



# General Assembly

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## Seventy-ninth session

Agenda items 16, 18 (i) and 64

### Macroeconomic policy questions

**Sustainable development: Ensuring access to affordable,  
reliable, sustainable and modern energy for all**

**Zone of peace, trust and cooperation of Central Asia**

## **Letter dated 14 November 2024 from the Permanent Representative of Turkmenistan to the United Nations addressed to the Secretary-General**

I have the honour to transmit herewith the summary report of the first International Meeting of Experts on Enhancing Energy Connectivity: Fostering Collaboration and Achieving Sustainable Development which was held in Ashgabat, Turkmenistan, on 16 and 17 October 2024 (see annex).\*

I would be grateful if you could kindly circulate the present letter and its annex as a document of the General Assembly, under agenda items 16, 18 (i) and 64, as well as to consider it as a submission under paragraph 5 of General Assembly resolution [78/149](#) of 19 December 2023.

*(Signed)* Aksoltan Ataeva  
Ambassador  
Permanent Representative

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\* Circulated in the language of submission only.



## Annex to the letter dated 14 November 2024 from the Permanent Representative of Turkmenistan to the United Nations addressed to the Secretary-General

### SUMMARY REPORT

#### International Meeting of Experts on Enhancing Energy Connectivity: Fostering Collaboration and Achieving Sustainable Development

(16-17 October 2024, Ashgabat, Turkmenistan)

#### 1. Introduction

The International Meeting of Experts on Enhancing Energy Connectivity (IMEEC) convened in Ashgabat, Turkmenistan, on October 16-17, 2024, to address the critical need for stable and efficient energy connectivity in achieving Sustainable Development Goal 7 (SDG 7): ensuring affordable, reliable, sustainable, and modern energy for all. The meeting was convened in accordance with the resolution of the General Assembly of the United Nations 78/149 of 19 December 2023<sup>1</sup>, which recognized the pivotal role of energy connectivity in driving sustainable development.

#### 2. Key Themes and Discussions

The IMEEC focused on several key thematic areas, fostering in-depth discussions and collaboration among experts, policymakers, and stakeholders from around the world.

##### 2.1 Regional Integration and Collaboration

The meeting emphasized the importance of regional cooperation in advancing energy connectivity. Enhancing regional energy connectivity with a focus on power grids is an important means of promoting the sustainability and security of the region's energy supply. At the 77th Session of the Commission in 2021, ESCAP Member States endorsed the Regional Road Map on Power System Connectivity (Road Map).<sup>2</sup> The Road Map contains a vision, a set of principles, and 9 strategies to support increased power system integration and sustainable development. Participants discussed best practices for cross-border infrastructure planning and development, harmonization of regulations and standards, financing and joint investment opportunities, knowledge sharing, and ensuring alignment of connectivity initiatives with sustainable development objectives.

- Regional Connectivity Strategies: Experts presented various regional connectivity strategies, including the lessons from the ESCAP Regional Road Map on Power System Connectivity and relevant initiatives in Central Asia, Africa, and ASEAN.
- Cross-Border Infrastructure Development: Discussions focused on the challenges and opportunities of building and maintaining cross-border energy infrastructure, such as transmission lines and pipelines. Participants explored innovative financing mechanisms and technological solutions to overcome these challenges.
- Regulatory Harmonization: The need for harmonized regulations and standards across borders was highlighted to facilitate energy trade and investment. Participants discussed potential approaches to address regulatory barriers and promote a level playing field for energy market participants. Different initiatives were presented, such as the Green Grids Initiative (GGI), which seeks to

<sup>1</sup> <https://undocs.org/Home/Mobile?FinalSymbol=A/RES/78/149>.

<sup>2</sup> <https://www.unescap.org/our-work/energy/energy-connectivity/roadmap>.

coordinate international action and mobilize technical expertise to accelerate the development of electricity grids essential to enable the integration of variable renewable energy.

## 2.2 *Diversification and Security of Energy Sources*

The meeting recognized the importance of diversifying energy sources and enhancing energy security. Enhancing regional energy connectivity and fostering energy trade through cooperation is a critical factor for bolstering the resiliency of the energy system as well as energy security across the region. An integrated and interconnected energy system that encompasses electricity and gas grids and facilitates the transport and trading of low-carbon and green hydrogen, can enhance the reliability, affordability, and sustainability of energy supply. Participants reviewed the scenarios and a roadmap for a regionally interconnected energy system in Central Asia and discussed strategies for integrating renewable energy into regional grids, managing risks associated with dependence on single suppliers, and promoting energy efficiency and demand-side management.

- *Multilateral legal framework*: The meeting considered the possible elements for drafting the next United Nations General Assembly resolution on the pivotal role of reliable and stable energy connectivity in driving sustainable development, building on resolution 78/149;
- *Renewable Energy Integration*: Experts shared experiences and lessons learned from integrating renewable energy sources into regional grids, including challenges related to grid stability, intermittency, and cost-effectiveness.
- *Energy Security*: Participants discussed strategies for enhancing energy security, such as diversifying energy sources, building strategic reserves, and improving energy infrastructure resilience.
- *Climate Change Mitigation*: The meeting emphasized the role of energy connectivity in mitigating climate change by enabling the integration of low-carbon energy sources and reducing greenhouse gas emissions.

