IRENA
International Renewable Energy Agency

Renewable capacity highlights

31 March 2026

2025 headline figures

5149 GW
Renewable power capacity

+692 GW
in 2025

49.4%
Renewables share of total capacity

↑ **15.5%**
Year on year growth of renewable power capacity

35.3%
Variable renewable share of total capacity

↑ **22.2%**
Year on year growth of variable renewable power capacity

11.17 TW
1.5°C Scenario in 2030

5.15 TW
End of 2025, cumulative

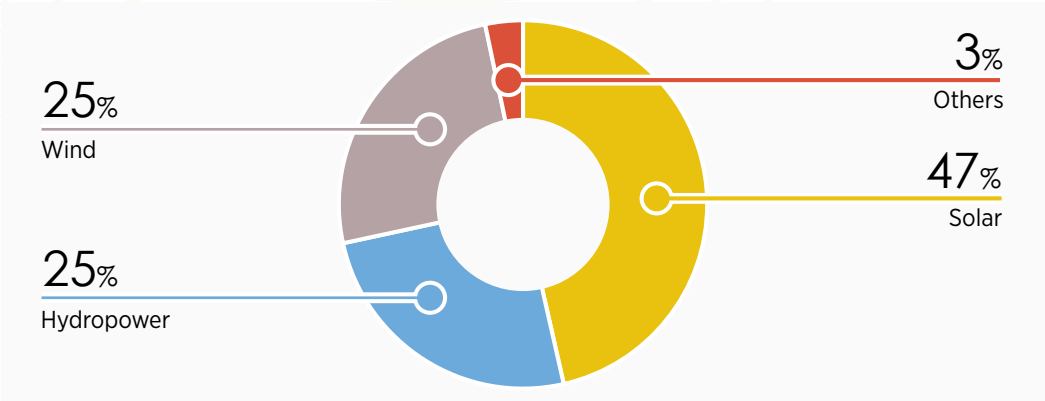
6.02 TW
Gap

Solar	Hydro	Wind	Bioenergy	Geothermal	Marine
2392 GW	1296 GW	1291 GW	154 GW	16 GW	0.5 GW

RENEWABLE POWER CAPACITY BY ENERGY SOURCE

At the end of 2025, global renewable power capacity amounted to 5 149 GW.[1] Solar, in line with the previous year, accounted for the largest share of the global total, with a capacity of 2 392 GW.

Renewable hydropower[2] and wind energy accounted for most of the remainder, with total capacities of 1 296 GW and 1 291 GW, respectively. Other renewable capacities were: 154 GW of bioenergy; 16 GW of geothermal; and 0.5 GW of marine energy.



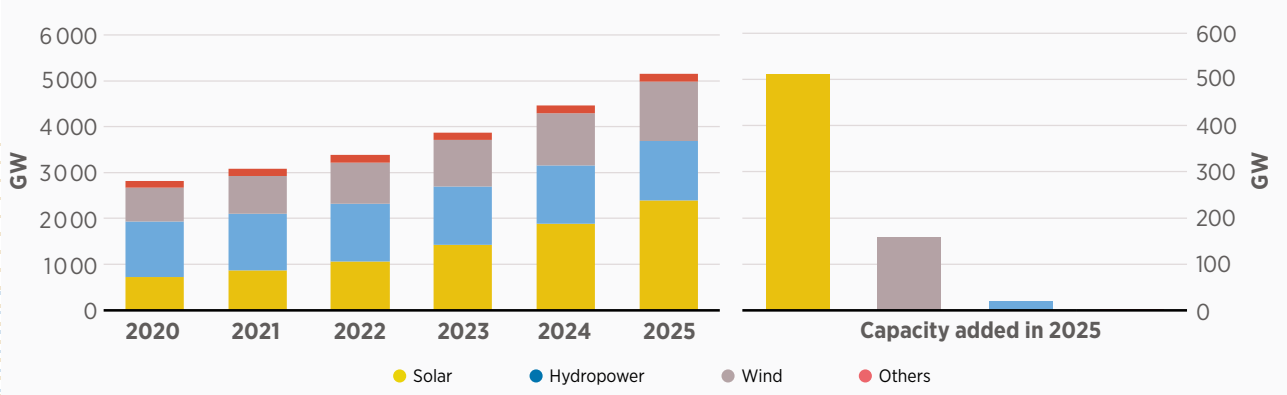
[1] *Data collection for stationary electric batteries is still at an early stage, so this is excluded from the 5 149 GW global renewable power capacity.*

