Day / Track: 13 June / Track III: Energy Industry Restructuring 9:30-12.30

Workshop: **Best practices in High Efficiency-Low Emissions (HELE) Coal Power Generation**

Organizers: UNECE, World Coal Association, IEA Clean Coal Centre

Target group: Open to all participants

High Efficiency-Low Emissions (HELE) technologies enhance efficiency, environmental performance and reliability is coal-fired power plants. Increasing upstream efficiencies enables operators to reap significant economic and environmental dividends down the value chain of electricity generation, transmission, distribution and use. Each percent of increase in efficiency may result in 2–3 percent reduction in emissions of carbon dioxide and other air pollutants. The deployment of HELE technologies might therefore offer the member States the opportunity to adjust policies and regulations as they prepare their energy system for the future.

The workshop will take a critical look at the role of coal in meeting climate commitments and present some of the technological innovations that are the backbone of HELE coal-fired power plants. The workshop will also present and discuss a few case studies on the state-of-the art HELE power plants in Europe and Asia. Representatives of countries with aging coal-fired fleets and growing electricity demand – such as Mongolia, Kazakhstan and Uzbekistan who have recently begun programmes of modernization of their power plants – may in particular benefit from this round table.

Guiding questions:

- How are countries making cleaner coal part of the Paris Agreement?
- What are the current technological developments in HELE?
- What are the current developments in major consumer markets?
- How are countries attempting to embed coal in their climate and energy policy through to 2050?
- Which policy, regulatory and financial actions will be required to drive future HELE deployment?

Session 1: A survey of HELE technology best practices		
9:00	**Welcoming remarks** • The role of clean coal in achieving Kazakhstan's developmental objectives and climate commitments • Strategic importance of HELE technologies (climate, air quality, energy security) • UNECE's work on best practices in deployment of HELE technologies	Mr Bakhytzhan Jaxaliev Vice-Minister Ministry of Energy of the Republic of Kazakhstan Mr Barry Worthington Chair UNECE Group of Experts on Cleaner Electricity Production from Fossil Fuels
9:30	**The role for coal in the post-Paris Agreement period** • Trends and developments in coal use over coming decades • HELE in Paris Agreement • PACE work of WCA	Mr Benjamin Sporton Chief Executive World Coal Association
10:00	**Overview of HELE coal combustion technologies** • Review of technological options and developments • Progress in emissions control and air quality • Overview of multipollutant control technologies • Towards zero-emission plants: HELE with CCS	Dr Andrew Minchener, OBE General Manager IEA Clean Coal Centre

10:30	**Coffee break**	
11:00	**Current best practice and recent projects in HELE** • Case studies as point of departure for future aspirational developments • Replicable lessons learned	Moderator: Mr Benjamin Sporton Chief Executive World Coal Association Presenters: Mr Zdeněk Zbytek Skoda Czechia Mr Akira Shindoh Japan Coal Energy Center Kazakh speaker
12:00	**Open discussion on lessons on HELE deployment in UNECE member States** • How are countries making cleaner coal part of the Paris Agreement? • What are the current developments in major consumer markets? • How are countries attempting to embed coal in their climate and energy policy through to 2050? • Which policy, regulatory and financial actions will be required to help drive future deployment of cleaner coal technologies? • Key messages to policy makers	Moderator: Mr. Barry Worthington, Chair UNECE Group of Experts All