

SUSTAINABLE ENERGY WEEK 2023
BUILDING RESILIENT ENERGY SYSTEMS

11-15 SEPTEMBER 2023 | PALAIS DES NATIONS | GENEVA



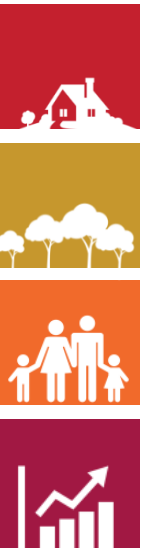
ENERGY 

32nd Session of the Committee on Sustainable Energy

14 September 2023

Morning Session 10h00 - 13h00

PLEASE STANDBY
SESSION WILL START AT 10:00 CEST



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Housekeeping


Ms. Iva Brkic

Secretary, Committee on Sustainable Energy


 10:00-13:00 and 15:00-18:00 CET

 Meeting is recorded

Presentations will be posted
(subject to approval by speakers)

 You can choose your preferred interpretation language

 Raise the hand to request the floor

 Draft report: <https://unece.org/sustainable-energy/events/32nd-session-committee-sustainable-energy>



Setting the Scene

Keynote Address: Electricity System Reliability during the Transition

Jim Robb,

Chair, Group of Experts on Cleaner Electricity Systems

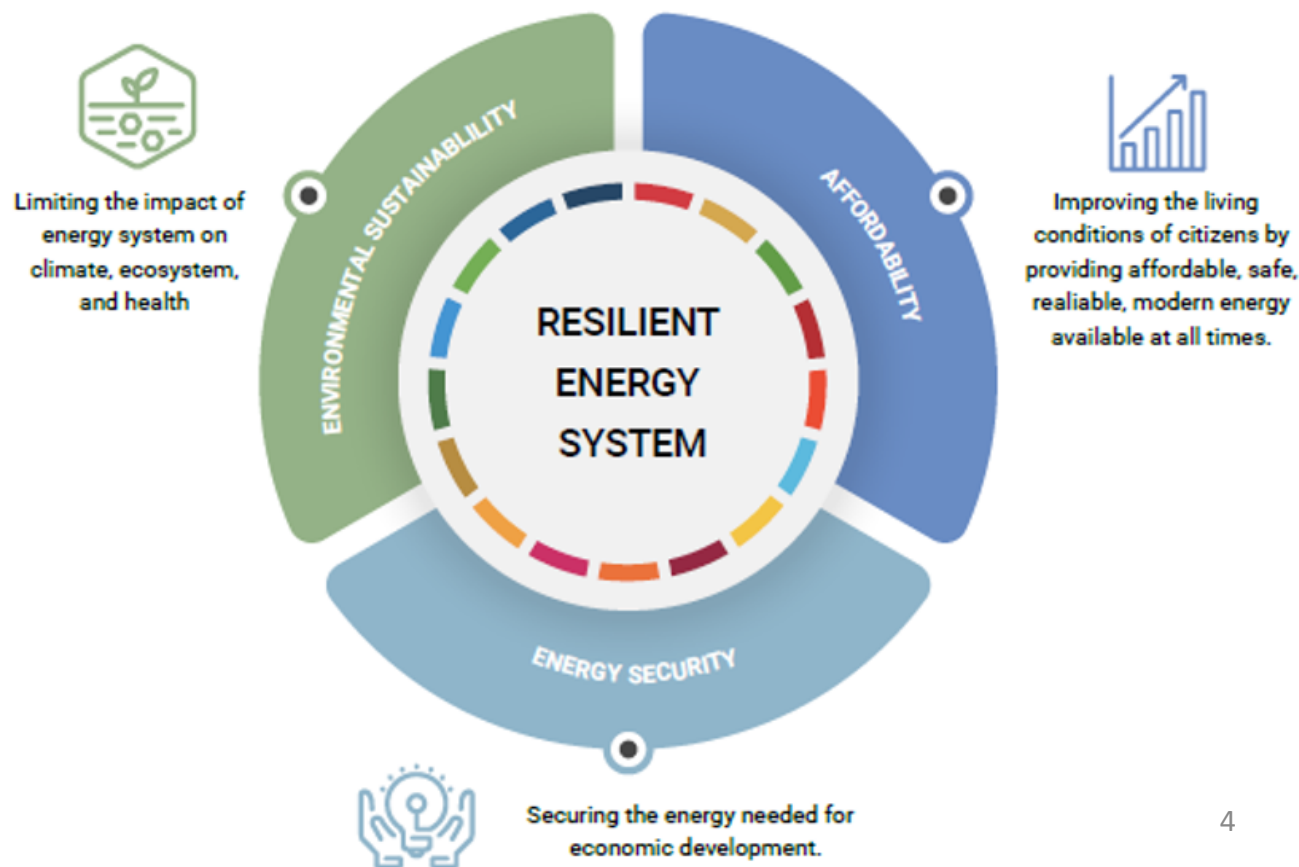
Building Resilient Energy Systems

Technical Considerations and Actions for Achieving Energy Security, Affordability, and Sustainability Net-Zero for Europe, North American and Central Asia



