

Delivering on the UAE Consensus

TRACKING PROGRESS TOWARD
TRIPLING RENEWABLE ENERGY CAPACITY AND
DOUBLING ENERGY EFFICIENCY BY 2030





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THE UAE CONSENSUS

COP28 delivered the historic UAE Consensus, an ambitious negotiated response to the First Global Stocktake charting progress against the Paris Agreement. It includes unprecedented language around transitioning away from fossil fuels in a just, orderly and equitable manner. The negotiated text – agreed by 198 Parties in Dubai – also includes a number of global goals, such as calls for tripling renewable energy, halting deforestation and doubling energy efficiency by 2030.

In early 2024, IRENA was designated the Custodian Agency for tracking and reporting on two of these goals; this report is the second edition of a resultant annual series of reports charting global progress toward them:

” II. A. 28. *Further recognizes* the need for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5 °C pathways and *calls on* Parties to contribute to the following global efforts, in a nationally determined manner, taking into account the Paris Agreement and their different national circumstances, pathways and approaches:

(a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030;



UNFCCC, Outcome of the First Global Stocktake, 2023.



Simon Stiell
Executive Secretary

United Nations
Framework
Convention on
Climate Change

” IRENA’s new data show the 2030 target of tripling renewables and doubling energy efficiency, agreed at the COP28 UN Climate Conference, remains within reach. But it’s now time to pick up the pace. COP30 in the Amazon is the moment for nations to reinforce global climate co-operation, and to accelerate climate action, because it’s in every nations’ interest – to protect every economy from worsening climate disasters, and to spread the massive benefits of renewables, efficiency and climate resilience to billions more people: more jobs, stronger economies, better health, more secure and affordable energy for all.



United Nations
Climate Change



The **International Renewable Energy Agency** (IRENA) is an intergovernmental organisation that supports countries in their transition to a sustainable energy future. The Agency serves as the principal platform for international co-operation, and a repository of policy, technology, resource and financial knowledge on renewable energy. IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy, in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity. www.irena.org



Hosted by Brazil in 2025, **COP30** is the 30th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). The conference will bring together governments, businesses, civil society and international organisations to address the urgent challenges of climate change, build on past commitments and drive ambitious action towards a resilient future. The COP30 Presidency has three strategic objectives: to strengthen multilateralism and the credibility of the UNFCCC; to connect the climate agenda with people's daily realities; and to accelerate the implementation of the Paris Agreement.



The **Global Renewables Alliance** (GRA) was established by the Global Wind Energy Council, Global Solar Council, International Hydropower Association, Green Hydrogen Organisation, Long-Duration Energy Storage Council and the International Geothermal Association to unify these global bodies. Collectively we strengthen the private sector's voice on accelerating the energy transition, working to triple global renewable energy capacity by 2030 to at least 11 000 GW. www.globalrenewablesalliance.org



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KEY FINDINGS

3X TRIPLING BY 2030 REQUIRES: **+1 122 GW/yr** 2025-2030 **+16.6%** annual growth

2024

+581.9 GW
+15.1% growth 2024
(0.7 percentage points more than in 2023)

Solar PV	Wind energy	Hydropower	Bioenergy	Geothermal, CSP and Marine
+452.1 GW added in 2024 (27% higher than in 2023); averaged 139 MW per project	+114.3 GW added in 2024 (105.7 GW onshore)	+9.3 GW (excluding pumped hydro) to reach 1 277 GW	+5.1 GW added in 2024 to reach 151 GW	+1 GW combined added in 2024 to reach 23 GW

INVESTMENTS IN 2024

624 USD billion Renewable power

348 USD billion Energy efficiency

Investment in Solar PV manufacturing in 2024: **-72%**

102 USD billion investment in solar, battery, wind and electrolyser manufacturing in 2024

Investment in battery manufacturing almost doubled in 2024

2x

91% of new renewable energy capacity in 2024 provides cheaper power than new fossil fuel capacity