[2] *These figures exclude pure pumped storage hydropower. At the end of 2025, total pure pumped storage hydropower amounted to 160 GW, bringing total hydropower capacity to 1 456 GW.*

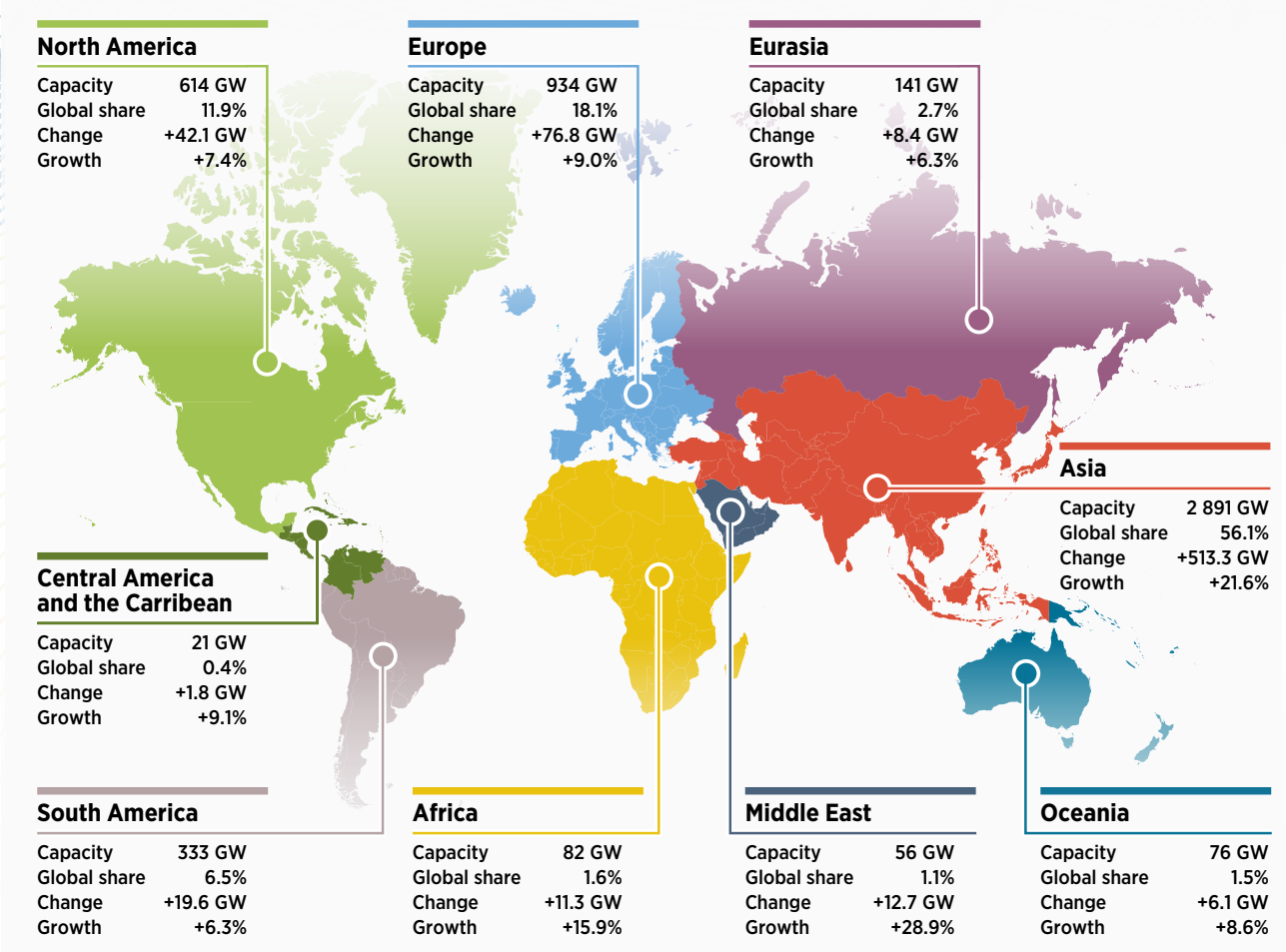
RENEWABLE POWER CAPACITY GROWTH

Renewable power capacity increased by 692 GW (+15.5%) in 2025. Approximately three-quarters of the capacity expansion was in the form of solar energy, which increased by 511 GW (+27.2%); this was followed by wind energy, with additions of 159 GW (+14.0%). Renewable hydropower capacity increased by 18.4 GW (+1.4%); bioenergy by 3.4 GW (+2.3%); and geothermal energy by 0.3 GW (+1.7%).

Solar and wind energy continued to dominate renewable capacity expansion in 2025, jointly accounting for 96.8% of all net renewable additions. 2025 marks the highest annual increase in renewable generation capacity to date and the highest growth on record in percentage terms.



RENEWABLE POWER CAPACITY BY REGION



Note: For the complete dataset, see: *Renewable capacity statistics 2026*, available at: *www.irena.org/Data/Statistical-publications/Yearbooks*
Disclaimer: This map is provided for illustration purposes only. Boundaries and names shown on this map do not imply any endorsement or acceptance by IRENA.

Even though 2025 marks the largest increase in renewable energy capacity and growth, significant disparities exist amongst countries and regions. Asia accounted for the majority of new capacity in 2025 (74.2%), increasing its renewable capacity by 513.3 GW to reach 2 891 GW (56.1% of the global total). The majority of this increase occurred in China (+440.1 GW). Europe's capacity expanded by 76.8 GW (+9.0%) in 2025, with Germany contributing significantly to this growth, adding more than 20.5 GW. Ukraine experienced a notable capacity decline of more than 7.5 GW in 2024, and no change was recorded in 2025.

