



Market Update

Nigeria Achieves Major Milestone As It Joins The Unified West African Power Grid

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2nd December
2025



Introduction

Nigeria has achieved a historic breakthrough in regional energy integration, following the successful synchronisation of its national electricity grid with the West African Power Pool (WAPP) on **8 November 2025, between 05:04 a.m. and 09:04 a.m.** The test, coordinated by the Nigerian Independent System Operator (NISO) and the WAPP Information and Coordination Centre (WAPP-ICC) in the Benin Republic, connected Nigeria (Area 1), Niger, Benin, and Togo to the broader West African grid (Areas 2 and 3) in a single unified frequency for the first sustained period in Nigeria's history.

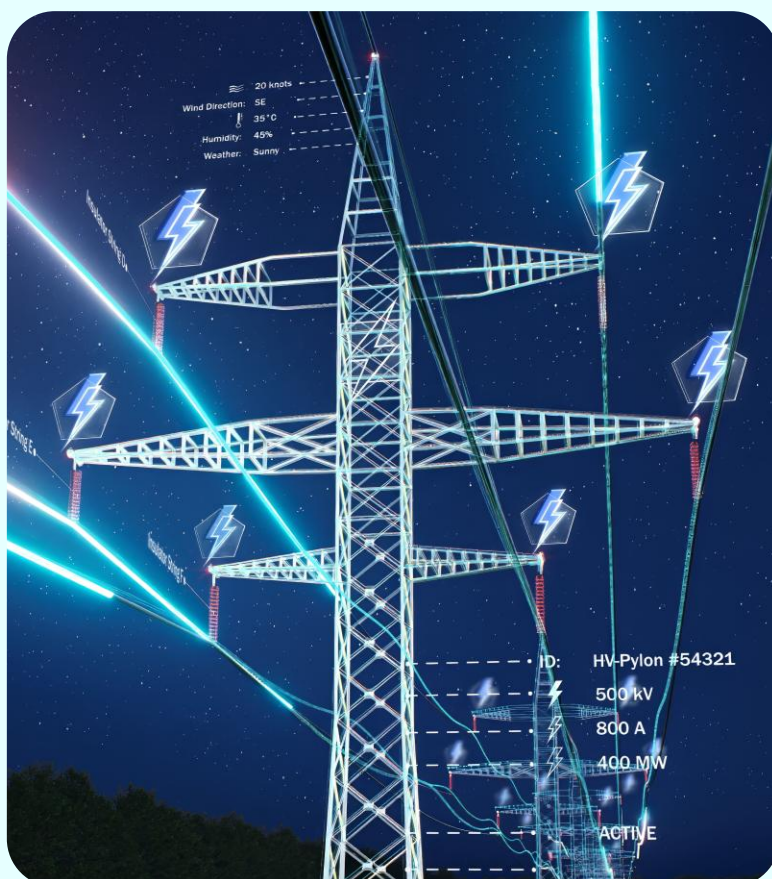
This achievement marks a significant advancement, particularly given that the last synchronisation attempt in 2007 was unsuccessful and lasted only seven minutes. The 2025 test succeeded due to enhanced system monitoring, real-time communication between national control centres, stricter frequency management, and harmonised operational standards across the region.

The synchronisation moves West Africa closer to a fully integrated regional electricity market under the West African Electricity Market (WAEM) framework and opens substantial economic, operational, and investment opportunities for Nigeria.

Key Benefits Nigerians and Investors Should Watch For

1. Improved Grid Stability and Operational Reliability

Synchronisation with WAPP ensures that Nigeria operates on a unified regional frequency, enabling automatic support from neighbouring systems whenever Nigeria's grid experiences frequency drops or instability. This shared reserve and balancing capacity help smoothen voltage fluctuations and reduce grid disturbances. With a more stable frequency, transmission lines operate more efficiently, industries benefit from more reliable voltage levels, and overall power quality improves across the country's load centres.



2. Better Utilisation of Nigeria's Installed Generation Capacity

Nigeria frequently experiences situations where generation companies produce more power than Distribution Companies (DisCos) can offtake due to weak networks, load rejection, or inefficiencies. Regional synchronisation provides an outlet for this stranded or underutilised capacity by enabling exports to neighbouring countries. Instead of wasting available generation, especially during periods of low domestic demand, Nigeria can optimise its output, improve the financial viability of power plants, and create new commercial opportunities for Independent Power Producers (IPPs).

