



WORLD  
METEOROLOGICAL  
ORGANIZATION

# WMO CLIMATE AND ENERGY NEWSLETTER

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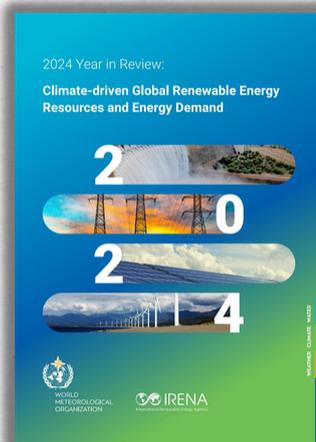
February 2026 | Vol. 3

# HIGHLIGHTS FROM THE SECRETARIAT

## WMO–IRENA Report (2024 Year in Review)

Produced jointly by the World Meteorological Organization (WMO) and the International Renewable Energy Agency (IRENA), **the third edition of the report, 2024 Year in Review: Climate-driven Global Renewable Energy Resources and Energy Demand**, examines how climate variability and long-term climate change are increasingly shaping renewable energy resources and electricity demand worldwide.

[Read More](#)



Record global temperatures in 2024 (+1.55°C above pre-industrial levels) drove significant regional variability in wind, solar and hydropower resources. Global electricity demand rose by around 4%, exceeding 20% in some heat-exposed regions.

Renewable energy performance varied sharply across regions, with strong wind and solar gains in Southern Africa contrasting with renewable shortfalls and rising cooling demand in parts of South Asia and South America—highlighting the need for diversified, climate-informed energy systems.

Seasonal climate forecasts showed growing value for energy planning in 2024, helping anticipate periods of high electricity demand and renewable variability and providing a practical pathway to strengthen energy-system resilience.

## New Version of Energy and Meteorology Portal

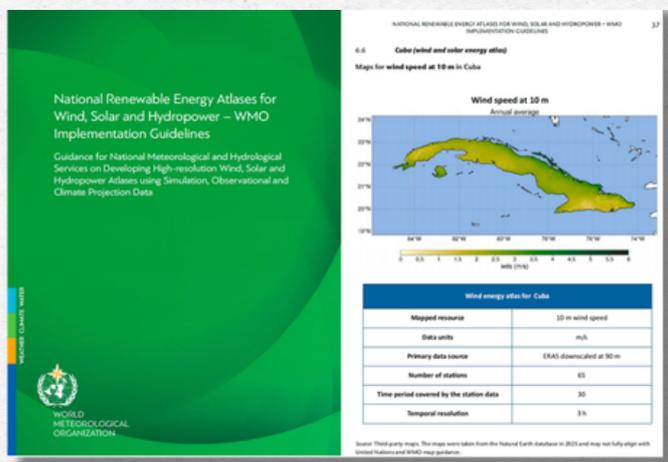


An updated version of the Energy & Meteorology Portal has been launched, strengthening access to trusted resources on climate-informed energy planning and resilience.

[Access the Portal](#)

# HIGHLIGHTS FROM THE SECRETARIAT

## National Renewable Energy Atlases: New Guidelines for High-Resolution Mapping



The publication *National Renewable Energy Atlases for Wind, Solar and Hydropower – WMO Implementation Guidelines* provides technical guidance to help countries develop National Renewable Energy Atlases (NRAs) for wind, solar and hydropower. The user manual offers step-by-step guidance for NMHSs and energy ministries, combining observational data with CMIP6 climate projections to strengthen resource assessment and planning. Developed in response to needs identified through WMO’s 2022–2023 energy survey, the initiative is being piloted in seven countries, with planned expansion in Latin America under the ENANDES project. [Read More](#)

## Early Warning for Energy: Best Practices in Energy Early Warning Systems



WMO, in collaboration with the China Meteorological Administration (CMA), has released a new technical publication titled *Best Practices on Early Warning Systems for the Energy Sector and Electricity Industry: Case Studies from China*. It provides practical guidance for governments, utilities and National Meteorological and Hydrological Services (NMHSs) on developing impact-based, actionable early warning services to protect power systems as climate hazards intensify, and supports the Early Warnings for All initiative through adaptable, energy-specific examples. [Read More](#)

# HIGHLIGHTS FROM THE SECRETARIAT

## WMO COP30 Side Event: Climate Data to Action for Clean Energy Resilience

At COP30, WMO hosted a high-level side event, “Climate Data to Action: Enhancing Clean Energy Resilience and Mitigation”, bringing together experts, policymakers and youth leaders to highlight how weather and climate information can accelerate a resilient clean energy transition.