## 2.3 *Technology and Innovation for Energy Connectivity*

The meeting explored the role of emerging technologies in facilitating efficient and sustainable energy transportation. Participants discussed the potential of hydrogen, smart grids, advanced metering infrastructure, energy storage solutions, digitalization, and data analytics in enhancing energy connectivity.

- *Hydrogen Technologies*: Experts presented the latest developments in hydrogen production, storage, and utilization, highlighting its potential as a clean energy carrier and its role in decarbonizing the energy sector.
- *Smart Grids and Advanced Metering Infrastructure*: Participants discussed the benefits of smart grids and advanced metering infrastructure in improving grid efficiency, reliability, and integration of distributed renewable energy resources.
- *Energy Storage*: The meeting explored various energy storage technologies, including batteries, pumped hydro storage, and compressed air energy storage, and their potential applications in energy connectivity.

## 2.4 *Policy and Regulation for Enabling Investment and Trade*

The meeting addressed the importance of effective policy frameworks and regulations in attracting investments and promoting cross-border energy trade. Participants discussed streamlining regulatory processes, harmonizing standards, identifying and addressing regulatory barriers, designing incentive mechanisms, and ensuring transparency and good governance in energy markets.

- *Regulatory Reform:* Experts shared experiences and best practices in reforming energy regulatory frameworks to promote investment and facilitate cross-border energy trade. Key findings from the development of the Economic Cooperation Organization Regional Electricity Market (ECO-REM) project were presented. ESCAP developed a road map containing targeted, actionable recommendations for policy and regulatory reforms to advance the ECO-REM initiative, building on existing arrangements and integration efforts in the region.
- *Incentive Mechanisms:* Participants discussed the role of financial incentives, tax breaks, and other policy measures in attracting private sector investment in energy connectivity projects. The importance of investments in cross-border energy infrastructure enabling the transition was emphasized. Financing grid infrastructure: Grid infrastructure is capital intensive and can be difficult to finance using only public sources of funding. Participants discussed the potential to access non-traditional funding sources, including from the private sector and climate finance. A representative from GGI presented a proposed framework for harmonizing different climate finance assessment methodologies.
- *Transparency and Good Governance:* The meeting emphasized the importance of transparency and good governance in energy markets to build trust, attract investment, and ensure fair competition.

### *2.5 Capacity Building and Knowledge Sharing*

The meeting recognized the need for capacity building and knowledge sharing to support the implementation of energy connectivity initiatives. Participants discussed the importance of training and education programs, technical assistance, and international cooperation in building the capacity of developing countries.

- *Training and Education Programs:* Experts highlighted the need for tailored training and education programs to equip professionals with the skills and knowledge required for effective energy connectivity management.
- *Technical Assistance:* Participants discussed the role of international organizations and development banks in providing technical assistance to developing countries in planning, implementing, and operating energy connectivity projects.
- *International Cooperation:* The meeting emphasized the importance of international cooperation in sharing knowledge, best practices, and experiences related to energy connectivity.

### **3. Recommendations**

Based on the discussions and deliberations during the IMEEC, the following recommendations were developed:

- *Strengthen regional and international cooperation:* Foster collaboration and partnerships among regional organizations, governments, and stakeholders to advance energy connectivity initiatives. Promote international cooperation and collaboration to share knowledge, best practices, and experiences related to energy connectivity.
- *Create enabling policy environments:* Develop effective policy frameworks and regulations that attract investment, promote competition, and ensure transparency and good governance in energy markets.
- *Invest in cross-border infrastructure:* Prioritize investments in energy infrastructure, such as transmission lines and pipelines, to facilitate cross-border energy trade.

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- *Harmonize regulations and standards:* Promote the harmonization of energy regulations and standards across borders to reduce barriers to trade and investment.
  - *Diversify energy sources:* Encourage the diversification of energy sources, including renewable energy, to enhance energy security and resilience.
  - *Promote energy efficiency and demand-side management:* Implement policies and programs to improve energy efficiency and reduce energy demand, thereby reducing the need for new infrastructure.
  - *Invest in emerging technologies:* Support research, development, and deployment of emerging technologies, such as hydrogen, smart grids, and energy storage, to enhance energy connectivity and sustainability.
  - *Enhance capacity building and knowledge sharing:* Strengthen capacity building and knowledge sharing initiatives to equip professionals with the skills and knowledge required for effective energy connectivity management.
  - *Future multilateral dialogue on energy connectivity:* Disseminate the outcomes of the IMEEC to United Nations Member States and relevant stakeholders to use the results of the discussions for drafting the next United Nations General Assembly resolution on the pivotal role of reliable and stable energy connectivity in driving sustainable development during the 80th session of the General Assembly.

#### **4. Conclusion**

The IMEEC provided a valuable platform for experts, policymakers, and stakeholders to discuss the challenges and opportunities of enhancing energy connectivity. The recommendations adopted by the meeting offer a roadmap for advancing energy connectivity and achieving sustainable development goals.

Participants expressed deep gratitude and appreciation to the Government of Turkmenistan for the productive organization and conduct of the first International Meeting of Experts on Enhancing Energy Connectivity.

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