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***Informal Preparatory Meeting of the  
UNECE Group of Experts on Energy Efficiency***

*Geneva, Palais des Nations, Salle VIII, 1 September 2014, 10:00-18:00*

**Summary of discussions**

**A. Status quo of energy efficiency (EE)**

- Facts and figures
- Countries ranked according to IEA indicators
- Gap analysis to reach targets
- Data: timeliness and quality
- Indicators and criteria of comparison
- Snapshot of EE policies
- EE Monitoring System

**B. Matrix of best practices**

- a. Simple measures and list of actions
  - Priority sectors (buildings, electricity/smart-grids, transport)
  - Small groups
  - Accelerator Platform concept
- b. Understand EE in policy making: application of high-impact measures through appropriate policies
  - Policy framework
  - Level of ambition adapted to country needs
- c. National Action Plan
- d. EE standards
  - Pathway towards standards
  - EE standards on buildings

The United Nations Economic Commission for Europe (UNECE) established the Group of Experts on Energy Efficiency (GEEE) to carry out concrete, results-oriented activities to significantly improve energy efficiency (EE) in the region, in line with the United Nations Secretary-General's Sustainable Energy for All (SE4ALL) initiative. The UNECE region is comprised of 56 member countries of Western, Central, South-East and Eastern Europe, the Caucasus, Central Asia, North America, Israel, and Turkey. It has significant economic, cultural, and energy diversity, and plays a key role in the current and future global energy architecture.

The informal preparatory meeting of GEEE took place on 1 September 2014 in Geneva, in which representatives of several member States and a number of energy efficiency experts participated. UNECE Executive Secretary Christian Friis Bach opened the meeting.

Improving EE is the famous low-hanging fruit that is supposed to be easy to do and contributes to energy security, a better environment, quality of life, and economic well-being for all. EE is the best way of getting more out of our existing resources, supporting economic growth, and reducing the energy costs for all citizens. Despite the multiple benefits, improving energy efficiency remains elusive because of the way markets are designed and structured. For energy efficiency to be mainstreamed, the direct relationship between economic growth and energy consumption must be broken. Significant

achievements have been made by UNECE countries since 1991, but the rate of EE improvements must be accelerated in order to achieve the targets set by the Sustainable Energy for All (SE4All) initiative. GEEE can help in this process, in particular by driving towards norms and standards and assisting countries in their implementation.

Participants of the informal discussion identified key obstacles in achieving EE improvements in the UNECE region and potential avenues for overcoming challenges. They exchanged views on the role that the Group of Experts could play to assist with implementation of EE best practices and provided comments on its draft work plan.

## I. Status of Energy Efficiency

EE is a “*much needed fuel to the economy*”, as energy demand and global energy prices continue to grow, along with proliferation of pollution from conventional energy sources. From 1990 to 2000, world population has quadrupled whereas energy consumption has increased by a factor of 16. As a result, there is an increase in greenhouse gas emissions (GHG), 59% of which are related to carbon dioxide release from fossil fuel combustion.

The International Energy Agency’s (IEA) 4-for-2°C Scenario presented in the 2013 World Energy Outlook Special Report<sup>1</sup> indicates that end-use, power plant, and electricity energy efficiency improvements will play a key role in reaching the 2 degree target by 2035. The Scenario highlights EE policies which would account for approximately 80% of the necessary carbon dioxide abatement by 2020

Even though EE is considered “the first fuel”, the reality is that EE improvements are happening, but not fast enough. Since 1990, the UNECE region has increased thermal efficiency in electricity supply by (only) 5%, with an overall 1% decrease in overall electricity supply efficiency.<sup>2</sup> Although the UNECE region has collectively reduced energy intensity in industrial, service/transport/residential and agriculture industries; the rate of improvement has regressed since 1990.

## II. Gaps and Possible Solutions

A range of barriers, from market structure to institutional gaps, prevent the acceleration of EE improvements. There is a need to think in transformative ways to overcome these gaps. The following key EE challenges were discussed:

### Data availability and quality

It is imperative to know where countries stand in the deployment of EE through monitoring. For this reason, quality and reliability of data are fundamental for creating an accurate assessment of EE activities in the region. Although numerous EE indicators exist, there is a knowledge gap on data availability, timeliness and reliability in the UNECE region overall. Furthermore, a re-evaluation of the most relevant indicators is needed. Early indicators describing positive EE developments were suggested as a potential solution to understand optimal measures for accelerating exchange of EE best practices and policy know-how and lessons learnt between countries. GEEE can assist in improving EE data by collaborating with existing international organizations involved in EE data collection, such as the International Energy Agency (IEA), the International Partnership for Energy Efficiency Cooperation (IPEEC), the World Bank Group, the Energy Charter, and the Copenhagen Centre on Energy Efficiency.

