatives of the former Yugoslav Republic of Macedonia, UNFCCC, Investor Confidence Project Europe, and ISO.

31. A representative of the former Yugoslav Republic of Macedonia shared experience of implementing energy efficiency policies and projects in the country. It has been adopting the EU directives. There have been successful projects as well as failures. There is a lot in common with other countries of South-Eastern Europe. All of them have national energy efficiency action plans. He gave an example of a project funded by the United States Agency for International Development (USAID) on the refurbishment of three residential buildings with low-income families. The buildings were successfully refurbished and

energy efficiency measures implemented. However, the project resulted in higher energy consumption due to improved living standards (energy savings allowed households to use heating in more rooms than before). The payback period of this project is 14 years and it is not feasible to get commercial financing for such project. The challenge is how to measure success? The project led to social and energy efficiency improvements, however, it provided a low return on investments, and energy consumption increased. Conditions in different countries are different. Where incomes are low, increase in electricity prices may the number of people living in poverty.

32. A representative of UNFCCC made a presentation, in which mitigation policies and measures implemented by Annex I parties were mentioned. However, it is not possible to assess what is the effect of particular measures on greenhouse gas (GHG) emissions. Policies are shaped by recent commitments that include increasing use of renewable energy and enhancing energy efficiency, which are at the core of climate policy for most Parties. Under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) process, actions with high mitigation potential are included. Among the four thematic areas is energy efficiency. Technical examination process included preparation of policy menus and identification of concrete actions. Barriers have been identified and examples of mitigation actions provided. Strong mechanisms to support implementation of these actions are needed. Cooperative initiatives enable Parties to implement measures. International partnerships may not lead to direct reductions in GHG emissions but may have mitigation effects due to changes in national policies. A policy options menu for energy efficiency was presented. Initiatives and partnerships can contribute to the political process.

33. A representative of Investor Confidence Project Europe emphasized that an energy efficiency capital gap exists. Estimated costs in Europe to achieve 79-82% GHG reductions in Europe by 2050 are 3.5 trillion EUR or 95 billion EUR per year. Investments in energy efficiency are considered risky. According to a survey by the Energy Efficiency Financial Institutions Group, one of the main barriers for investments is lack of standards. There is a need for greater standardization. The goal is to increase confidence of investors, which will bring a lot of benefits for countries. When developing specific policies and projects, one has to bear in mind that they have to be bankable and attractive for investors. Otherwise they will remain at pilot project stage and will not be scaled up. A proposal for additions to the Work Plan was presented.

34. A representative of ISO made a presentation on ISO standards on energy efficiency in buildings. She emphasized the important value-added associated with standards. A well known example is ISO 50001:2011 standard on Energy Management Systems. ISO work is conducted through technical committees. There are technical committees on energy efficiency in buildings. There are 136 standards on various aspects of energy efficiency. ISO tries to apply holistic approach by incorporating various elements (heating, cooling, insulation, etc.).

IX. United Nations Economic Commission for Europe role in achieving objectives of the Sustainable Energy for All Initiative of the United Nations Secretary-General (agenda item 5 (b))

35. Presentations were made by an independent expert and representatives of IPEEC and the Copenhagen Centre on Energy Efficiency.

36. The independent expert stated that significant changes have been made in promoting energy efficiency. One of the most important issues is that the policies should encourage investments in energy efficiency. Clear objectives are needed and SE4All initiative starts doing it. Utilities need to change their approach, deliver energy efficiency services and

open renewable energy. Energy efficiency policies need to be integrated with the main economic and social development policies. Strategic policy change needs to come along with operational changes. The independent expert presented a policy matrix, which contains policy options for both energy efficiency and renewable energy. They do not have to compete or contradict each other. Adaptation of 25 IEA policy recommendations to the needs of particular region and countries is useful. Effort on policy foundations, infrastructure, and utilities is necessary to make operational policies successful. Energy intensity information is not sufficient; end-use data are needed. Investments in energy efficiency are a good indicator. Experience of UNEP in its programmes needs to be used. On smart grids, the role of utilities is paramount.

37. The Head of IPEEC emphasized that it is necessary to prioritize work and link it with existing initiatives. Energy efficiency in buildings is of concern to many countries, therefore work on this issue with other ECE divisions may be valuable. Energy efficiency needs to be brought to the highest level of authorities in the countries, so it becomes the first fuel of the economy.

