

**Panel Discussion: Modernization of the energy sector – a pathway towards low-carbon energy and green economy**

**Organizers:** UNECE and its subsidiary bodies

**Target group:** Open to all participants

The session will discuss a project that the UNECE is currently working on with the aim of having it launched by the end of the year. It is conceived as a tool for assisting UNECE Member States in delivering on effective transition to low-carbon energy and green economy through helping them in modernising their mining and energy sectors, which are often intertwined as parts of an industrial ecosystem.

Modernization of the energy sector neither can be avoided, particularly in light of the states' environmental pledges, nor can it be further delayed as the energy infrastructure in many cases is at the very end of its life-cycle. Consequently, since modernization is inevitable, it is in the state's best interest to undertake it in the most efficient, cost effective, socially beneficial, and environmentally sound manner.

In the initial stage, the project will seek to develop a plan for greening the selected State's economy through modernisation of its fossil fuel based industrial sites by reorienting them towards modern technologies and processes that lead to more efficient use of available resources. In the following stage, the project will develop a standardized business model for efficient transition of industrial sites that can be used to aid in planning re-development at other industrial sites in like countries or regions. Such replicable transformational business model will present states with tools for improving their energy efficiency through application of modern low-emission technologies, switch to more efficient yet available energy resources, more effective use of available resources, and building an integrated economy that is in harmony with the needs and capabilities of the state, its population, and its environmental commitments.

Panelists will discuss the goals, structure, and feasibility of the project. They will identify benefits that it can bring and obstacles that it will have to face. Representing different branches of the energy sector, the panelists will describe how their respective branches can contribute to the transition foreseen by the project. Recognizing its cross-cutting nature, the Chairs of the UNECE Group of Experts will also address the issue of collaboration among their respective Groups for the attainment of the set goals.

**Guiding questions:**

- *What can and should be done in order to transform the old, inefficient, and heavily polluting industrial sites into full-fledged efficient components of a modern low-carbon economy?*
- *Large integrated industrial complexes exist as a part of an industrial ecosystem. How can the UNFC be used to provide guidance for sustainable extraction and use of natural resources within these manmade ecosystems?*
- *How can the availability of natural gas as well as coalbed methane, coal mine methane, and VAM, play a role in changing way in which energy is provided and consumed at these industrial sites?*
- *Increasing energy efficiency at these industrial sites will help improve energy consumption and reduce pollution, but how will it also lead to increasing the competitiveness of these industrial complexes?*
- *Renewable energy resources could have a role in reshaping the energy future of these industrial sites. How can renewable energy be incorporated into planning the re-industrialization of these sites?*
- *Redevelopment of these industrial site will require huge financial resources. Can a case be made to the finance community that these multi-year projects will produce a return on investment.*

Time	Content	Resource person
14.00-14.05	Introduction by the moderator	Mr. Raymond C. Pilcher (moderator)
14.05-14.50	Presentations by each panellist	Mr. Raymond C. Pilcher (Chair, UNECE Group of Experts on CMM) Mr. Richard Mattus (Specialist, UNECE) Mr. Morozov Sergey (Specialist: operational improvements, ArcelorMittal Temirtau) Mr. Torstein Indrebø (Vice-Chair, UNECE Group of Experts on Gas) Mr. David G. MacDonald (Chair, UNECE Expert Group on Resource Classification) Mr. Aleksandar Dukovski (Chair, UNECE Group of Experts on Energy Efficiency) Mr. Sigurd Heiberg (former Chair, UNECE Committee on Sustainable Energy) A representative of the Government of Kazakhstan (TBC)
14.50-15.10	Discussion lead by the moderator	All Participants
15.10-15.20	Open floor – Q&As	All Participants and audience
15.20-15.30	Closing statements	All Participants