NWEC
NIGERIA WIND ENERGY COUNCIL

Insights from the GWEC 2025 Report

A World at 8.8% CAGR: The Global Wind Market Outlook 2025–2030

Volume 3

September 2025

Executive Summary

This Month's Insight offers a 360-degree view of how the wind sector will evolve between 2025 and 2030 by translating the market outlook into clear, actionable insights. Beyond headline capacity numbers, it unpacks the regional drivers, the shift between onshore and offshore growth, and the structural changes reshaping the industry. Global wind power is entering a new growth phase. The speed and scale of this transition will depend on how effectively countries expand grids, streamline permitting, mobilise finance, and build public confidence.

First, let's examine the global macro picture of wind energy developments between 2025 and 2030.

1. The Global Macro Picture

The GWEC Report reaffirms wind energy's centrality to the global energy transition. Despite rising interest rates, supply chain inflation, and geopolitical disruptions, GWEC projects that global wind installations will accelerate from a record 117 GW added in 2024 to 138 GW in 2025 and an average of 164 GW annually from 2025 to 2030. This value annually represents a compound annual growth rate (CAGR) of 8.8%, signalling the sector's resilience[1].

GWEC attributes this projected growth to these five enabling pillars[2]:

» China's clean-energy-driven economic growth under its '30-60' pledge. A target for non-fossil energy sources to account for over 80% of total energy consumption by 2060.

» Europe's accelerated energy security drive under the Clean Industrial Deal.

» The US manufacturing and AI boom requires clean power despite policy uncertainty.

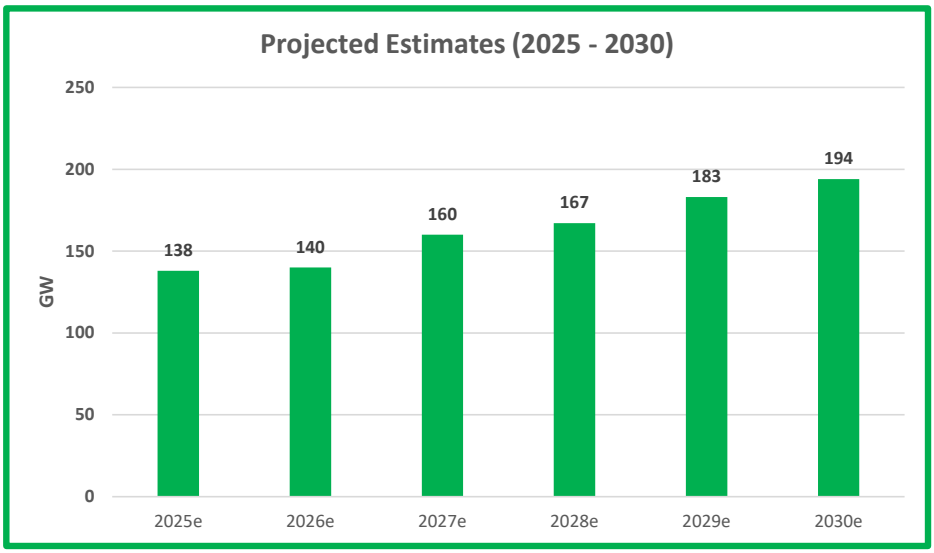
» Government's commitment to offshore wind, including floating wind technology and power-to-X solutions.

» The rise of emerging markets in Southeast Asia, Central Asia, the Middle East & Africa.

Let's look at the onshore wind forecast from 2025 to 2030.