38. A representative of the Copenhagen Centre on Energy Efficiency presented options for energy efficiency under ECE. They include readiness for investment in sustainable energy; work with UNEP and the Copenhagen Centre on Energy Efficiency to advance Energy Efficiency Accelerators (Lighting, Appliances, Transport); in the area of utilities – policy options to deliver sustainable energy outcomes including demand-side management and smart grids; work with others on improving data quality; and the matrix of policy options – with the decision in what form it should be presented. A response from countries about these set of priorities for the ECE member States was encouraged.

39. A representative of Azerbaijan stated that there is a correlation between energy efficiency and renewable energy. Renewable energy is now functional. We need to move to make energy efficiency functional as well. Coordination is needed not only among international organizations but also within countries. A comprehensive strategy and policy framework is needed, in which all government agencies as well as utilities are involved. Monitoring of such strategies and action plans is extremely important. Time is needed to build capacity. He stated that Azerbaijan will be interested in developing energy efficiency in energy sector, in transport, and in buildings. Joint work with the group on renewable energy is valuable.

40. A representative of Germany suggested that joint work with UNEP is good but there could also be work on energy management systems, particularly for SMEs. He stated that the menu of options may be differentiated for countries with high and low energy intensity economies.

41. A representative of Armenia stated that in Armenia energy efficiency and renewable energy are viewed as one issue because a lot of improvements in energy efficiency can be achieved through renewable energy use. GHG emissions reduction is a by-product of energy efficiency improvements but the main point is that energy efficiency can improve productivity and economic performance. This will be helpful in attracting investments. Distinction has to be made on socially-oriented projects where energy efficiency is not the main issue but rather the improvement of living standards. He stated that Armenia would like to be involved in ISGAN. He also emphasized that the Group of Experts should be involved in developing international standards, so that inefficient appliances and equipment are not imported. He also pointed out that Armenia has a good experience in using natural gas in transport.

42. A representative of the former Yugoslav Republic of Macedonia stated that writing a menu of policy options may not even require additional research. We are still living in the world focused more on profits than on common good. We should focus on developing

policies on the regional level. Regional views may be more useful. The issue of smart grids is also interesting.

43. A representative of International Sustainable Energy Organization (ISEO) made a statement on standard ISO13602-1 "Technical energy systems – Methods for analysis" that allows comparison of energy systems.

44. The representative of the EU and its Member States stated that ECE should work on as complete as possible matrix or menu of energy efficiency improvement measures and technologies, which also lists the countries that already implement these measures and technologies, and that the Group should not work on closing the investment gap because that work should be done by the international financial institutions. Standards can also be developed in this Group. The focus of this Group should be on energy efficiency.

45. A representative of HEP ESCO made a statement on the experience of Croatia that had to change quickly to accede to the European Union. There is still a lack of understanding that energy efficiency is multidisciplinary. Renewable energy is important in promoting energy efficiency. The Prime Minister has to be committed to energy efficiency and this commitment has to be transferred to the whole Government. Ministries of economy, transport, finance, environment and others must be involved. Awareness of energy efficiency has improved but there is still work that has to be done.

46. A representative of the United States stated that the discussions have been good. There is a need to develop national action plans, which take into account the multidimensional and multisectoral character of energy efficiency. There is also a desire to have a menu of policy options and also to work on rather technical issue of developing standards. The United States would have options to contribute and would also look forward to learning what others have found to be effective.

47. A representative of the University of Geneva stated that the workplan could consist of the following three elements in the first phase: menu of options of best practices; addressing utilities; monitoring progress in these areas. In a later phase, further aspects (such as industry and vehicle transport) could be dealt with. If the work plan is to be workable its scope needs to be clearly defined.

48. An independent expert stated that we are looking for a list of policies and list of countries and their status in terms of implementing them.

49. The Director of ECE Sustainable Energy Division stated that Sustainable Energy Division would not be engaged in gathering data since other groups are involved in this, but that the ECE and the Group of Experts could assist the data-gathering organizations.

50. A representative of UNEP suggested having the ECE and SE4All coordinate developing and help implementing regional strategies. This would mean assisting in developing regional, sub-regional and national strategies.

51. The Representative of the EU and its Member States stated that the ECE should focus on developing a menu of measures and technologies and national energy efficiency action plans and not work on developing regional strategies.

52. An independent expert suggested that working with countries will lead to regional plans.

53. A representative of HEP ESCO and the former Yugoslav Republic of Macedonia stated that development of national action plans is a long-term process taking several months or over a year and it has to be planned with appropriate resources allocated in the national budget. Several delegates stated that a template for national energy efficiency action plan is useful and is available on the EU website.

