

## *United Smart Cities: Implementing Smart Sustainable Cities approaches worldwide*

### Session 2. Improving energy efficiency in buildings and neighbourhoods to promote smart sustainable cities

#### Summary

Moderator Mr. Aleksandar Dukovski, Chair of the UNECE Group of Experts on Energy Efficiency, Senior Energy Expert from the former Yugoslav Republic of Macedonia, opened the session and emphasized that improving energy efficiency in buildings is an important component in implementing smart sustainable cities approaches. Mr. Oleg Dzioubinski, UNECE Regional Adviser on Energy, gave an overview of the UNECE work on energy efficiency in buildings, in particular on standards in buildings. He presented the outcomes of the work of the UNECE Joint Task Force on Energy Efficiency Standards in Buildings and its upcoming activities. Ms. Domenica Carriero, Associate Economic Affairs Officer at the UNECE Housing and Land Management Unit, made a presentation on the completed study on Mapping of Energy Efficiency Standards in Buildings in the UNECE Region. Oleg Dzioubinski presented the main findings of the study on Mapping of Existing Technologies to Enhance Energy Efficiency in Buildings in the UNECE Region, which is close to completion. Mr. Kostiantyn Gura, Acting Director of the State Company Subdivision "Green Investment Development Center" under State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE), spoke about measures to improve energy efficiency in buildings in Ukraine, in particular of the State Support Program for Households "Warm Loans" and development of the energy service companies (ESCO) market in Ukraine, including tenders for energy performance contracts (EPC).

The presentations were followed by a panel discussion moderated by Aleksandar Dukovski, in which experts from five UNECE member States participated: Ms. Doris Andoni, Head of Housing Policy at the Ministry of Finance and Economy of Albania; Mr. Leonid Danilevski, Deputy Director of the Institute of Housing NIPTIS in Belarus; Ms. Natalia Jamburia, Head of Renewable Energy and Energy Efficiency Division at the Ministry of Economy and Sustainable Development of Georgia; Mr. Olzhas Sartaeu, Chairman of Astana Innovations in Kazakhstan; Mr. Sergiy Tetyukhin, Director of the Department of Economic Development at the Odessa City Council in Ukraine; Ms. Ima Khrenova-Shymkina, Deputy Project Director of the GIZ project on Energy Efficiency Reforms in Ukraine; and Kostiantyn Gura.

Aleksandar Dukovski asked the panelists to share positive experience of improving energy efficiency in their countries and to give their opinions on what needs to be done for energy efficiency to become a reality. Several important points were made during the discussion. Panelists expressed their opinion that energy efficiency needs to be economically driven and the projects need to be bankable. A change in the people's mentality is also an important component of success. Importance of the proper policies, ways to measure energy efficiency, and performance indicators was emphasized. However, energy efficiency is not just about energy saving, as was stressed by panelists. Quality of life needs to be maintained and preferably improved. Sometimes energy efficiency measures are not cost-effective but socially beneficial. They may be easier to implement in public buildings (schools, kindergartens). Diverse approaches are often needed.

Examples of the practical ways to improve energy efficiency in residential buildings were provided for Astana, Odessa, and Belarus. In Astana, the households cannot rely on public money for retrofits; they have to invest themselves. Requirements for new construction is already in place in Kazakhstan. Energy

efficient buildings are about 10 percent more expensive. In Odessa, a lot of residents are interested in doing renovation and have been using the “warm loans” programme implemented by SAE. Good results have been achieved in four years of the programme implementation. Those households that took advantage of the programme have decreased the use of heat by half on average. In Belarus, good standards have been developed and heat meters are installed. Energy efficiency improvements started with pilot projects, which were scaled up. Further improvements in new construction can now be made possible only through introduction of high-performance technologies. Old buildings are the main problem area that needs modernization and energy efficiency improvement. The pace of modernization currently is too slow and needs to be significantly increased.

Aleksandar Dukovski thanked the speakers and the panelists for an informative session and productive discussion and closed the session.