3. Strengthened Role in Regional Electricity Trade Under WAEM

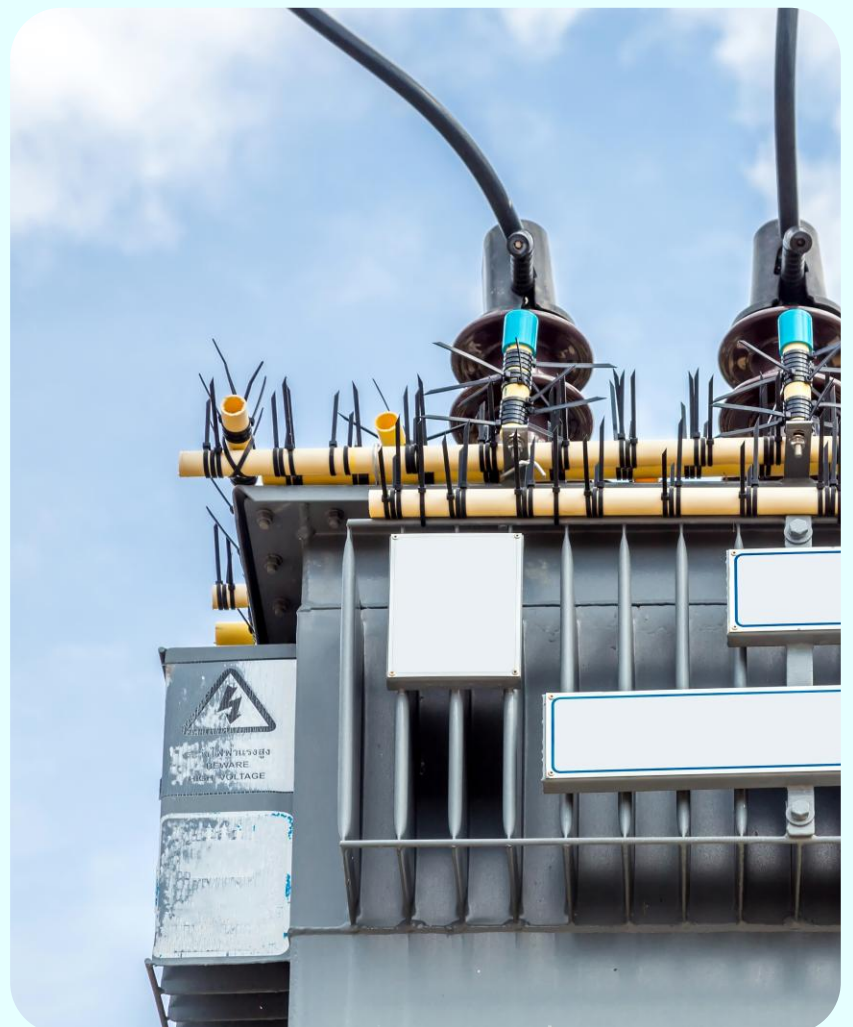
The WAEM aims to create a fully liberalised regional marketplace where electricity is traded seamlessly across borders. Synchronisation is the precondition for Nigeria's full commercial participation in this market. By achieving stable alignment with WAPP, Nigeria positions itself as both a major supplier and a central transit hub for regional power flows. Over time, this increases export potential, opens access to new buyers, and allows Nigeria to leverage its large generation assets for regional economic influence.

5. Greater Access to Regional and Multilateral Funding for Grid Expansion

Synchronisation is a prerequisite for several regional transmission projects supported by the World Bank, AfDB, EU, and ECOWAS. Nigeria's success increases its eligibility for funding to upgrade substations, strengthen transmission corridors, deploy advanced grid management tools, and complete regional lines such as the North Core Transmission Project. These upgrades will help Nigeria expand its wheeling capacity, reduce grid congestion, and modernise its energy infrastructure.

4. Increased Confidence for Investors, IPPs, and Long-Term Financiers

Operating successfully at WAPP's harmonised technical standards signals improved grid discipline, operational transparency, and enhanced system reliability. These are critical factors for investors considering multi-million-dollar projects in gas, hydro, solar, or transmission assets. A more stable and predictable operating environment reduces perceived market risk, lowers financing costs, and attracts funding from DFIs, climate financiers, and international energy investors.



Risks and Challenges Ahead

1. Exposure to Cross-Border Frequency Disturbances and System Instability

Interconnected grids are highly sensitive to disturbances from any participating country. A frequency deviation or sudden generation loss in one nation can cascade across the synchronised system in seconds. Nigeria must therefore strengthen its system protection schemes, enhance real-time monitoring, and improve its grid resilience to withstand disturbances from beyond its borders. Without robust control systems, synchronisation can increase the risk of partial or full system collapses.