54. A representative of ISO proposed to add the International Electrotecthnical Commission (IEC) and the European Committee for Electrotechnical Standardization (CENELEC) to the list of organizations with which cooperation on standrads is expected.

X. Smart Grids (agenda item 5 (c))

55. A representative of ISGAN – International Smart Grids Action Network provided an overview of the activities of the organization. ISGAN was established by the Clean Energy Ministerial and is an implementing agreement of the IEA. Currently there are 25 Contracting Parties. He listed drivers for change in the energy systems: market liberalization, reduction of CO_2 emissions, integration of renewable energy sources, and energy efficiency. He provided a definition of a smart grid. Paradigm shift for the system is occurring from "generation follows load" to "load follows generation". Depending on the amount of distributed generation (DG) the situation with losses can improve (small amounts) or worsen (significant increase in DG). Modification of the load curve as the target of demand response was presented. Various second generation energy meters are available. ISGAN Case Book, which describes solutions and approaches and gives examples of best practices in 12 countries, was presented. It is available at the ISGAN website: iea-isgan.org. ISGAN is financed primarily through task sharing.

56. The Group of Experts took note of the presentation by the representative of the International Smart Grids Action Network (ISGAN). The Group of Experts agreed that smart grids are an important area of work that could contribute significantly to achieving energy efficiency improvements and they could be part of national action plans.

XI. Cross-cutting issues in energy efficiency and coordination of work with other United Nations Economic Commission for Europe Divisions and with other international organizations (agenda item 5 (d))

57. Presentations were made by representatives of ECE Housing and Land Management Unit, UNFCCC, UNEP, IFC, and ISO.

58. A representative of ECE Housing and Land Management Unit made a presentation on the activities in energy efficiency in housing and buildings. They include a number of publications, including Action Plan and Good Practices in Energy-efficient Housing in the ECE Region, regional and national workshops, and exhibitions. Specific recommendations that include legislative framework, building management, and financial mechanisms have been developed. Housing and Land Management Unit has been cooperating effectively with Sustainable Energy Division in joint organization of International Fora on Energy for Sustainable Development, preparation of publications, and organization of workshops. There is a need in joint programming and planning to ensure this work is not ad hoc but is part of a long-term planning. Proposal for developing a study on standards for energy efficiency in buildings (ECE/HBP/2014/4) was approved by the Committee on Housing and Land Management (CHLM) in October 2014. Establishment of a ECE Task Force on building codes and standards on energy efficiency in buildings, building materials and energy performance requirements is envisioned in December 2014. A number of partners have been identified and others are invited. A proposal for additions to the Work Plan was presented.

59. A representative of UNFCCC discussed opportunities for cooperation with ECE. The technical examination process of mitigation potential in pre–2020 period is expected to continue in 2015 and beyond and could possibly be taken to the regional level as suggested by some UNFCCC Parties. ECE could be a natural partner for such regional process and

could be invited to take part in the future technical examination meetings discussing thematic areas with high mitigation potential. The outcome of the technical examination process is captured by the technical paper on mitigation benefits of actions, options and initiatives. This paper could be complemented by an online mitigation platform and ECE can participate in sharing information through such platform based on its technical expertise and regional knowledge management platforms. To enhance policy implementation process, UNFCCC cooperates with international organizations and encourages matchmaking process between organizations providing support and countries requiring such support. Cooperation is also possible in encouraging a higher level of ambition for initiatives on emission reductions and assessing the level of support and impact of these initiatives.

60. A representative of UNEP stated that the organization is deeply involved in work on energy efficiency in a number of areas. The success of the en.lighten programme has prompted UNEP to develop similar initiatives in transport, appliances and equipment, buildings, and district energy. As these programmes include local adaptation support, they can be effective options for ECE countries. An important area is the SE4All's Global Energy Efficiency Accelerator Platform. Coordination and cooperation with ECE is possible in setting and harmonizing standards and policies. Participation of ECE to support implementation of the accelerators was proposed. Concrete goals need to be identified. The Copenhagen Centre on Energy Efficiency is helping to coordinate these activities.

