Activities and priorities of the Committee on Sustainable Energy and matters for consideration by the Group of Experts

Dario Liguti, Director
Sustainable Energy Division

Coal Mine Methane and Just Transition

BUILDING RESILIENT ENERGY SYSTEMS

Key achievements 2023-2024

- **Developed cross-thematic knowledge to produce joint papers and events on key, complex topics:** Building Resilient Energy Systems, Sustainable Hydrogen Production Pathways, Sustainable Resource Management (UNRMS/UNFC), Critical Raw Materials, Energy Connectivity, Role of Women in Energy Transition

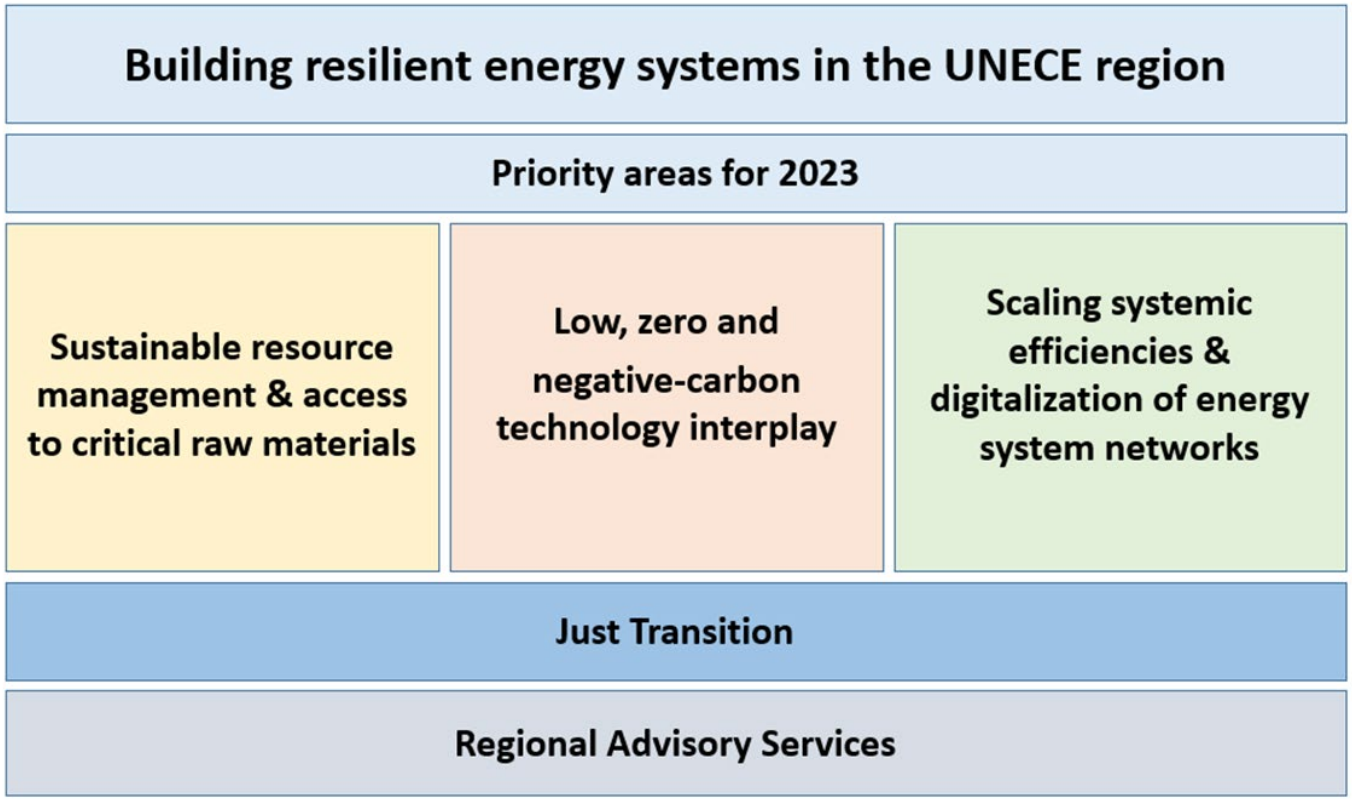
Key achievements 2023-2024 (continued)

- Organized special events and high-level dialogues on the topics of **building resilient energy systems, critical raw materials, climate finance, energy connectivity and digitalization of energy systems.**

- **Organized the 3rd Almaty Energy Forum** (UNECE, UNESCAP and UNDP) and launched the **UNECE – ESCAP Programme on Energy Connectivity in Central Asia** to help countries scale renewable energy capacity and design and build and resilient and carbon neutral energy systems in Central Asia.