2. Onshore Wind Outlook 2025–2030

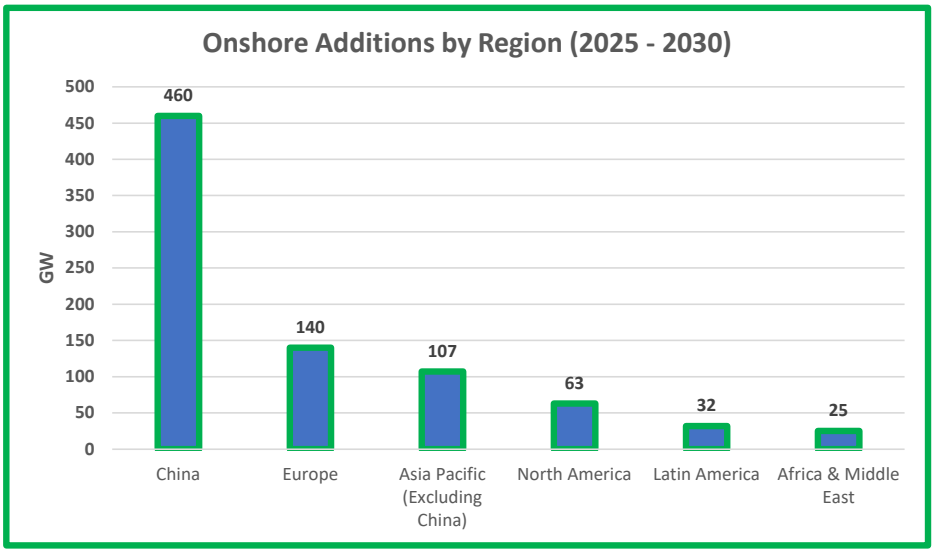
Onshore wind remains the backbone of global capacity growth. GWEC forecasts a CAGR of 6.6% between 2025 and 2030, with average annual onshore installations of 138 GW, totalling 827 GW[3].



1 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 87). Lisbon: GWEC

2 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 87-88). Lisbon: GWEC

3 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 88). Lisbon: GWEC

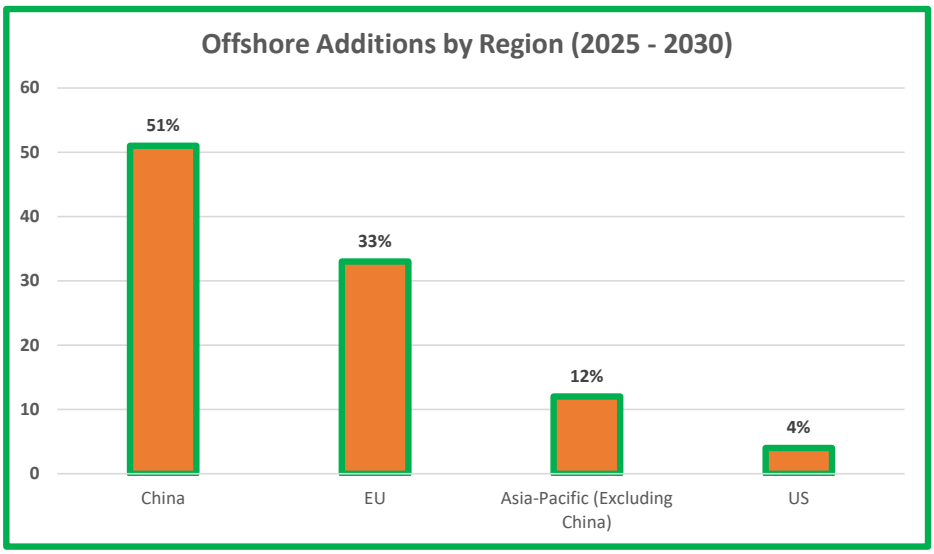


China and Europe together will account for 73% of these additions, but diversification will accelerate after 2026. By 2030, roughly half of annual onshore growth will come from outside China[4]. GWEC explains that this diversification is a response to policy support and market dynamics in emerging markets, including India's large auction programme, Australia's renewable targets, and new pipelines in Southeast and Central Asia.

Next, we take a look at offshore wind.

3. Offshore Wind Outlook 2025–2030

Offshore wind is set for a step change. GWEC projects a 27% CAGR between 2025 and 2030, with average annual additions of 26 GW, totalling 156 GW by 2030[5]. Offshore wind's share of new global installations will rise from 7% to 18% by 2030[6]. Despite inflation and supply-chain issues, offshore wind is becoming a mainstream pillar of global wind growth.



Between 2025 and 2030, China will lead with 51% of offshore additions, followed by the EU at 33%, Asia-Pacific excluding China at 12% and the US at 4%[7]

4 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 88-89). Lisbon: GWEC

5 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 89). Lisbon: GWEC

6 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 90). Lisbon: GWEC

Now we look at the regional dynamics of wind energy development across the different regions.

4. Regional Dynamics

GWEC's Market Outlook provides a region-by-region breakdown of expected growth between 2025 and 2030[7]. These regions are:

- China
- India
- Asia Pacific excluding China
- Europe
- North America
- Latin America
- Africa & Middle East

4.1 China:

2025 marks the final year of the 14th Five-Year Plan, with over 150 GW of wind turbine orders awarded. An estimated 460 GW of new onshore wind will be added between 2025 and 2030[8]. The industry is adapting quickly to the new market-oriented pricing scheme introduced in February 2025.