Meanwhile, capacity in North America expanded by 42.1 GW (+7.4%), driven by installations in the United States. Africa experienced its largest growth on record, with 11.3 GW of additions (+15.9%), driven primarily by Ethiopia, South Africa and Egypt. Oceania's installed capacity increased by 6.1 GW (+8.6%), largely due to additions in Australia; and Central America and the Caribbean expanded capacity by 9.1% (+1.8 GW), the largest growth since 2016. The Middle East recorded its largest growth rate, at 28.9% (+12.7 GW) in 2025, with Saudi Arabia accounting for the majority of this expansion.

RENEWABLE POWER CAPACITY FOR SIDS, G7 AND G20 COUNTRIES

SIDS	
Capacity	11 GW
Global share	0.2%
Change	+1.8 GW
Growth	+19.6%

G7	
Capacity	1 140 GW
Global share	22.1%
Change	+83.3 GW
Growth	+7.9%

G20	
Capacity	4 210 GW
Global share	81.8%
Change	+612.5 GW
Growth	+17.0%

By the end of 2025, the Group of Seven (G7) countries (excluding the European Union[3]) accounted for 22.1% of the global capacity share, totalling 1140 GW. The Group of Twenty (G20) countries (excluding the European Union and African Union[4]) accounted for 81.8% of the global share, with a total capacity of 4 210 GW. The G7 and G20 countries accounted for 12.0% and 88.5% of new capacity, respectively, in 2025.

Small island developing states (SIDS)[5] accounted for a modest 0.2% of the global cumulative capacity share with a total capacity of 11 GW. In 2025, SIDS accounted for 0.3% of global capacity additions (+1.8 GW), up from 0.9 GW added in 2024. Over three-quarters of this growth came from two countries: the Dominican Republic (+0.7 GW) and Singapore (+0.3 GW).