61. A representative of IFC made a presentation on the work of organization on providing Clean Energy Finance. IFC priorities include climate change and financial markets. She emphasized the factors that limit the implementation of energy efficiency projects. Sustainable Energy Investments by IFC in various regions of the world were presented. IFC has active sustainable energy finance programmes in Europe and Central Asia. An example of Albania's residential energy efficiency programme was given. Challenges in various countries were presented. It was suggested that the European Bank for Reconstruction and Development (EBRD) and the World Bank should be part of this Group of Experts. More coordination between international organizations on energy efficiency financing is needed.

62. A representative of ISO informed the delegates of the ways for organizations to cooperate with ISO and participate in developing standards. ECE has over 50 liaisons with ISO Technical Committees (e.g., in transport and in trade). She presented different types of liaison membership for international organizations.

63. In the following discussion representatives of Germany, UNEP, and IPEEC participated.

64. The Group of Experts agreed to strengthen cooperation and synergies with other ECE work, in particular in housing, transport and statistics.

65. The Group of Experts noted the study on standards related to energy efficiency in buildings undertaken by the ECE Committee on Housing and Land Management (ECE/HBP/2014/4) and requested the secretariat in collaboration with the Committee on Housing and Land Management to distil possible measures that could be included in the matrix of best practices in energy efficiency.

66. The Group of Experts agreed to strengthen the cooperation and synergies with other international organizations, in particular with the IEA, the Copenhagen Centre on Energy Efficiency, the International Partnership on Energy Efficiency Cooperation (IPEEC), the United Nations Foundation, UNEP, and the UNFCCC.

XII. Coordination of work with the United Nations Economic Commission for Europe Group of Experts on Renewable Energy (agenda item 5 (e))

67. Director of ECE Sustainable Energy Division made a presentation on cooperation and synergies in other areas of the Sustainable Energy Subprogramme. The Group of Experts on Renewable Energy (GERE) reviews the state of development of renewable energy sources in ECE region. It will work on national renewable energy action plans for countries in the region and start implementation with the help of the private sector, academia, civil society and other international actors. It also looks at the best practices, high-impact measures and procedures for an energy transition towards significantly increasing use of renewable energy. Joint activities of the Group of Experts on Energy Efficiency and GERE are possible. The Group of Experts on Cleaner Electricity Production from Fossil Fuels is working on assessment of the efficiency of the existing fleet of conventional power plants in the ECE region. It produced a baseline analysis of the efficiency of fossil fuel-fired power plants in the ECE region. Joint work on smart grids is also a possibility.

XIII. Promoting Energy Efficiency Investments for Climate Change Mitigation (agenda item 6)

68. The Group of Experts was informed of the United Nations Development Account project "Promoting Energy Efficiency Investments for Climate Change Mitigation and Sustainable Development".

69. A representative of the former Yugoslav Republic of Macedonia presented information on energy efficiency projects in the country that stem from the implementation of the above project.

XIV. Other business (agenda item 7)

70. No issues were discussed under this agenda item.

XV. Report of the meeting (agenda item 8)

Documentation: Informal document ECE/ENERGY/GE.6/2014/INF.4: Draft Conclusions and Recommendations of the Group of Experts on Energy Efficiency

71. The Chair of the Group of Experts and the secretariat drafted the report of the session, including conclusions and recommendations. The conclusions and recommendations were agreed by the Group of Experts, subject to any necessary editing and formatting. It was agreed that the draft report would be circulated for comments and endorsement to the participants of the session and to the member States. The Group of Experts requested the secretariat to report to the Committee on Sustainable Energy on the first session of the Group of Experts on Energy Efficiency, in particular on its conclusions and recommendations.

XVI. Dates of the next meeting (agenda item 9)

72. The second session of the Group of Experts is tentatively scheduled to take place on 5–6 November 2015 in Geneva.

Annex I

I. Work Plan of the Group of Experts on Energy Efficiency for 2014–2015

1. Annex II of the Executive Committee decision on matters related to the Committee on Sustainable Energy (ECE/EX/2013/L.15) establishes a Group of Experts on Energy Efficiency (the Group of Experts), which is mandated to carry out concrete, results-oriented activities that, in line with the "Sustainable Energy for All" (SE4All) initiative of the United Nations Secretary-General, 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 emissions.

2. According to its Terms of Reference, the Group of Experts will concentrate on: (a) Regulatory and policy dialogue addressing financial, technical and policy barriers to improve energy efficiency; and (b) 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 greenhouse gas emissions.