What is a resilient energy system?

- A resilient energy system ensures that energy makes an optimal contribution to a country's social, economic, and environmental development.
- Energy security strengthens energy independence through interconnectivity and trade.
- Affordability reduces costs of electricity, heating, cooling, and transport.
- Environmental sustainability lowers the carbon footprint and enhances efficiency across the energy supply chain.



Hyper Complex Risk Environment

- Rapidly changing resource mix
 - Retirements of traditional generation
 - Natural gas interdependencies
 - Inverter-Based Resource (IBR) integration
 - DER performance and visibility
- Extreme weather complexities
 - Extreme not infrequent
 - Broader deeper longer
- Energy & Environmental Policy
 - Electrification
 - Emissions
- Rapidly Evolving Threat Landscape
 - S/W vulnerabilities
 - Supply chain
 - Ransomware
 - Physical attacks



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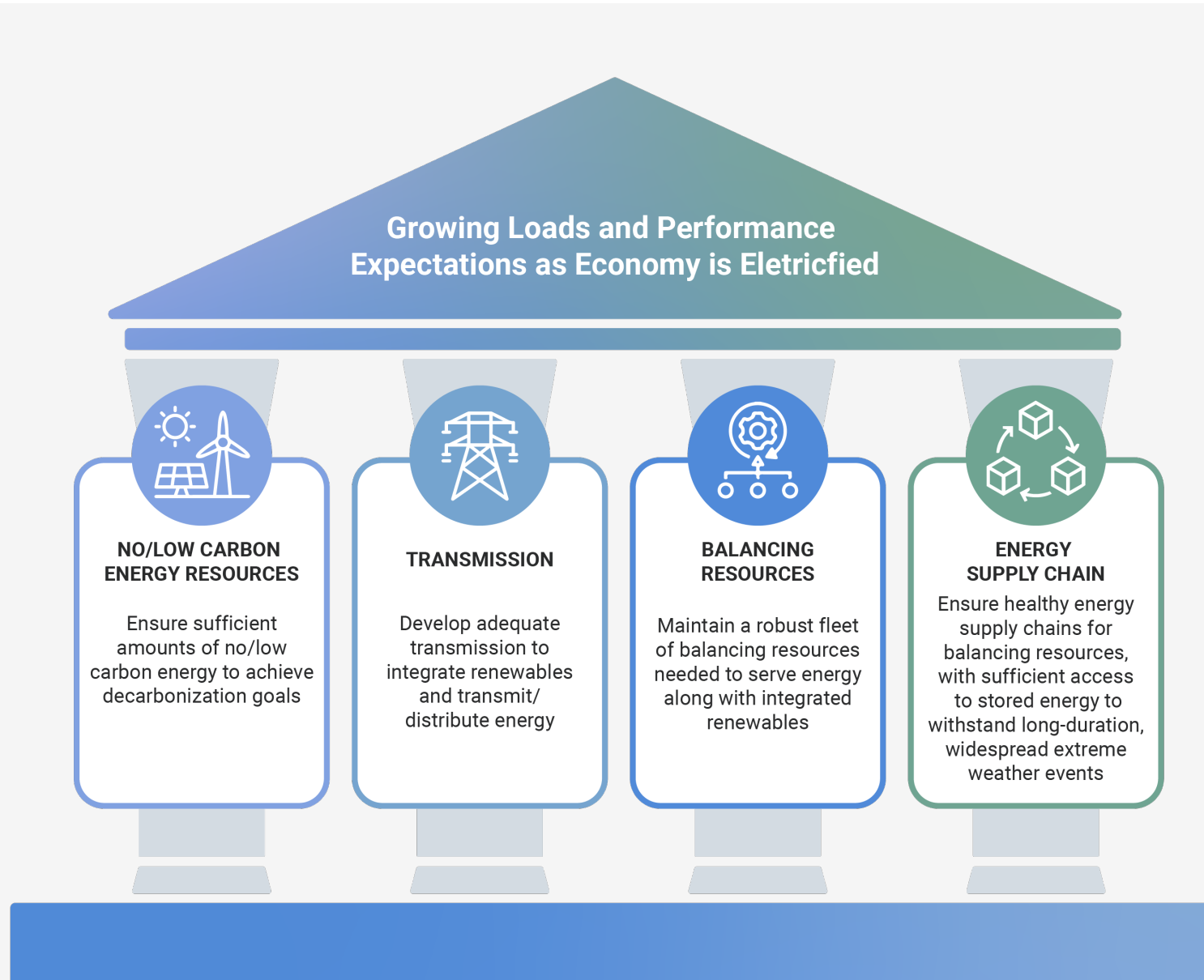
Reliability/Resilience/Security Concerns

