IRENA
International Renewable Energy Agency

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# Background Note

# Delivering on the UAE Consensus: Tracking progress toward tripling renewable power capacity and doubling energy efficiency by 2030

## Background

1. At COP28, Parties reached the UAE Consensus, calling for a tripling of global renewable power capacity and a doubling of the global average annual rate of energy efficiency improvements by 2030. IRENA's 1.5°C Scenario, developed in the *World Energy Transitions Outlook (WETO)*, provided the analytical basis for this milestone.

2. Progress in 2024 has been significant: global renewable power capacity grew by +581.9 GW (15.1% annual growth rate). 91% of new renewable capacity in 2024 provides cheaper power than new fossil fuel capacity. Solar PV added a record 452 GW, while wind energy expanded by 114 GW. Other technologies contributed to a diversified mix, with hydropower, bioenergy, geothermal, CSP and marine energy together adding more than 15 GW. Investments reached USD 624 billion in renewable power and USD 348 billion in energy efficiency, supported by rapid expansion of storage and electrification solutions such as batteries (+74 GW), pumped hydro (+8.3 GW), EVs (21% of global new car sales), and residential heat pumps (+6% to 14.4 million units sold).

3. Despite these advances, deployment remains geographically uneven: Asia, Europe and North America account for 85% of installed capacity, while Africa holds just 1.6% of the global total, despite the region's vast energy needs and potential. Delivering on the tripling target requires action across all regions, though starting points differ. The G20 must lead through stronger ambition and faster deployment, while emerging and developing regions face more urgent growth needs but also hold vast potential, particularly in solar and wind. Africa and ASEAN require rapid scale-up to meet demand and ensure access, Latin America can build on its already high renewable share, and the Middle East is poised to emerge as a hub for renewable generation and green hydrogen production. Coordinated regional action is essential to keep the global tripling target within reach.

4. System bottlenecks risk slowing progress towards the tripling renewable power capacity target. Achieving this goal requires strengthened grid infrastructure and enhanced flexibility to manage solar and wind variability across daily, weekly, and seasonal timescales. By 2030, global flexibility needs in the power system are projected to be roughly three times higher than end of last decade

for daily balancing, 2.5 times for weekly, and twice as high for seasonal variability. Annual investment in grids and flexibility must nearly double from USD 433 billion today to USD 792 - 912 billion in 2025 - 2030. Near-term measures – fast-tracking permitting, digitalising and upgrading grids, prioritising storage, and accelerating critical infrastructure – are essential to maintain reliability, affordability, and energy security.

5. Investments in energy transition supply chains – for manufacturing of solar, wind, battery and hydrogen technologies – dropped by 21% in 2024 due to supply-demand imbalances, trade tensions, and supply chain vulnerabilities. Scaling up such investments is essential for meeting the tripling goal to keep pace with the unprecedented demand of solar modules, wind turbines, batteries, and other technologies. Moreover, such investments need to be distributed equitably as they form a crucial building block of a just and inclusive energy transition and enhancing energy security.

6. Access to affordable finance remains a critical challenge for developing countries, with the majority of energy transition related financing going to China and Advanced economies. In addition, permitting, limited grid flexibility, and workforce challenges remain critical bottlenecks. Achieving the tripling and doubling goals will require urgent action across policy frameworks, infrastructure, financing, skills development, and international collaboration.

**Objective of the Programmatic Discussion**

- Present the latest global findings on progress toward the tripling and doubling targets, based on IRENA's tracking of renewable power capacity, efficiency, investment, and policy commitments.
- Highlight regional disparities, sectoral trends, and lessons learned from 2024.
- Identify priority policy actions needed to address bottlenecks and accelerate deployment, drawing on IRENA's recommendations in areas such as flexibility needs, supply chains, regulation, infrastructure, workforce skills, and international finance and collaboration.
- Facilitate discussion with Member States on how IRENA can further support implementation, enhance tracking of progress, and link outcomes to updated NDCs in line with the UAE Consensus.

**Guiding questions**

- What immediate actions should countries take to overcome system bottlenecks – such as flexibility needs, grid readiness, permitting delays, and skills gaps – to accelerate renewable deployment and efficiency improvements?
- What regional actions are most urgent to unlock renewable potential in Africa, ASEAN, Latin America, and the Middle East, and how can international cooperation bridge gaps?
- How are countries enhancing their renewable energy and energy efficiency targets within their energy plans and NDCs, while translating these into concrete and investable pathways for implementation?
- What policy approaches ensure that ambitious energy goals also advance social equity and inclusiveness goals, including energy access and protection of low-income and vulnerable groups?

- How can international cooperation and financing mechanisms further mobilise resources, particularly for Africa, least-developed countries (LDCs), and small island developing states (SIDS)?
- In areas such as supply chain security, financing, grid upgrades, permitting, and skills development, how can IRENA provide more targeted support to Member States?

**Associated Publications**

- Delivering on the UAE Consensus: tracking progress toward tripling renewable power capacity and doubling energy efficiency by 2030 (2025) - *forthcoming*
- Renewable capacity statistics 2025 (2025)
- Renewable power generation costs in 2024 (2025)
- Global landscape of renewable energy finance 2025 (2025) - *forthcoming*