[3] *Only individual G7 Members from the European Union are included (France, Germany, Italy).*

[4] *Only individual G20 Members from the European Union and African Union are included (France, Germany, Italy; South Africa).*

[5] *The SIDS grouping is based on the United Nations Standard Country or Area Codes for Statistical Use, commonly referred to as the M49 standard, prepared by the Statistics Division of the United Nations Secretariat https://unstats.un.org/unsd/methodology/m49/.*

HIGHLIGHTS BY TECHNOLOGY

Solar energy

Solar photovoltaic power accounted for almost all the increase in solar power, with 510.3 GW of total capacity added in 2025.

Asia has more than doubled its installed solar power capacity since 2022, adding 317.1 GW in 2024 and 371.2 GW in 2025. However, the largest capacity increases occurred in China (+315.1 GW) and India (+37.0 GW), followed by South Korea (+3.7 GW).

Outside Asia, the United States added 34.0 GW of solar capacity in 2025 – a 19.2% increase over the additions in 2024 – followed by Germany (+15.1 GW) and Brazil (+11.6 GW).

Hydropower

Renewable hydropower capacity grew by 18.4 GW in 2025; this was two-and-a-half times the increase seen in 2024. However, 96.0% of the increase comes from China. Other countries where capacity increased by more than 0.5 GW were: Ethiopia, India, United Republic of Tanzania, Bhutan, Viet Nam, Canada, Austria, Indonesia and Nepal.

Wind energy

Wind energy additions reached a record high of +158.7 GW in 2025 – 14.0% more than in the previous year. China led the expansion, contributing nearly three quarters of the total capacity added (+119.4 GW), while India saw an increase of 6.3 GW. Other countries with significant capacity growth included the United States, Germany, Brazil, Türkiye and France.

Offshore wind accounted for about 1.8% of total renewable power capacity and 7.1% of total wind capacity.

Bioenergy

Bioenergy capacity grew by 3.4 GW in 2025. This growth was led by Japan, which expanded its bioenergy capacity by 1.1 GW – more than double the 2024 additions (+0.5 GW). China followed with a bioenergy expansion of 0.8 GW. Other countries with major increases were Brazil (+0.6 GW), Chile (+0.2 GW) and Belgium (+0.1 GW).