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<sup>1</sup> International Energy Agency’s (IEA) 2013 World Energy Outlook, Special Report, Redrawing the Energy-Climate Map

<sup>2</sup> Global Tracking Framework Energy Efficiency Indicators, UNECE calculations

## Social Behavioural Patterns

Participants highlighted the knowledge gap of the benefits of EE measures. Social behavioural patterns need to be addressed. Assuming education is the basis for change, supporting communication/education as a tool for implementing EE activities at various levels, including the local level, facilitated by international collaboration and national support, is a viable solution to this challenge.

### III. Policy Strategies

Participants expressed the need for better evaluation of the results of EE programmes and policies. Analysis of high impact cross-sectoral policies that have accelerated EE programmes at the local, regional and national level is a possible solution as such exercises have provided valuable feedback in certain countries. The concept of the *Accelerator Platforms* was presented by the Copenhagen Centre on Energy Efficiency, the international hub for energy efficiency activities for the SE4All initiative. The Accelerator Platform is global public-private alliance focusing on the interface between EE sectoral initiatives, policy, consumption, and finance mechanisms. This knowledge platform intends to provide analytical and technical support for several key EE sectors initially (lighting and appliance, buildings, district energy systems, transport), with the end goal to produce a list of multi-level (national, city and industry) measures for advancing EE improvements. UNECE's partnership with the Copenhagen Centre on Energy Efficiency could provide an opportunity to design a menu of EE policy measures to support transformational EE initiatives targeted at the UNECE community.

There is a need to define best practices, so that examples and experience on how to "do EE right" can be exchanged among member States. Experts suggested that adoption of high-impact EE policies is necessary and should be mainstreamed in sectoral policies (transport, buildings, city planning, agriculture, finance, etc.). However, EE measures should not be viewed in isolation, as efforts to transition towards a more sustainable system will be strengthened if the approach is cross-cutting, for example, integrating EE improvements with sustainable housing and renewable energy (RE) would accelerate low-carbon efforts of countries. EE policy implementation, which takes place at the local, national and industry level, can be facilitated by international cooperation and support.

Participants expressed concern that financing of EE improvements has not yet become "business-as-usual". Financial institutions are hesitant to invest in EE projects. This is also the result of the financiers' lack of expertise in the EE field, who perceive EE projects as high-risk. Better understanding of the impact of energy savings on a company's rate of return would be desirable from a financial perspective. Standardization or rating of EE technologies was proposed as a possible solution, providing a tool for the financial community to compare EE measures and technologies. Creation of policy frameworks that support financing EE projects is another possible solution for mobilizing the financial sector (establishing a dedicated EE state fund, system of incentives, etc.). To accelerate EE improvements, engagement from both private and public sectors is crucial.

Policy makers can play an active role in increasing uptake of EE by designing appropriate policy frameworks (standards, codes, ratings, certificates, etc.) and targets. However, enforcement of normative instruments should be ensured to make them effective. Conflict of interests in the policy-making strategy should be addressed. The impact of EE improvements on energy providers' infrastructure and assets should be considered, as EE policies might be in conflict with existing business models, leading to certain business interests rendering the deployment of EE difficult. A paradigm shift from paying for energy produced/supplied to paying for energy services received is needed.

#### IV. **Capacity Building Through Sharing Lessons Learnt**

Understanding of EE related issues varies across UNECE member States. GEEE can be a platform to both enhance understanding of and accelerating EE improvements in UNECE member States. This can best be achieved through targeted collaboration with the key international organizations and stakeholders mentioned above.

EE has an important role to play in the modernization of infrastructure. More work is needed to identify how to incorporate EE activities into existing and future energy systems taking into account national circumstances. Experience of countries with in the implementation of EE improvements is different. Capacity building exercises and exchange of knowledge could help, as well as clustering of comparable countries according to their needs and current situation and providing analysis based on regional and sub-regional approaches. Further analysis of knowledge gaps and the most significant barriers preventing EE improvements in the UNECE region is also needed. A UNECE-wide survey on high-impact policies that work best was proposed so that countries can use existing best practices to their advantage.