[Read More](#)



## Regional Workshop: Advancing WEFE Nexus in Latin America

WMO, through its Regional Office for the Americas (RAM) and the ENANDES project, convened an in-person regional workshop on hydro-meteorological services for the energy sector and the Water–Energy–Food–Ecosystem (WEFE) Nexus for Spanish-speaking countries in Central and South America.

[Read More](#)



## Capacity Building: Strengthening Mozambique's Climate-Informed Energy Planning

WMO, together with Mozambique’s GIZ team and development partners, organized a capacity-development event to strengthen climate-informed Long-term Energy Planning (LTEP). The program equips national energy institutions with tools to design power systems resilient to climate change and aligned with Mozambique’s NDCs, Long-Term Low Emission Development Strategy (LT-LEDS) and Energy Transition Strategy (2023–2050).

[Read More](#)

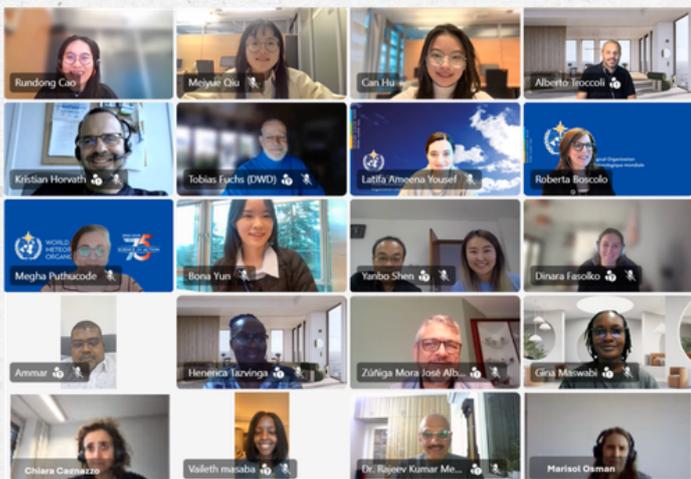


# HIGHLIGHTS FROM THE SECRETARIAT

## SG-RENE Outlook for 2026–2027

The WMO Service Commission (SERCOM) Study Group on Renewable Energy Transition (SG-RENE) held its 7th virtual meeting on November 26, 2025 under the chairmanship of Prof. Troccoli. Members prepared inputs for the SERCOM Management Group (MG) meeting, held in December 2025, including clearer framing of SG-RENE functions, deliverables and priority levels for the 2026–2027 workplan.

[Read More](#)



## ECOSOC Side Event: Strengthening the Digital–Energy Nexus with AI and Data



WMO, UNDP and UNECE co-hosted an ECOSOC side event on the digital–energy nexus, exploring how data, AI and innovation can accelerate a just, inclusive energy transition. Panelists stressed interoperable, high-quality climate and energy data, strong governance and skills to boost resilience, renewable integration and investment readiness, with equity and partnerships key to real development impact. [Read More](#)

# ENERGY PLUS +

## United Nations Special Report: Power the Transition Globally

UN Secretary-General António Guterres launched a UN special report, supported by agencies and partners including WMO. It tracks progress since the 2015 Paris Agreement: renewables nearly match fossil fuels in installed capacity, provided almost all new additions last year, and generate nearly one-third of global electricity. [Read More](#)



## IEA Workshop: Strengthening Infrastructure Resilience



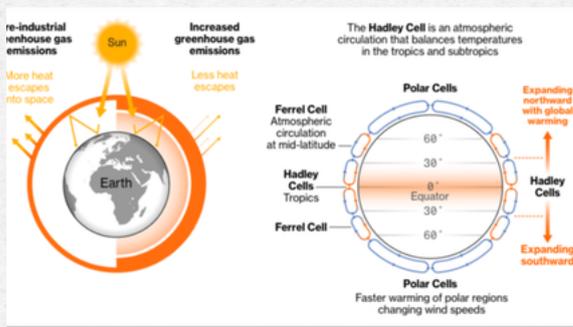
WMO participated in the International Energy Agency's High-Level Roundtable and Technical Workshop on Strengthening Energy Infrastructure Resilience to advance climate-informed approaches for planning and financing resilient energy systems. [Read More](#)