3. The mandate is approved until December 2015, with the possibility of extension.

II. Concrete Activities

4. On the basis of a proposal by the Bureau of the Committee on Sustainable Energy and nominated candidates to the Bureau of the Group of Experts, the Group of Experts proposes to undertake the following activities:

A. Identification of the state of development of energy efficiency in the ECE region

Description: The Group of Experts will identify the state of development of energy efficiency in countries in the region to establish a baseline for further activities. The work will be conducted with other relevant international and national actors and be based on existing data and benchmarking indicators in order to identify success stories that can be scaled up.

Work to be undertaken:

- Conduct a review of relevant studies/analyses to establish a baseline of energy efficiency in the ECE region, including an overview of existing energy efficiency indicators and their relevance, availability, timeliness and quality of data, and existing energy efficiency monitoring systems;
- Present the results of the review to the Committee of Sustainable Energy.

Deliverables: A report submitted for consideration by the Group of Experts.

Timeline:

- Literature review at regional level: October 2014;
- Presentation of the initial results to the Committee on Sustainable Energy: November 2014.

B. Exchange of know-how and best practices in ECE on how to significantly improve energy efficiency in the ECE region

Description: The Group of Experts will encourage the exchange of know-how and best practices between relevant experts of all member States and relevant international actors on how to significantly improve energy efficiency in the region. This work will be undertaken collaboratively with other organizations, such as the International Energy Agency (IEA), the Copenhagen Centre on Energy Efficiency (C2E2), the Energy Charter Secretariat, the International Partnership for Energy Efficiency Cooperation (IPEEC), the United Nations Foundation, the European Commission, the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO), the European Bank for Reconstruction and Development (EBRD), the World Bank, the International Finance Corporation (IFC), the United Nations Development Programme (UNDP), the United Nations Framework Convention on Climate Change (UNFCCC), the Investor Confidence Project Europe, ISGAN – International Smart Grids Action Network, other United Nations Regional Commissions (UN RCs), and other relevant organizations.

Work to be undertaken:

- Identify and contact key stakeholders from government, non-governmental, financial and international organizations as well as from energy companies and academia and work with them (through an interactive electronic exchange) to identify economic and efficient measures and technologies that are capable of accelerating energy efficiency improvements in key sectors in the region;
- Produce a menu of economic and efficient measures and technologies, including high-impact policy measures that could help the countries of the region (at the national and local levels) to significantly improve energy efficiency. ECE member States that have implemented measures will be indicated, allowing both tracking and reporting of progress and providing platforms for experience sharing. The menu would provide ECE member States with a range of options, including smart grids, that they could consider for inclusion in their national action plans;
- Identify work on energy efficiency standards and labelling that is ongoing in other organizations (such as the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO), the European Committee for Standardization (CEN), and the European Committee for Electrotechnical Standardization (CENELEC), etc.) and develop suggestions on establishing ECE standards for energy efficiency in cooperation with international standardization organizations;
- Based on the above, support the exchange of experiences and assist ECE member States, if requested, with the development of national action plans that contribute to a significant improvement in the uptake of energy efficiency. This work will be carried out in cooperation with other actors such as UNDP, UNFCCC, UNEP, C2E2, and Energy Community Treaty.

Deliverables:

- A first draft menu of accelerators based on available information from existing actors (UNFCCC, IEA, UNEP, and C2E2) and countries implementing them will be circulated to stakeholders and posted on the ECE website in March 2015. Stakeholders will be invited to comment on the draft menu in an interactive electronic exchange of views. The menu will be updated regularly in the same manner;

- Suggestions for further work on developing and establishing ECE standards for energy efficiency;
- Help in developing national action plans if requested and where possible on the basis of existing templates and models.

Timeline:

- Present a draft version of the menu of accelerators in March 2015;
- Improve/complete/maintain/update the menu from March 2015 onwards;
- Suggestions for further work on the development and establishment of ECE standards for energy efficiency: May 2015;
- Assistance in developing national energy efficiency actions plans: ongoing.

C. Share experience on smart grids and other advanced transmission and distribution technologies

Description: This activity aims at increasing awareness on the advantages of smart grids and their potential to help reduce greenhouse gas emissions and energy use. It will be carried out with the International Energy Agency (IEA) "Implementing Agreement for a Co-operative Programme on Smart Grids (ISGAN)[2].

Work to be undertaken:

Provide an overview of smart grids initiatives and activities in the region leading to enhanced understanding of the state of development of smart grids, and their impact.

Deliverables:

- Overview of activities and players active in smart grids.

[2] http://www.iea-isgan.org