UNECE – UNESCAP Programme on Energy Connectivity in Central Asia and the Caucasus
AGENDA

9.00 – 9.05   Welcome
9.05 – 9.20   Opening remarks
9.20 – 9.45   Context and projects overview
9.45 – 10.50  Moderated discussion
10.50 – 11.00 Closing remarks
Team

Matthew Wittenstein, Chief of Section Energy Connectivity, UN ESCAP
Anna Lobanova, Sustainable Energy Specialist & Energy Connectivity Project Lead, UN ESCAP
Iva Brkic, Secretary of the Committee on Sustainable Energy & Central Asia Lead, UNECE
Nadejda Khamrakulova, Secretary of the Group of Experts on Cleaner Electricity Systems & Water-Energy Nexus Lead, UNECE
Opening remarks

Mr. Hongpeng Liu, Director of Energy Division, UN ESCAP
Mr. Dario Liguti, Director, Sustainable Energy Division, UNECE
Amb. Huseyin Avni Bicakli, Deputy Secretary General of ECO
Dr. Omer Kocaman, Deputy Secretary General of OTS
Context and projects overview

Matthew Wittenstein, Chief of Section Energy Connectivity, UN ESCAP
Iva Brkic, Secretary of the Committee on Sustainable Energy & Central Asia Lead, UNECE
Energy transition implies a shift from \textit{fuel-} to \textit{weather-dependent} power systems.

Storage and flexible demand: help meet peak load

Grids: connect supply to demand

Storage and flexible demand: help manage volatility

Grids: connect supply to demand and \textit{help manage volatility}
Growing Loads and Performance Expectations as Economy is Eletricified

**NO/LOW CARBON ENERGY RESOURCES**
Ensure sufficient amounts of no/low carbon energy to achieve decarbonization goals

**TRANSMISSION**
Develop adequate transmission to integrate renewables and transmit/distribute energy

**BALANCING RESOURCES**
Maintain a robust fleet of balancing resources needed to serve energy along with integrated renewables

**ENERGY SUPPLY CHAIN**
Ensure healthy energy supply chains for balancing resources, with sufficient access to stored energy to withstand long-duration, widespread extreme weather events
Carbon Neutral Energy System of the Future

What is a resilient energy system?

Power system connectivity - the need for larger, more integrated power systems

**Economics**
- Access to lower-cost resources
- Potential for export revenues
- Increased economies of scale

**Security**
- Lower reserve margin requirements
- Increase resource diversity

**Sustainability:**
- Access to regions with high RE potential
- Enables integration of variable RE (resource smoothing)

**ESCAP’s Regional Roadmap on Power System Connectivity**

**Planning**
- Develop a regional master plan (Strategy 2)
- Coordinate cross-border transmission planning (Strategy 6)

**Financing and development**
- Mobilize investment in cross-border infrastructure (Strategy 7)

**Operations**
- Move toward multilateral trading and competitive markets (Strategy 5)
- Co-ordinate cross-border system operations (Strategy 6)

**Cross-cutting**
- Build trust and political consensus (Strategy 1)
- Develop intergovernmental agreements (Strategy 3)
- Coordinate, harmonize, and institutionalize policy and reg frameworks (Strategy 4)
- Build capacity and share information, data, best practices (strategy 8)
- Ensure coherence of connectivity with the SDGs (Strategy 9)
Multilateral connectivity initiatives in the region

- **Ukraine**
  - **Belarus**
  - **Russian Federation**

- **Moldova**
  - **Armenia**

- **EPC-CIS**
  - **Azerbaijan**
  - **Kazakhstan**
  - **Uzbekistan**
  - **Turkmenistan**
  - **Kyrgyzstan**
  - **Tajikistan**

- **Afghanistan**
  - **Pakistan**

- **CAREM**
  - **Georgia**

- **NEARPIP / NAPSI**
  - **Mongolia**

- **CAREC**
  - **China**
  - **Bangladesh**
  - **Bhutan**
  - **India**
  - **Nepal**
  - **Sri Lanka**