- **Set up**, in cooperation with EMBER, an **online** bi-monthly **series *Methane Mondays*** providing a **platform for a multistakeholder dialogue on** matters related to **MRV and mitigation of methane emissions along the coal value chain**

Key Areas of Work

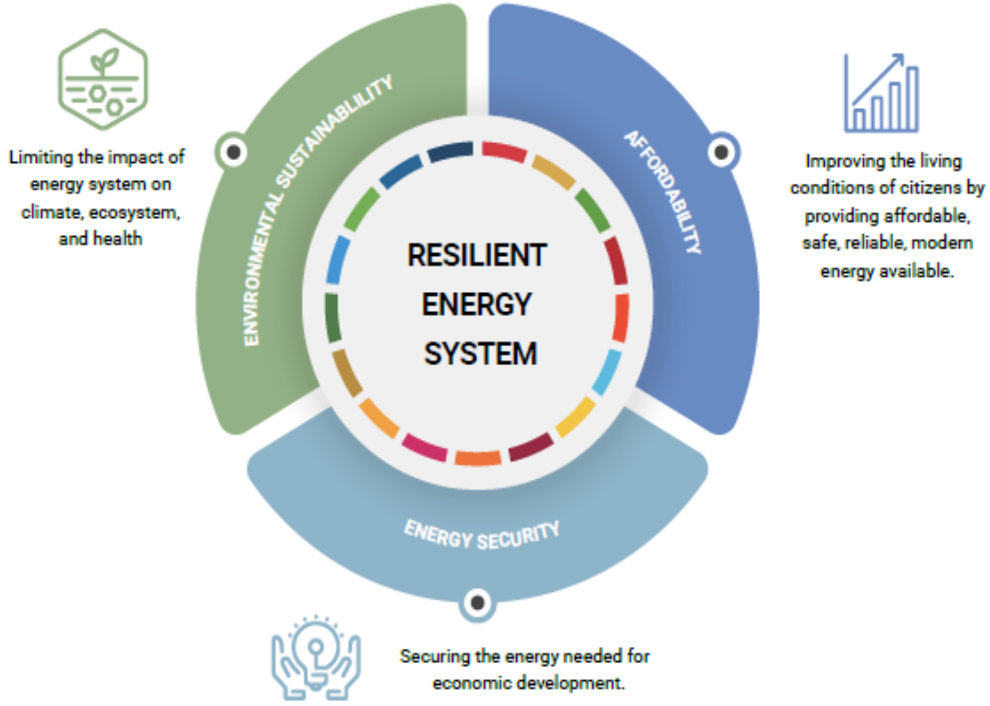


2024: building resilient Energy Systems

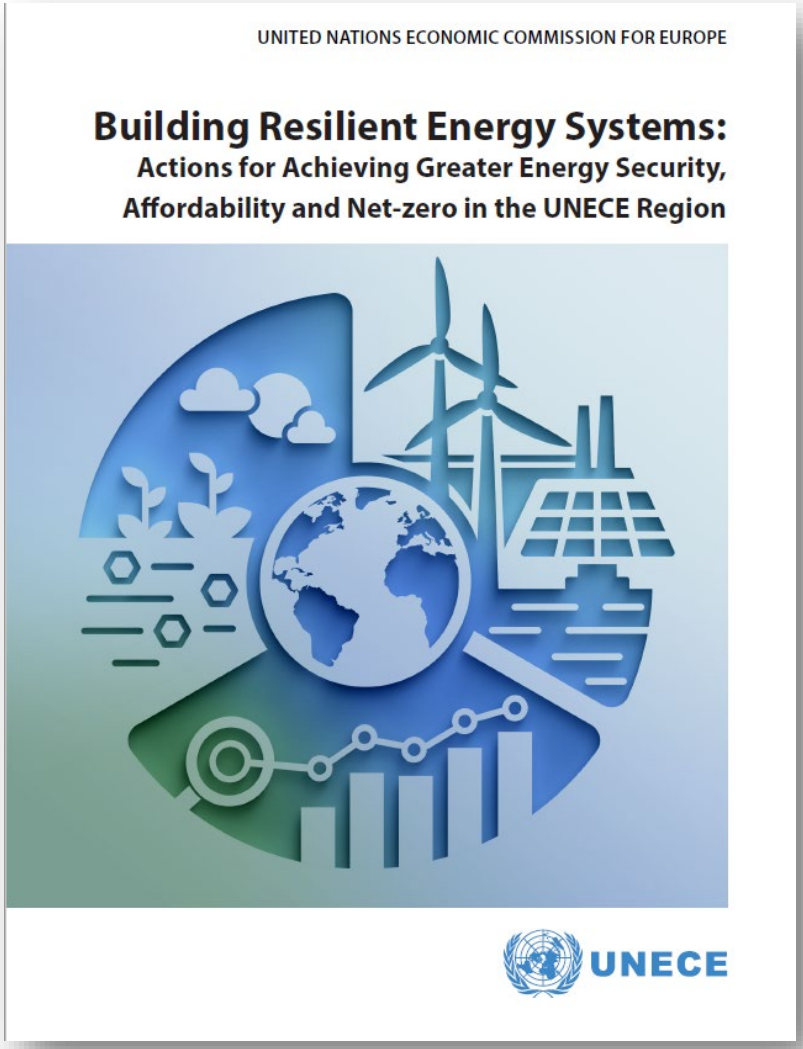
Technical Considerations and Actions for Achieving Energy Security, Affordability, and Sustainability Net-Zero for Europe, North American and Central Asia

