NWEC
NIGERIA WIND ENERGY COUNCIL

Insights from the GWEC 2025 Report

Policy, Regulation, Finance and Infrastructure: Building the Framework for Wind Power Acceleration

Volume 2

August 2025

Executive Summary

In the first volume, NWEC noted a record of 117 GW of new wind installations in 2024[1]. Though historic, this record still falls short of the level required to stay on a 1.5°C pathway. The report stresses that achieving an average of 164 GW of annual installations between 2025 and 2030 requires structural reforms in policy, permitting, finance, and infrastructure. These structural reforms are central pillars to building the framework for wind energy acceleration. This report begins by considering the investment gap.

1. The Investment Gap and Pathway to Net Zero

Investments are a critical factor needed for wind power acceleration. When there are no financial or investment opportunities for wind energy development, progress is often restricted to feasibility studies and isolated pilot projects rather than advancing toward a sustained pipeline of bankable, utility-scale projects. The Paris Agreement's current targets require at least a tripling of global energy transition investment (across all decarbonisation sectors) to more than $5 trillion annually between 2023 and 2050, a financing scale well beyond what government balance sheets can manage alone. Within this, investment in renewable generating assets requires around $1.4 trillion annually through 2050[2].

However, current forecasts from S&P Global Commodity Insights expect only $700 billion per year of renewable energy investment over this period. This situation implies an annual funding gap of up to $700 billion to meet net-zero aligned targets. Crucially, this shortfall is not evenly distributed. It is most acute in emerging markets, where higher financing risks and elevated capital costs limit investor appetite. This situation stalls the progress of our pathway to Net Zero.

This data underscores the urgency of interventions beyond technology, focusing instead on creating enabling market conditions globally. Key conditions are below.

1.1. Market and Revenue Certainty

A stable and predictable financial environment is a core requirement for investors to channel capital into wind power development[3]. Some of the key indicators investors consider when assessing a market for stability and revenue certainty include:

- **Contracts for Difference (CfDs) and Power Purchase Agreements (PPAs):** the report emphasises that well-designed long-term contracts provide price stability and allow developers to secure financing under less risky conditions.

- **Indexation:** Contracts must include inflation-linked adjustments to account for rapidly changing cost structures, a lesson learned from recent cost pressures on offshore projects. For Nigeria, the National Bureau of Statistics (NBS) introduced special inflation indices to Nigeria's monthly Consumer Price Index (CPI) report. The new indices include the Farm Produce Index, Energy Index, Services Index, Goods Index, and Imported Food Index[4].

- **Bankability:** With predictable revenue frameworks, projects become less vulnerable to market volatility, which reduces financing costs and supports investment in emerging markets.

2. Permitting and Governance Challenges

Permitting remains one of the most significant barriers to wind power expansion[5] due to overly bureaucratic processes or complex approvals.

- **Multi-agency and lengthy processes:** In mature markets, especially Europe, onshore and offshore wind projects face years of delay due to multi-stage, complex approvals.

- **One-stop shop solutions:** GWEC calls for streamlined permitting systems, including creating centralised single-point approval systems that can reduce bureaucracy.

- **Digitalisation:** Modernising and digitising application processes would create transparency and speed up reviews.

The report clarifies that permitting reform is critical for accelerating wind energy deployment. NWEC, in partnership with the Department of Climate Change (DCC), Federal Ministry of Environment, is hosting a technical roundtable session on Regulatory Frameworks and Policies for Advancing Wind

1 Odiniya, O. (2025). Insights from the GWEC 2025 Report – Volume 1 . In Nigeria Wind Energy Council (NWEC) (p. 1).

2 S&P, G. R., & S&P, G. C. I. (2023, September 14). Renewable Energy Funding in 2023: A "Capital Transition" Unleashed.

3 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 24). Lisbon: GWEC

4 Ojoko, I. (2025, February 19). NBS introduces special inflation indices to monthly CPI report.

5 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 23). Lisbon: GWEC

Energy Development in Nigeria, with 10-15 MDAs in attendance. NWEC is hosting this roundtable to advance relevant frameworks to frame the market.