- **BIMSTEC**
  - **Myanmar**
  - **Cambodia**
  - **Viet Nam**
  - **Thailand**
  - **Lao PDR**

- **SAARC Energy Centre**
  - **SAREP**
  - **ASEAN Power Grid**

- **Greater Mekong Subregion**

- **DPR Korea**
  - **Japan**
  - **Republic of Korea**
  - **Russian Federation**

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** Member of UN ECE only
Strategic collaboration between ESCAP and UNECE on Energy Connectivity in Central Asia

- **Recent joint UNECE and ESCAP activities on Energy Connectivity**
  - Brief on Power System Connectivity at HLPF 2023
  - Project on Energy Connectivity in Central Asia
  - Stocktaking analysis on energy infrastructure in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan
  - Joint regional workshops with regional energy experts, energy regulators and policymakers at 3rd Almaty Energy Forum
• Project 1:

Energy connectivity for sustainable development – Enabling renewable energy resource sharing across borders (ECO-REM)

– **Key activity**: development of a subregional roadmap to inform multilateral power trading linked to sustainable cross-border trade of renewable energy resources.

– **Timeline**:
  - **Policy brief summarizing gaps/challenges** to developing multilateral power trade by April 2024
  - **Roundtable discussion** to inform the development of subregional road map - April 2024 (TBC)
  - **Stakeholder workshop** to discuss key findings from the roadmap development – June 2024 (TBC)
  - **Roadmap for establishing multilateral power trade** and developing renewable energy resources by October 2024
  - **Stakeholder workshops** to disseminate road map and develop capacity to implement road map recommendations by December 2024
Project 2: Energy Connectivity in Central Asia

Objective: to improve resiliency of the energy systems in Central Asia through enhanced regional energy connectivity

Key activity: development of scenarios and a roadmap for a regionally interconnected energy system in Central Asia

Timeline:
- Launch of the modelling activity, by 20 February
- Online workshop on modelling – verification of assumptions, by 30 March
- Regional workshop in Central Asia, discussion of the roadmap preliminary results, by 15 June
- Finalization of the Roadmap on Energy Connectivity in Central Asia by 30 August
- Policy dialogues, September and November
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- **Project 3: Supporting increased energy security and resilience through energy transition**
  - **Objective**: to help member States increase their policy design capacity to enhance energy security and energy system resilience through energy connectivity
  - **Key activity**: development of tools and fostering multi-stakeholder partnerships for a resilient and interconnected power systems
  - **Timeline**:
    - **Toolkit for a cost-benefit analysis of interconnected power systems** by September 2024
    - **Report on cross-border power trade** by December 2025
    - **National workshops and focused reports** periodical by 30 December 2024
    - **Cross-regional multistakeholder dialogues** annually by 2026
Moderated discussion

Anna Lobanova, Sustainable Energy Specialist & Energy Connectivity Project Lead, UN ESCAP

Nadejda Khamrakulova, Secretary of the Group of Experts on Cleaner Electricity Systems & Water-Energy Nexus Lead, UNECE
Guiding questions:

1. What are the key priorities for national power system development?
2. What are the priority areas for power sector connectivity development?
3. What are the key challenges/concerns for energy connectivity development?
4. What are your expectations from the projects and how are you planning to be engaged?
5. How projects activities can be tailored to meet your country's needs?
6. Are there any national or subregional initiatives that we should be aware of?
Interventions by Experts

• Ms. Margalita Arabidze, Head of Energy Efficiency and Renewable Energy Policy and Sustainable Development Department, Ministry of Economy and Sustainable Development of Georgia

• Ms. Tatiana Vedeneva, President, Center for Renewable Energy and Energy Efficiency Development, Kyrgyzstan


• Mr. Sergey Katyshev, Independent Consultant and author of the UNECE study on Energy Connectivity in Central Asia - an inventory of existing national energy systems
Thank you!

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