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.



Energy System Resilience: UNECE contribution



Recommendations for Policymakers

The Expert Groups have aligned on five important recommendations to build a resilient energy system and achieve balance among affordability, energy security, and environmental sustainability:

1. **Prioritize and maximize the implementation of energy efficiency solutions** to drive down primary energy consumed while meeting economic and societal needs.
2. **Digitalize the energy system** and take advantage of increasing consumer digital literacy capturing the enormous optimization opportunity in the value chain.
3. **Accelerate fuel switching** to optimize the carbon footprint of end use energy and replace carbon intensive fuels where practical with low- and zero-carbon options.
4. **Manage resources effectively, sustainably, and with circular economy considerations**, using the UN framework Classification (UNFC) and UN Resource Management System (UMRMS).
5. **Accelerate the deployment of low- and zero-carbon technologies** by scaling renewable energy, nuclear power and advanced fossil fuels with carbon capture, use and storage.

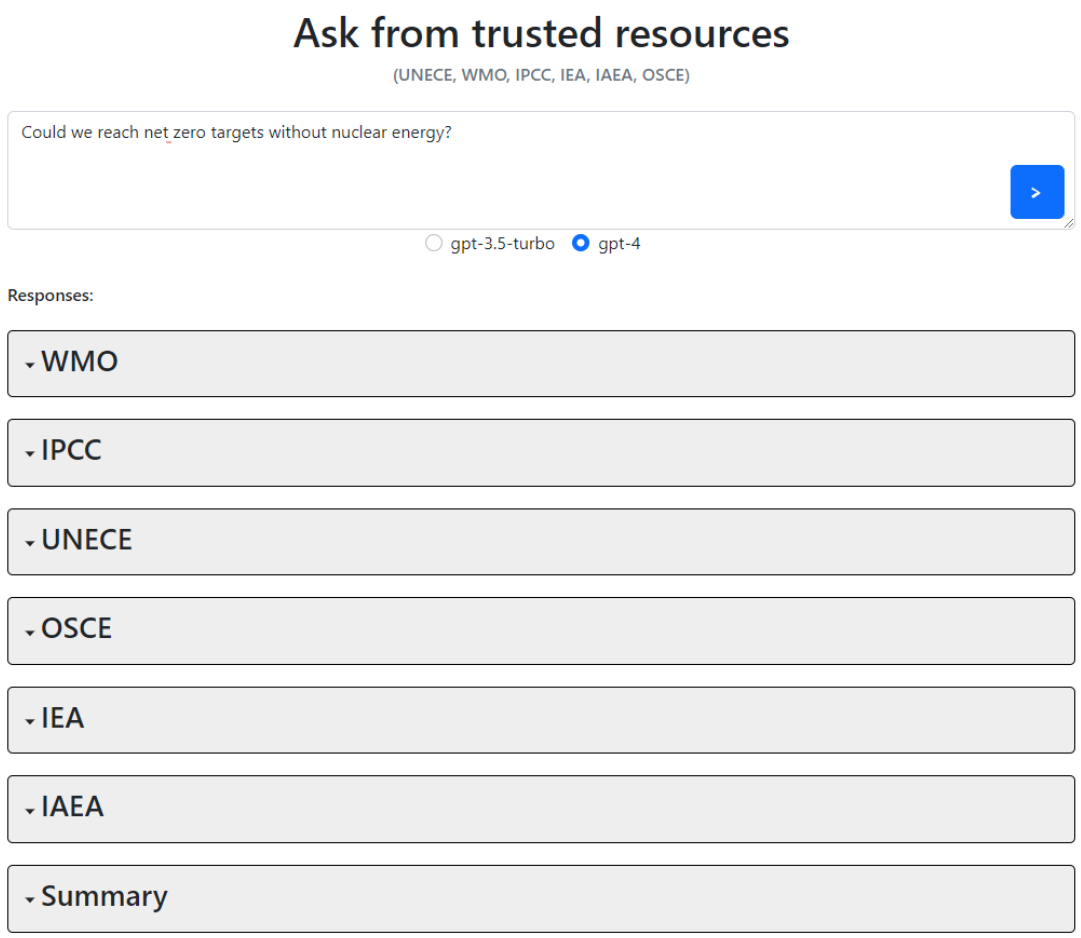
Key Considerations for Policymakers

As policymakers look across the options included and assess what will be best for their circumstances, it is important to bear in mind the following key considerations:

1. Recognize that there is not a one-size-fits-all approach.
2. Consider long term goals as they design policies today.
3. Address behavioural barriers to unlock innovation and digitalization potential.
4. Build a workforce to deliver on a just energy transition and address the skills shortage.