4.2 India:

41 GW of new onshore capacity between 2025 and 2030. Drivers include 10 GW annual auctions from 2023–2027, 27.3 GW of projects already awarded by end-2024, renewable purchase obligations through 2030 and a 48 GW transmission integration plan (large-scale transmission integration plan)[9]. These specifics show how GWEC's forecast is grounded in actual policy and project pipelines.

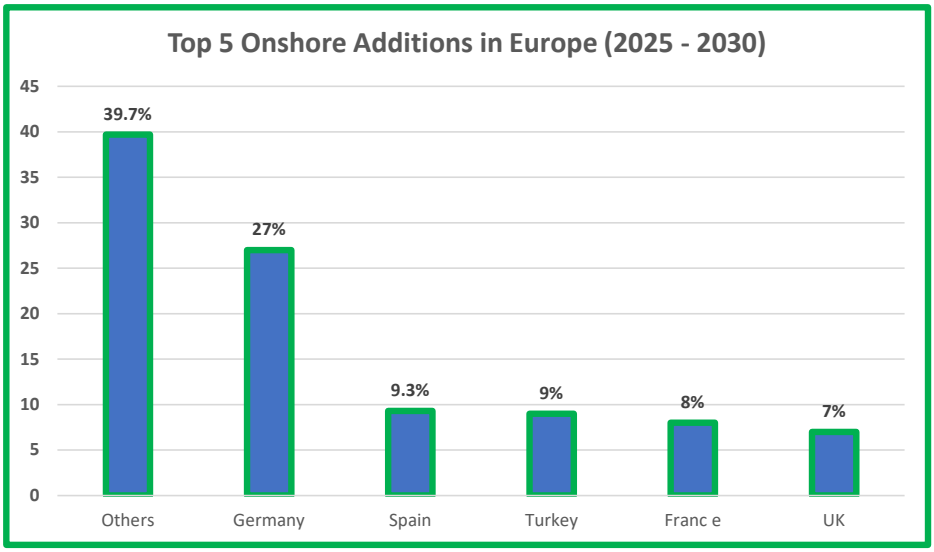
4.3 Asia-Pacific excluding China:

Rising stars include the Philippines, Kazakhstan and Uzbekistan, which together will account for 13% of new APAC capacity between 2025 and 2030. Australia will need 6 GW of utility-scale capacity annually to meet its 82% renewables target by 2030[10].

4.4 Europe:

140 GW of new onshore capacity between 2025 and 2030, with Germany, Spain, Turkey, France and the UK as the main contributors. Offshore wind momentum also remains strong.

4.4.1 Europe's Onshore Outlook



Europe is projected to add 140 GW of new onshore capacity between 2025 and 2030, 81% (113GW) within the EU. Germany leads with 27% of these additions, followed by Spain (9.3%), Turkey (9%), France (8%) and the UK (7%) .

7 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 90-95). Lisbon: GWEC

8 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 91). Lisbon: GWEC

9 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 91). Lisbon: GWEC

10 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 92). Lisbon: GWEC

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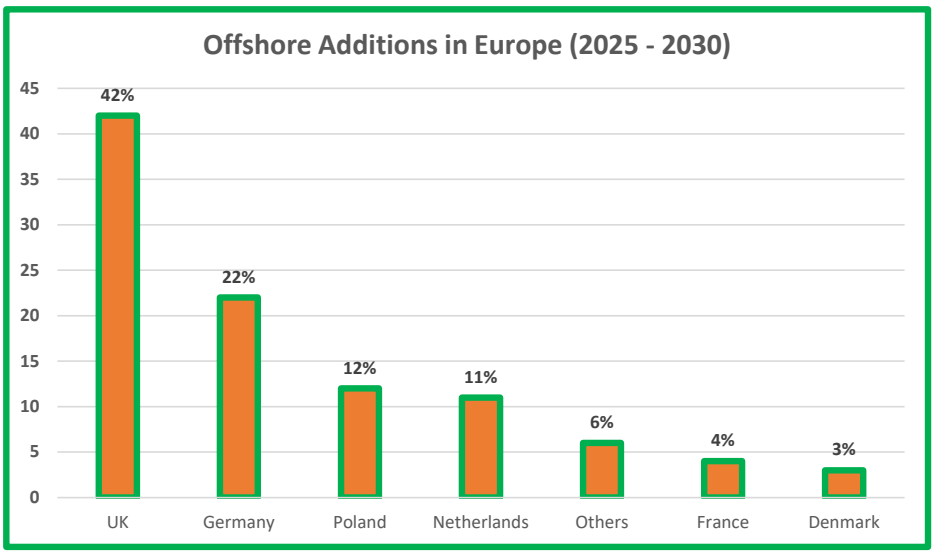
Now, also looking at Europe's offshore.