STORAGE IN 2024

Battery storage: **+74 GW** (around 180 GWh) of battery storage in 2024

39 GW	12 GW	11.5	11.5
China	United States	EU+UK	Rest of world

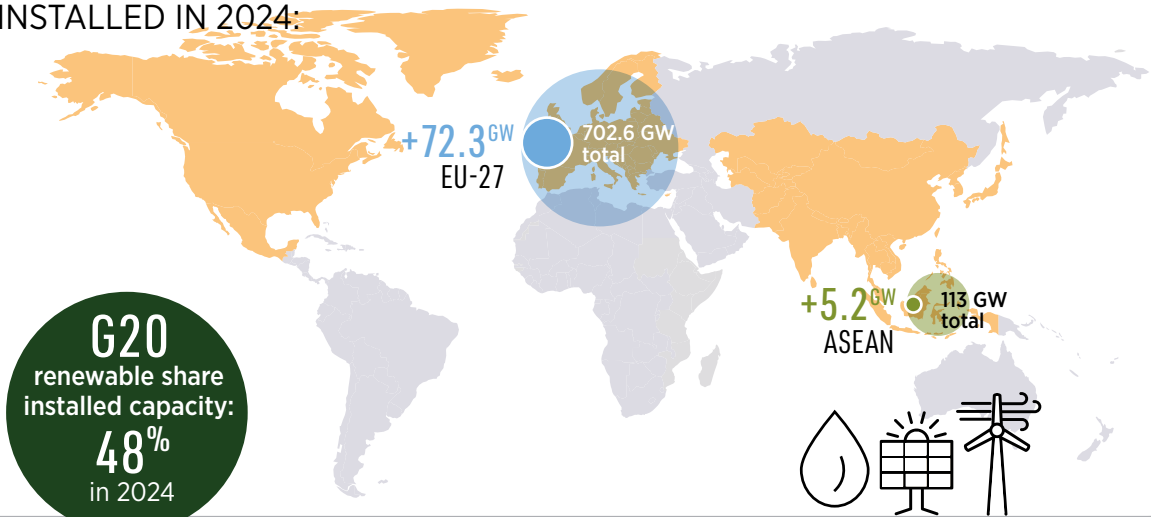
Pumped hydro storage capacity: **+8.3 GW** added in 2024 - total installed 150 GW

Notes: ASEAN = Association of Southeast Asian Nations; CSP = concentrated solar power; EU = European Union; EVs = electric vehicles; G20 = Group of twenty; GW = gigawatts; GWh = gigawatt hour; MW = megawatt; NDCs = nationally determined contributions; PV = photovoltaic; RE = renewable energy; yr = year.

INSTALLED RENEWABLE POWER IS GEOGRAPHICALLY UNEVEN:



INSTALLED IN 2024:



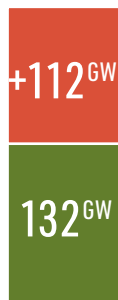
G20 renewable share installed capacity: **48%** in 2024

NDC 3.0 FACTS



60 updated NDCs increase their RE commitments to

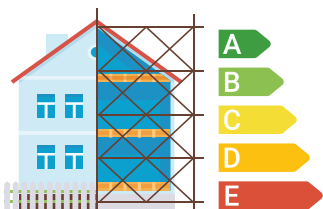
244 GW by 2035



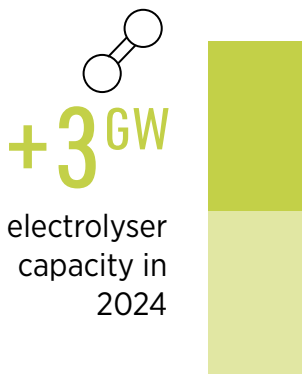
Least developed countries' NDCs 2030 renewables target:



88% of NDC 3.0s mention energy efficiency



Global building renovation rate: **1%** (of building stock in 2024)



14.4 million residential heat pumps sold in 2024 (+6%)

1% energy intensity improvement in 2023-2024

URGENT ACTIONS FOR POLICY MAKERS



KEY RECOMMENDATIONS



SUPPLY CHAINS

- Ensure socially responsible procurement of renewables by encouraging uptake of sustainable supply chain assurance schemes.
- Incentivise public-private partnerships and investment in circularity.
- Ensure fair and transparent trade practices for critical renewable energy technologies and pursue international co-operation to safeguard trade corridors for key materials and components.
- Integrate trade measures within local industrial development strategies, underpinned by assessments of the sectors and technologies in which developing countries can specialise.
- Implement fiscal incentives (e.g. tax credits, subsidies, grants, loan guarantees for manufacturing); public funding for research and development; affordable access to electricity and land; and investments in infrastructure upgrades.

KEY RECOMMENDATIONS



POLICY, REGULATION AND NDCS

- Include specific, measurable renewable energy capacity targets within NDCs and integrated energy plans that align with the UAE Consensus energy goals, and issue NDC investment strategies that promote quantified, bankable mitigation projects supported by robust investment mechanisms.
- Develop robust and transparent methodologies and standards for authorities issuing carbon and renewable energy certificates.
- Establish tariff-based support mechanisms to provide revenue certainty (e.g. CfDs, PPAs, etc.) and reduce perceived risks of renewable energy projects.
- Tailor auctions to local contexts and objectives, and balance these between low prices, project realisation and broader development and macroeconomic objectives.
- Address social equity concerns associated with projects – including distribution of system costs – to avoid disproportionately impacting low-income or vulnerable consumers; and undertake early community engagement and meaningful consultation.
- Streamline renewable energy and grid deployment, identifying zones that avoid nature-sensitive and culturally significant areas; incentivise deployment of renewable energy projects on degraded and desert land to reduce impacts; and expedite processes for developers repowering assets on existing sites.