#### V. **Recommendations for the Draft Work Plan**

To increase the rate of EE improvements in UNECE region, dedicated financial and human resources and collaboration with other established international institutions and stakeholders in this field are necessary. Experts came to the conclusion that the first item of the EE work plan, *Identification of the state of development of energy efficiency in the ECE region*, is a necessary first step to assist member States in understanding the baseline for EE in the UNECE region. Participants highlighted the pressing issues of quality, reliability and timeliness of data. UNECE can collaborate with other key international organizations to address this issue. The experts agreed on the need for further analysis of knowledge gaps and the most significant barriers preventing EE improvements in the UNECE region.

Concerning the second item of the EE work plan, *Exchange of know-how and best practices in UNECE on how to significantly improve energy efficiency in the UNECE region*, experts proposed a matrix of best practices to be developed as a tool to inform policy makers of existing EE measures in various countries and compare their effectiveness. The menu of measures would assist member States in identifying effective EE policies that would be most appropriate in specific national and local circumstances. Collaboration with the Copenhagen Centre on Energy Efficiency, particularly on the Global Accelerator Platform has been proposed. It provides a sector-by-sector list of high-impact EE policies, measures and activities which could be valuable for member States in developing their national EE action plans.

The participants agreed that dialogue and cooperation between the various constituencies of the EE community (financial sector, policy makers, experts, engineers, economists, academia, etc.) is necessary to achieve a comprehensive understanding of EE related challenges and most effective policies. A 'living' document on best practices would set a foundation for pathway to setting EE standards in the UNECE region in cooperation with standard organizations, like the International Organization for Standardization (ISO).

## **Annex**

### **List of participants**

Mr. Nazir Ramazanov, Advisor to Chairman, State Agency on Alternative and Renewable Energy, Azerbaijan; Mr. Namiq Salamov, Ministry of Energy, Azerbaijan; Mr. Zlatko Pavicic, Head of Energy Efficiency & New Technology Department, Ministry of Economy, Croatia; Mr. Thomas Fohgrub, Second Secretary, Permanent Mission of Germany; Mr. Mykhailo Harmash, Counsellor for Economic Issues, Permanent Mission of Ukraine; Mr. Jared Banks, Deputy Counselor for Economic and Science Affairs, Permanent Mission of the United States of America; Mr. Servatius Van Thiel, Minister Counsellor, Permanent Mission of the European Union; Mr. Tim Farrell, Senior Advisor, Copenhagen Centre on Energy Efficiency, Denmark; Ms. Bilyana Chobanova, Energy Efficiency Expert, Energy Charter Secretariat; Ms. Elena Shonya, Operations Officer, Deputy Program Manager, International Finance Corporation, Moscow Office; Mr. Benoît Lebot, Executive Director, International Partnership for Energy Efficiency Cooperation (IPEEC); Mr. Martin K. Patel, Chair for Energy Efficiency, Institute for Environmental Sciences, University of Geneva, Switzerland; Mr. Nikolay Sviridov, Deputy General Director for Development, CJSC "Mezhregionsoyuzenergo", Russian Federation; Mr. Christian Friis Bach, UNECE Executive Secretary; Mr. Marco Keiner, Director, UNECE Environment Division; Ms. Paola Deda, Chief, UNECE/FAO Forestry and Timber Section, UNECE Economic Cooperation, Trade, and Land Management Division; Ms. Gulnara Roll, Head, Housing and Land Management Unit, UNECE Economic Cooperation, Trade, and Land Management Division; Mr. Scott Foster, Director, UNECE Sustainable Energy Division; Ms. Stefanie Held, Chief, Sustainable Energy Section, UNECE Sustainable Energy Division; Ms. Charlotte Griffiths, Chief, Energy Industry Section, UNECE Sustainable Energy Division; Mr. Oleg Dzioubinksi, Economic Affairs Officer, UNECE Sustainable Energy Division; Mr. Gianluca Sambucini, Economic Affairs Officer, UNECE Sustainable Energy Division; Mr. Vahan Kotanjyan, Regional Advisor, UNECE Sustainable Energy Division.