3. Grid and Infrastructure Planning

Grid capacity is a decisive factor in the ability to scale up renewables[6]:

- GWEC indicates that over 3 TW of global renewable capacity is waiting for grid connection.

- Long-term planning: The report emphasises that grid and supporting infrastructure planning must complement renewable targets to ensure capacity growth can be absorbed. Solutions such as Green Corridors and the development of Green Energy Zones can drive targeted infrastructure expansion, improve regional connectivity, and support decentralised renewable integration. For instance, Katsina State, among the States with high wind speed, recently launched the Katsina State Green Growth Agenda **(KAGGA)** in Nigeria. **KAGGA** is a roadmap with bold pillars and measurable targets positioning Katsina as a national model for climate-smart development with an initial **₦5 billion Green Investment Fund** to accelerate climate-resilient infrastructure, effectively creating a framewor similar to a Green Energy Zone[7].

Next, we consider how financing emerging markets can help to accelerate wind energy development.

4. Financing Emerging Markets

Emerging markets play a critical role in the global wind energy transition. However, they face specific financing and risk challenges[8]. The following interventions can address these challenges.

- **Concessional Finance:** Sovereign guarantees and concessional finance can help mitigate perceived investment risks and attract capital.

- **Capacity Building:** Training and knowledge transfer initiatives, particularly for operations, maintenance, and grid integration, are highlighted as priority areas. NWEC has carried out capacity building sessions at the University of Abuja and University of Ibadan, respectively, so far in 2025, and with a Youth for Wind and Climate Innovation (YWCI) program, also conducted as reported in NWEC insights in Volume 1[9].

- **Multilateral Development Banks:** Multilateral development banks can step up their role in supporting large-scale renewable projects, especially in markets such as Africa, Latin America, and Central Asia.

---

6 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 23). Lisbon: GWEC

7 Itsibor, M. (2025, April 24). Nigeria: Katsina Unveils N5bn Green Fund, $500m Energy Deal, Climate Blueprint.

8 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 24). Lisbon: GWEC

9 Odiniya, O. (2025). Insights from the GWEC 2025 Report – Volume 1. In Nigeria Wind Energy Council (NWEC) (p. 3).

This report will also examine how building a skilled workforce bolsters the renewable energy transition.

5. Building a Skilled Workforce

The transition to renewable energy requires a new workforce with skills in engineering, logistics, digital technology, and environmental sciences[10].

- GWEC emphasises that the just transition must ensure inclusion, job creation, and safety standards.
- Collaboration between the private sector, governments, and educational institutions is essential to ensure that labour shortages are not barriers to scaling up installations.

To promote wind energy adoption and support the building of a skilled workforce in Nigeria, NWEC participated in a Multi-Stakeholder Dialogue on the Inclusive Green Jobs and Just Transition Framework for Nigeria and a **High-Level Dissemination Session on the Enhanced Solar Energy TVET Curriculum in Nigeria.**

This report has highlighted key enabling conditions to advance Nigeria's wind energy sector, leading us to the next steps.

6. Strategic Priorities

NWEC, Volume 1[11] reported some frameworks to accelerate wind energy deployment based on GWEC recommendations. These frameworks have been listed below with their current status in Nigeria:

	Frameworks	Current Status in Nigeria	Remarks
1	Establish predictable revenue frameworks (CfDs, PPAs).	PPAs exist (solar), but CfDs do not	Nigeria does not use CfDs, but PPAs exist for solar IPPs (Independent Power Producers) (e.g., signed under NBET for grid-connected solar projects). However, implementation and payment security remain weak. So: **Yes** (PPAs exist) and **No** (CfDs absent).
2	Streamline permitting and shorten approval processes.	NO (Permitting remains a barrier).	Renewable projects (solar, wind, small hydro) still face multi-agency approvals (NERC, FMEnv, state governments, etc.). While REA has tried to ease approvals for mini-grids, no streamlined process exists for utility-scale renewables.
3	Expand grid capacity and modernise infrastructure	Grid expansion efforts exist, but remain insufficient	Grid expansion efforts are ongoing with donor support (e.g., World Bank's NESI program, Siemens Presidential Power Initiative). These target renewables indirectly, but the grid remains weak and underfunded. So: **Yes** in plans, but **in progress** in execution
4	Invest in workforce development and just transition policies	Workforce programmes exist, but are not comprehensive, and do not have a just transition policy yet (Still in development)	Training exists (e.g., REA, NBET, universities, TVET Curriculum, donor programs like GIZ), but no national just transition policy yet. Workforce development is solar-heavy, while wind expertise is nearly absent. So: Yes, in training, in progress for a structured just transition.
5	Provide targeted support to emerging markets through de-risking finance and t echnology transfer	De-risking finance is donor-driven, not government-led	Donors (World Bank, AfDB, SE4All) provide concessional financing for renewables (mainly solar mini-grids and hydro). However, no robust domestic de-risking framework exists. So: **Yes** via donors, **No** domestically

10 GWEC. (2025). GWEC Global Wind Report 2025 (pp. 40). Lisbon: GWEC

11 Odiniya, O. (2025). Insights from the GWEC 2025 Report – Volume 1 . In Nigeria Wind Energy Council (NWEC) (p. 3).

7. Nigeria's Call to Action

The Nigerian Wind Energy Council (NWEC), the pioneering body promoting the adoption of wind energy in the country, has carried out many activities and engagements towards achieving the above subject matter since its establishment. The activities carried out by the Council are:

- Signing the MOU with the Rural Electrification Agency of Nigeria (REA) on August 22, 2025.
- **Technical Roundtable on Regulatory Frameworks and Policies for Advancing Wind Energy Development in Nigeria**, organised by the Federal Ministry of Environment, Department of Climate Change, in partnership with NWEC, with over 12 MDAs in attendance on August 28, 2025.
- NWEC participated in **a High-Level Dissemination Session on the Enhanced Solar Energy TVET Curriculum in Nigeria** on August 18, 2025. The Council's representative at the event encouraged the addition of wind energy to the curriculum.
- Recent participation in the **Multi-Stakeholder Dialogue on the Inclusive Green Jobs and Just Transition Framework for Nigeria**, which was held on July 24, 2025, hosted by the Nigerian House of Representatives Committee on Renewable Energy, the Advocacy for Policy and Innovation (API), and INCLUDE Knowledge Platform.
- **Research & Development:** Desktop analysis of Nigeria's wind energy profile.
- **Partnerships and Collaborations:** Partnering with government and non-governmental bodies like the Department of Climate Change at the Federal Ministry of Environment, Rural Electrification Agency of Nigeria (REA), Federal Ministry of Power, Renewable Energy Association of Nigeria (REAN), Global Wind Energy Council (GWEC), etc.
- **Capacity Building:** In March 2025, capacity-building sessions were held at the University of Abuja and the University of Ibadan.
- **Lobbying and Advocacy:** In May 2025, there was a National Discourse on Youth for Wind and Climate Innovation (YWCI), which was followed by the YWCI 30-Day Sprint Challenge in July 2025.

In subsequent months, NWEC has planned more technical activities and engagement to promote the adoption of wind energy technology in Nigeria.

8. Conclusion

Overcoming investment gaps, permitting delays, and infrastructure constraints will require a unified policy and financial strategy. Achieving ambitious clean energy targets globally will be challenging without these coordinated efforts, delaying the transition to a sustainable energy future.

Sources

Global Wind Energy Council (GWEC) Global Wind Report 2025

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

Author

Ojodomo Odiniya
Research & Operations Analyst

Editor

Omiesam Ibanibo
Lead – Partnership & Market Intelligence

Nigeria Wind Energy Council (NWEC) No. 5, Kikuyi close, Off Nairobi Street, Wuse 2, Abuja

info@n-wec.org

n-wec.org

nwec_official
NWEC_nigeria
Nigeria Wind Energy Council - NWEC
Nigeria Wind Energy Council (NWEC)