## IAEA Conference: Climate Science for Rare-Extreme Risk Management

WMO was invited by the International Atomic Energy Agency (IAEA) to contribute to its International Conference on the Resilience of Nuclear Installations against External Events from a Safety Perspective, highlighting how climate science can strengthen the management of rare, high-impact hazards affecting long-life nuclear facilities. [Read More](#)



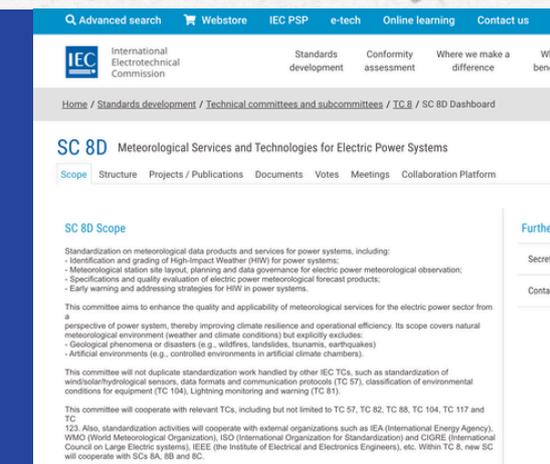
## Bloomberg: Managing Climate Risks in Energy Transition



A Bloomberg Green article underscores that while clean energy is central to decarbonization, climate change is increasing weather volatility, and the same conditions that power renewables are becoming less predictable. [Read More](#)

# LOOKING FORWARD TO...

## Global Standards: IEC Cooperation for Energy Service Standardization



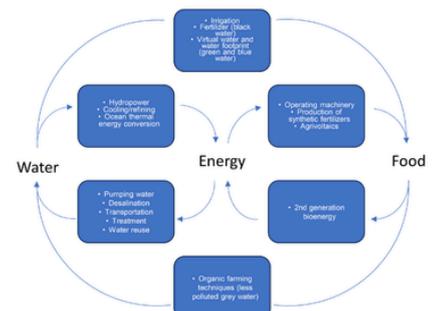
WMO is advancing cooperation with the International Electrotechnical Commission (IEC) to support the standardization of energy services that rely on weather, water and climate information. The collaboration aims to strengthen interoperability, quality assurance and common terminology for climate-informed energy services across the value chain, helping NMHSs, energy operators and developers apply consistent approaches for planning, operations and risk management.

[Read More](#)

## MENA Region: Best Practices for the Water-Energy-Food Nexus

With intensifying water scarcity, rising energy demand and growing food insecurity across the Middle East and North Africa (MENA), integrated Water-Energy-Food (WEF) planning is increasingly essential. Renewable energy—particularly solar and wind—can help decouple water and food systems from fossil fuels by enabling more sustainable desalination, irrigation and agricultural production in one of the world's most climate-vulnerable regions.

through hydropower, cooling and refining processes, and ocean thermal energy conversion. In turn, energy is essential for water-related activities, including pumping, desalination, transportation, treatment, and reuse. The agricultural sector depends on both water and energy for irrigation, fertilizer production, and farm operations, including mechanization and **agrivoltaic** systems. Conversely, food systems contribute to energy generation through second-generation bioenergy and promote water conservation through organic farming techniques that produce less polluted grey water. These circular linkages, illustrated in Figure 15, demonstrate how each sector both relies on and influences the others, reinforcing the importance of integrated and resource-efficient management across the WEF Nexus.



### Upcoming Events

- **SG-RENE 8th Meeting**, Virtual, March 24, 2026
- **UN-Energy Meeting**, Geneva, March 24–27, 2026
- **IVECF**, Vienna, April 9–10, 2026
- **SERCOM-4**, Geneva, October 2026