5. Integrate resiliency concerns into existing and related planning efforts.
6. Consider climate change impacts on supply and demand.

Platform on Resilient Energy Systems

Demo EnergyChat in partnership with University of Zurich and International Organizations



UNECE

Platform Partners

Looking ahead: 2024
Top Priority Activities (continued)

Methane management

- Reducing coal mine methane emission **from active and abandoned coal mines**
- Measure and manage methane emissions **across the natural and gas value chains**
- Making impact in the UNECE subregions: methane mitigation in Central Asia and the Caucasus, regions of key importance for global emission reduction efforts.

The Forum is hosted by the United Nations Economic Commission for Europe (UNECE) and the Global Methane Initiative (GMI), in partnership with the Global Methane Hub and the Climate and Clean Air Coalition (CCAC).

Looking ahead: 2024
Top Priority Activities (continued)

Accelerate activities on Sustainable Resource Management

- Support UNECE member States in priority **deployment of UNFC**
- Continue **development of UNRMS** with a focus on the extraction, sustainability and procurement of **Critical Raw Materials and Resource Efficiency**, i.a. with focus on Central Asia
- ICE-SRMs in Russia, UK and Mexico (for Latin America and Caribbean). Planned in Kazakhstan/Central Asia, Slovenia for EU, India and in East & SE Asia.

The theme, **"Assuring sustainability in resource management"**, will focus on the United Nations Framework Classification for Resources (UNFC) and the United Nations Resource Management System (UNRMS) and their pivotal role in resource management worldwide.

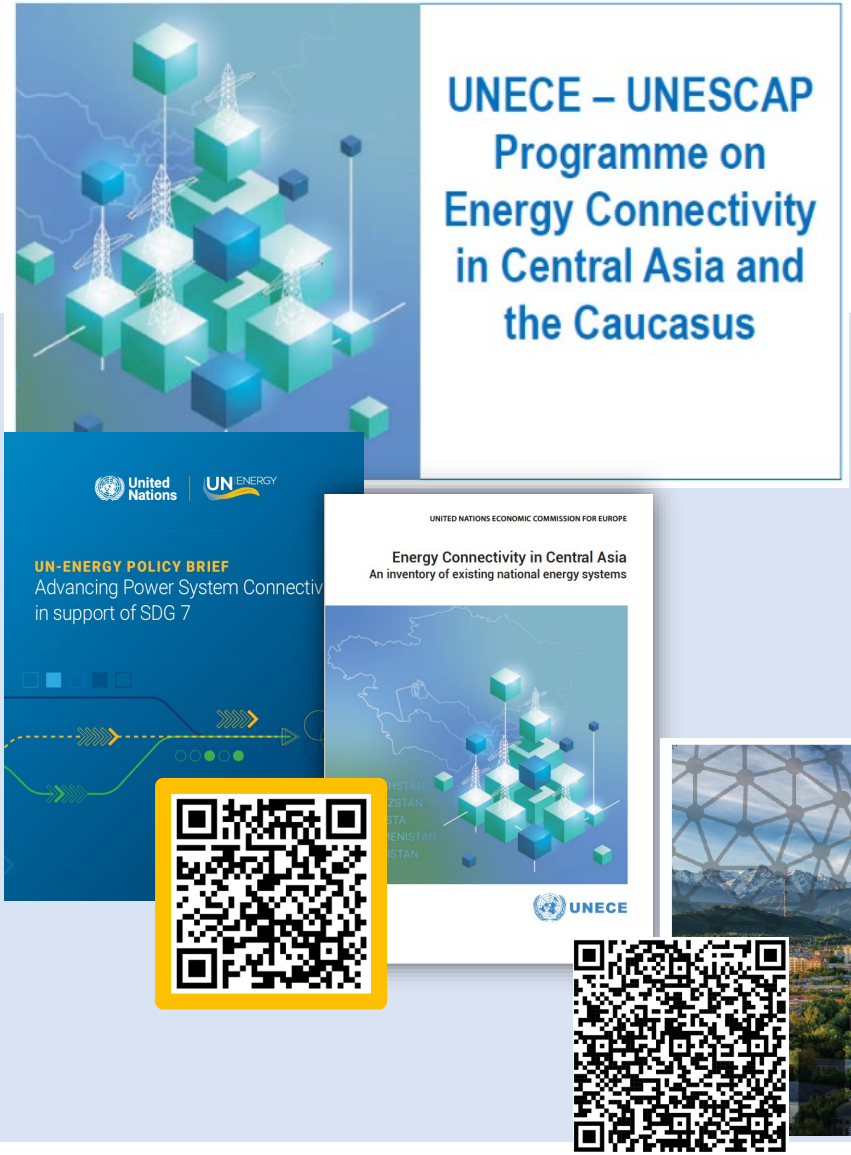
Looking ahead: 2024
Top Priority Activities (continued)