- Fuel assurance/uncertainties
 - Natural gas
 - Renewables
- Loss of key "essential reliability services" with retirements
 - Inertia/frequency response
 - Reactive Power/voltage support
- Appropriate level of investment in infrastructure for hardening & resilience
 - Extreme weather
 - Coordinated Physical attack
- Expanding cyber attack surface
 - Industry Control Systems (ICSs)
 - IBRs/DERs/EV Charging
- Sophistication of recent cyber attacks
 - SolarWinds (one to many)
 - Pipedream, Industroyer malware

Four Pillars of the Energy Transition



UNECE





Panel I: Technology Interplay for Carbon Neutral Power Systems

- **Moderator: Jim Robb**, Chair, Group of Experts on Cleaner Electricity Systems
- ***Role of Dispatchable Generation***
 - **Mark Lauby**, Senior Vice President, Chief Engineer, North American Electric Reliability Corporation (NERC)
- ***Outlook for Carbon Capture and Sequestration***
 - **Jon Gibbins**, Vice-Chair, Group of Experts on Cleaner Electricity Systems
- ***Accelerating Renewable Deployment***
 - **Kostiantyn Gura**, Chair, Group of Experts on Renewable Energy
- ***Outlook for Energy Storage***
 - **Lars Jacobsson**, CEO, TEXEL Energy Storage
- ***End Uses and the Electricity Grid***
 - **Stefan Buettner**, Chair, Group of Experts on Energy Efficiency
- ***Power-to-X: Role of green and low-carbon hydrogen***
 - **Francisco de la Flor Garcia**, Chair, Group of Experts on Gas

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Panel II: Energy Connectivity and Regional Cooperation

- **Moderator: Iva Brkic**, Secretary, Committee on Sustainable Energy

Insights from Central Asia and the Caucasus

- **Overview on Central Asia**
 - **Sergey Katyshev**, Independent consultant, expert on Central Asia
- **The case of Georgia**
 - **Romeo Mikautadze**, Vice-Chair, Committee on Sustainable Energy, First Deputy Minister of Economy and Sustainable Development of Georgia
- **The case of Republic of Moldova**
 - **Sergiu Robu**, Lead Analyst, Institute of Power Engineering of the Academy of Sciences of Moldova

Insights from Western Europe

- **The case of Austria**
 - **Jasmin Haider**, Policy Officer, Austrian Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation & Technology
- **Steps towards a global energy interconnected network**
 - **Yin Bo**, Executive Director of Europe Office, Global Energy Interconnection Development and Cooperation Organization (GEIDCO)

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Day 2 Morning Session Conclusions and Recommendations

Documentation: DRAFT CSE-32/2023/INF.1 - Conclusions and Recommendations of the Committee on Sustainable Energy at its 32nd session

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THANK YOU!

The session will continue today at **15:00 CEST**