4.4.2 Europe's Offshore Outlook

In Europe alone, 51 GW of offshore capacity is expected between 2025 and 2030, with 42% in the UK, 22% in Germany, 12% in Poland, 11% in the Netherlands, 4% in France and 3% in Denmark[12].

4.5 North America: Forecast of 63 GW of new onshore capacity to be added between 2025 and 2030[13]. Offshore capacity is downgraded to under 6 GW between 2025 and 2030 due to policy reversals[14].



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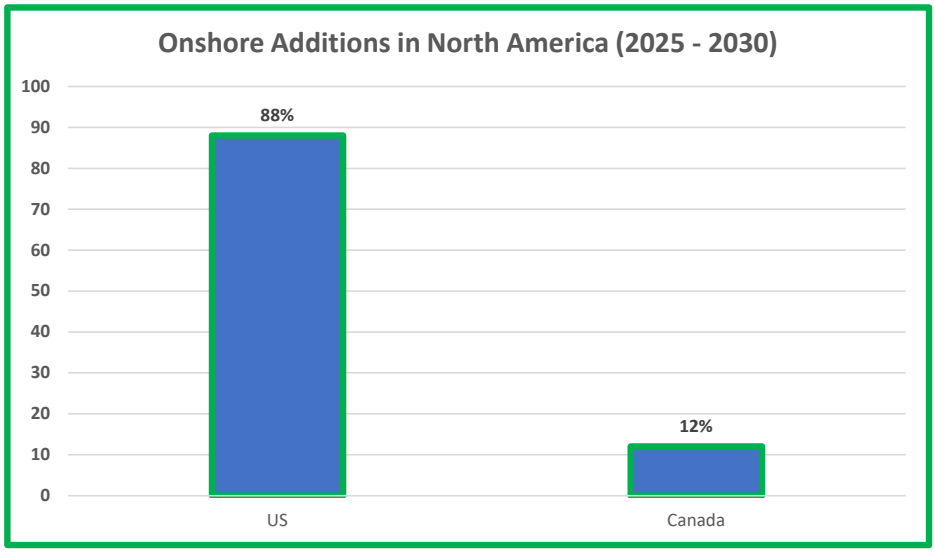


63 GW of new onshore capacity between 2025 and 2030 (88% US, 12% Canada)

11 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 92). Lisbon: GWEC

12 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 90). Lisbon: GWEC

13 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 93). Lisbon: GWEC

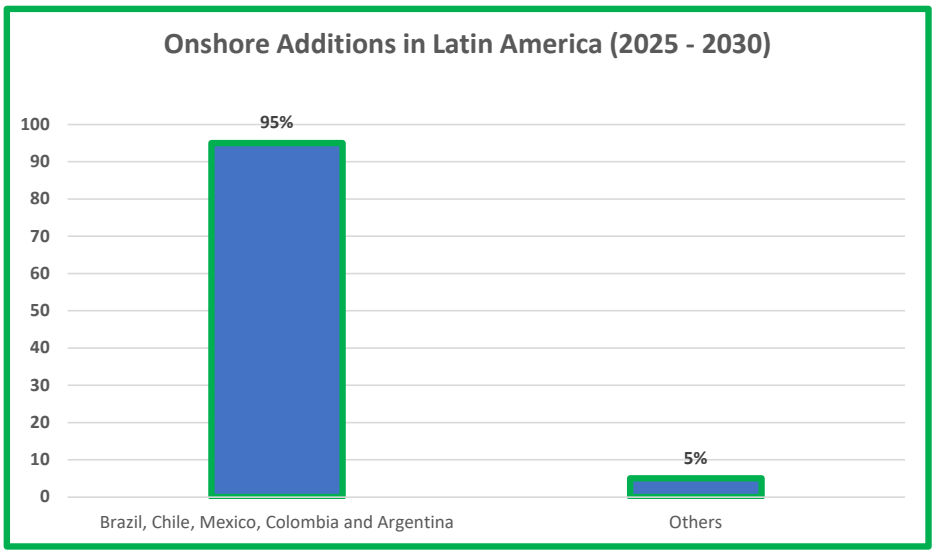
14 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 90). Lisbon: GWEC