Energy Efficiency and Digitalization in Energy

- Joint activities with on new technologies for systemic energy efficiencies:
  - **UNECE & ESCWA:** a flagship publication "The Role of Blockchain in the Sustainable Energy Transition in the Arab Region"
  - **UNECE & ESCAP**: an ongoing activity on "Driving the Energy Transition: Connectivity, Digitalization and Artificial Intelligence"
  - **UNECE, ITU & other International Organizations** the first United Nations Virtual Worlds and Metaverse Day (Geneva, 14 June 2024)

- **UNECE Task Force on Digitalization** is working on a series of case studies that focus on governance of energy system digitalization, use of Artificial Intelligence in the energy systems and behavioural aspects of energy system digitalization

Looking ahead: 2024
Top Priority Activities (continued)



Key Programme activities:

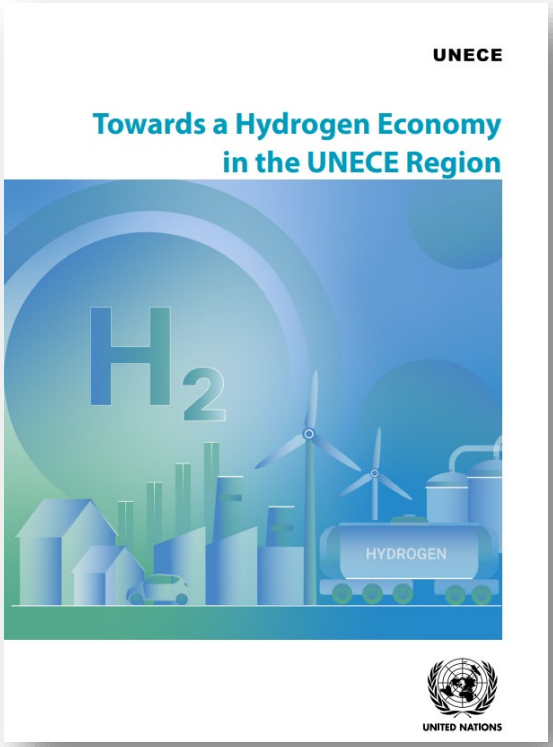
- development of scenarios and a **roadmap** for a regionally **interconnected energy system in Central Asia**
- development of a subregional roadmap to **inform multilateral power trading**
- development of **tools for a resilient and interconnected power systems** in Uzbekistan, Kazakhstan and Georgia

Looking ahead: 2024
Top Priority Activities (continued)

Support the development of a Hydrogen Ecosystem

- UNECE **Task Force on Hydrogen** coordinates efforts and developed:
  - a comprehensive **classification for hydrogen**
  - specifications for **UNFC/UNRMS application** to hydrogen projects and production technologies, if/where appropriate

- Launched the publication "Towards a Hydrogen Economy in the UNECE Region" that looks at hydrogen classification based on technology-neutral, quantified greenhouse gas emissions intensity levels of hydrogen production options.



Thank you!

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