WORKFORCE SKILLS AND DIVERSITY

- Adopt long-term, multi-level workforce strategies in close co-ordination with industry, government, labour representatives, and educational and training institutions; these should empower women and marginalised groups.
- Invest in dedicated transition training funds to expand vocational and university programmes, apprenticeships and reskilling opportunities, especially in technical trades.
- Integrate renewable energy into national curricula – from primary to tertiary – and promote lifelong learning opportunities to adapt to evolving technologies and the increase of digitalisation and AI in energy systems.
- Close the gender gap in leadership and technical roles by issuing measurable targets for women's representation in STEM, and expanding access to mentorship and networking.
- Address cultural and organisational barriers by introducing policies that guarantee the inclusion of women and minorities, and protect workplace cultures without reinforcing structural inequities.

KEY RECOMMENDATIONS

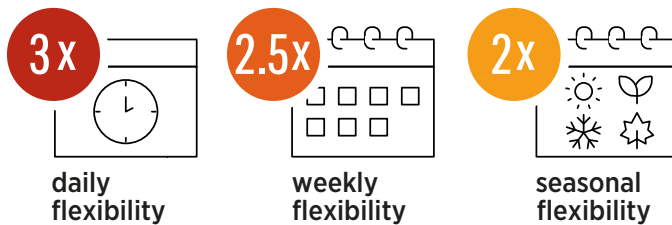


INFRASTRUCTURE AND SYSTEM OPERATION

- Simplify and fast-track permitting, digitalise grids and prioritise storage; governments and stakeholders can achieve rapid scale-up by focusing on near-term measures in the next five years.
- Accelerate the permitting and deployment of critical energy infrastructure, including power grids, bioenergy conversion plants, hydrogen networks, and fuel terminals in ports and airports.
- Develop the power system infrastructure necessary to guarantee access, reliability and cost efficiency.
- Systemic planning for grid and flexibility infrastructure should balance investment and operational costs and enhance energy security.
- Near-term grid enhancement and flexibility solutions, including demand management and sector coupling, are needed immediately, ahead of more comprehensive infrastructure expansion.

QUICKFACT

POWER SYSTEM FLEXIBILITY NEEDS BY 2030 COMPARED TO 2019:

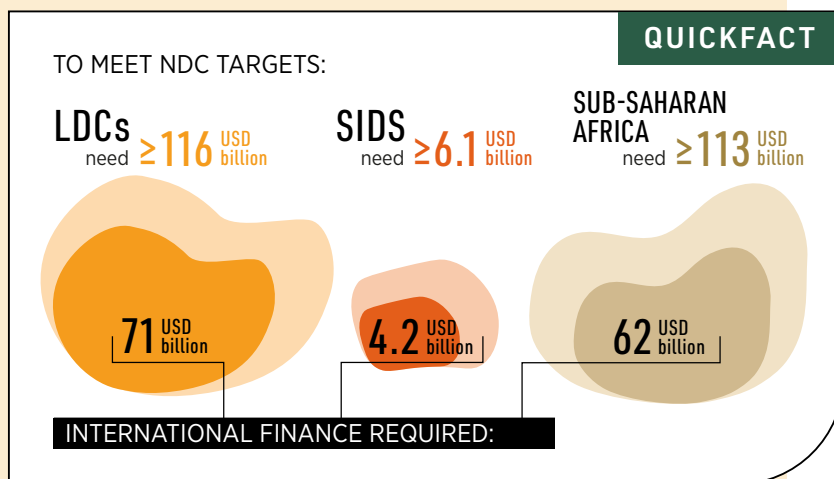


KEY RECOMMENDATIONS



INTERNATIONAL COLLABORATION: ENERGY TRANSITION FINANCE

- Deliver the USD 300 billion annual commitment in the New Collective Quantified Goal (NCQG) and progressively scale up towards the aspirational USD 1.3 trillion target.
- Direct a greater share of financial flows to least-developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS), ensuring more inclusive, regionally-balanced progress.
- Increase the use of grants, concessional loans, equity and enhanced risk-mitigation tools to better match countries' needs, moving beyond debt-heavy approaches.
- Unlock capital for high-impact, development-oriented projects with socio-economic co-benefits such as enhanced energy access, local job creation, affordability and strengthened domestic industrial capacity, even where such projects fall outside traditional bankability criteria.



- Strengthen project pipelines and de-risking mechanisms, expand project preparation support, improve investment planning processes, and deploy fit-for-purpose de-risking tools to attract private capital at scale and speed, particularly in markets currently lacking affordable financing.
- Embed energy transition priorities into global financial frameworks, strengthen donor co-ordination, and channel more public capital to absorb risk in underserved markets, building on the outcomes of the 4th International Conference on Financing for Development (FfD4), such as new debt relief mechanisms, blended finance platforms, and risk-mitigation tools under the Sevilla Platform for Action.



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**EXECUTIVE
SUMMARY**

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