4.6 Latin America:

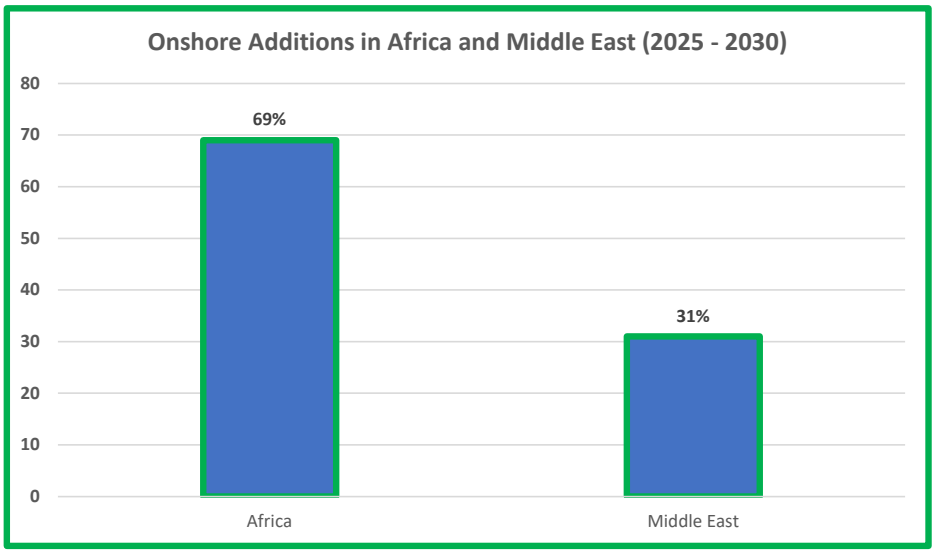
32 GW onshore between 2025 and 2030, 95% from Brazil, Chile, Mexico, Colombia and Argentina. Brazil's momentum slowed in 2024, but Chile saw a 236% year-on-year increase in renewable investment[15].

4.7 Africa & Middle East:

Africa & Middle East had a record year in 2024, with Egypt and Morocco surging. South Africa is expected to rebound from 2025, and only Saudi Arabia will likely add GW-level onshore wind capacity from 2025 to 2030[16].



32 GW onshore between 2025 and 2030, 95% from Brazil, Chile, Mexico, Colombia, Argentina and others will contribute the remaining 5%.



25 GW of new capacity is expected between 2025 and 2030 (69% Africa, 31% Middle East)

15 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 94). Lisbon: GWEC

16 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 94-95). Lisbon: GWEC

5. Key Themes from GWEC's Outlook

GWEC's forecast is not just about capacity numbers. It highlights structural shifts[17]:

- Floating wind and Power-to-X will unlock further offshore potential
- Emerging markets are the future growth frontier, delivering record installations annually from 2025
- Diversification beyond China and Europe will be visible by 2030
- Africa & the Middle East will double onshore additions by 2030 compared to 2024[18].

6. Nigeria's Call to Action

The Nigeria Wind Energy Council (NWEC), the pioneering body promoting the adoption of wind energy technology in the country, has carried out many activities and engagements, as reported in the previous volumes[19]. All these activities are geared towards bringing Nigeria to be a part of the countries in Africa, contributing to global wind installations.

The Nigeria Wind Energy Council (NWEC) recently engaged with the Federal Ministry of Power in convening industry stakeholders for a **Baseline Study Presentation Workshop for a Draft Wind Energy Development Strategy for Nigeria,** funded by the European Union. *The European Union Global Technical Assistance Facility for Sustainable Energy (EU GTAF)* conducted the study. The workshop marked a significant step in developing Nigeria's National Wind Energy Strategy and Roadmap, and thus a step in the right direction for wind energy development in Nigeria.

7. Conclusion

This volume thus turns GWEC's Market Outlook into an actionable narrative. It shows a world adding 164 GW of wind annually, underpinned by a diversification of markets, a surge in offshore (including floating) capacity, and a doubling of African and Middle East contributions. These projections allow stakeholders to align supply chains, financing, and workforce planning to achieve the 8.8% CAGR wind future.

17 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 87-99). Lisbon: GWEC

18 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 95). Lisbon: GWEC

19 n-wec.org/insights-from-the-gwec-2025-report-2

Sources

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Nigeria Wind Energy Council (NWEC) Insights from the GWEC 2025 Report – Volume 1 & 2

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