Geothermal energy

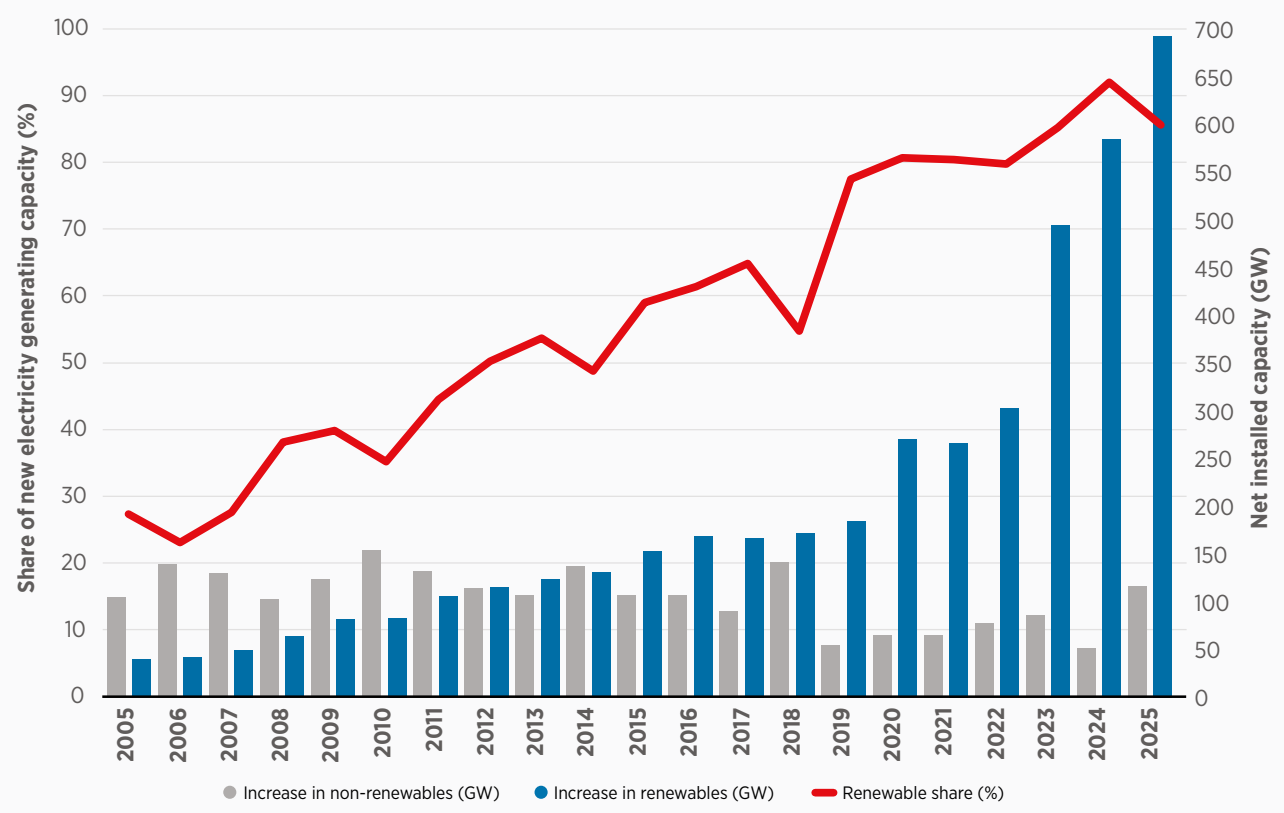
Geothermal capacity grew at a similar rate to the previous year, adding 0.3 GW in 2025. The Philippines and Indonesia each contributed 0.1 GW of capacity additions, followed by Germany, Türkiye and Japan.

Off-grid electricity

Off-grid capacity[6] expanded by 1.7 GW to reach 17.8 GW in 2025. Solar power dominated this growth, accounting for 88.2% of the expansion with an increase of 1.5 GW, bringing its total off-grid capacity to 10.3 GW. The remaining increase in capacity came from a broad range of bioenergy types (+0.2 GW), while off-grid hydro capacity remained relatively similar to 2024 levels.

[6] *These figures exclude Eurasia, Europe and North America.*

RENEWABLE SHARE OF ANNUAL POWER CAPACITY EXPANSION



In 2025, renewable power capacity expansion increased compared to 2024, and remained well above the long-term trend. As in previous years, most of this expansion occurred in China and – to a lesser extent – the United States. However, most other countries also expanded their renewable capacity in 2025 compared to 2024.

The share of renewables in total capacity expansion in 2025 was 85.6%, down from 92.0% in 2024. However, the renewable share of total installed power capacity rose by more than three percentage points from 46.3% in 2024 to 49.4% in 2025.

Despite a decrease in the share of renewables in total capacity expansion, the overall positive trend in installed capacity confirms that renewable deployment continues to outpace non-renewable growth. However, at the global level, 2025 also saw a sharp rebound in non-renewable additions, which nearly doubled compared to 2024. This increase was driven primarily by China, which added over 100 GW of non-renewable capacity, approximately 81% of which was coal. Against this backdrop, significant acceleration will be required to meet the goal adopted at COP28 to triple installed renewable power capacity to more than 11 TW by 2030.

LATEST FIGURES COMPARED TO PREVIOUS ESTIMATES

Compared to the capacity statistics published in July 2025, the 2024 figures here have been revised slightly upwards. Total renewable capacity in 2024 was previously reported as 4 443 GW but has now been revised to 4 457 GW (+0.3%).

As noted in previous years, most revisions can be attributed to imprecise early reporting of capacity and, in some cases, by the unavailability of data to year-end, so it may be expected that data for 2025 and previous years could be revised again in July 2026. Furthermore, the *IRENA Energy taxonomy* is currently being implemented in the statistics knowledge products, leading to the reclassification of technologies and the introduction of new ones.