3. Misalignment Between National and Regional Market Regulations

While the Electricity Act 2023 empowers states to develop their own electricity markets, WAPP and WAEM operate on harmonised regional frameworks. Without coordinated tariff structures, market rules, and grid codes, Nigeria may face regulatory friction that slows the commercialisation of electricity exports. Ensuring alignment between Nigerian regulators, state electricity markets, and regional market operators will be essential for seamless participation.

2. Technical Limitations in Nigeria's Transmission Infrastructure

The Transmission Company of Nigeria (TCN) continues to grapple with ageing infrastructure, constrained wheeling capacity, and overloaded transmission corridors. These limitations can make it difficult to sustain long-duration synchronisation or accommodate cross-border power flows. To fully benefit from integration, Nigeria will need to upgrade critical substations, deploy SCADA/EMS functionalities nationwide, and improve redundancy across key 330kV and 132kV lines.

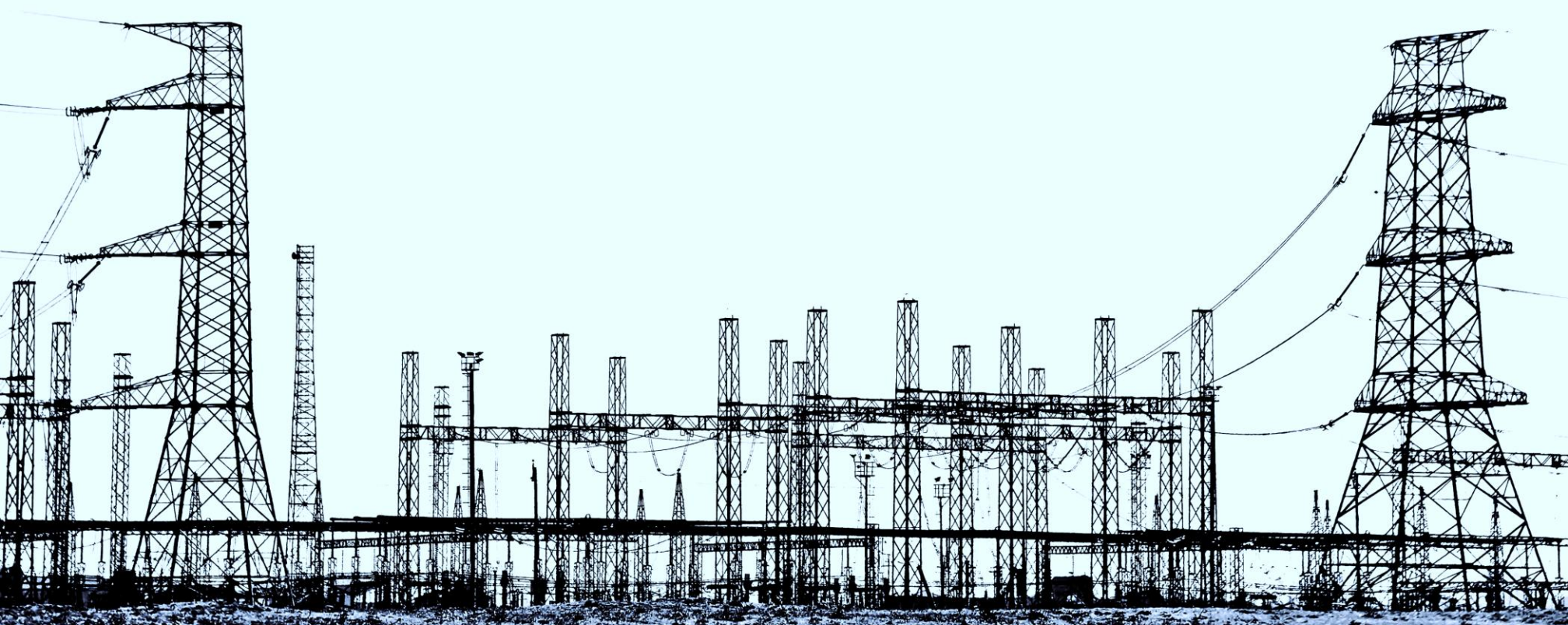


4. Generation Reliability Constraints and Domestic Supply Pressures

Nigeria's ability to benefit from regional trade depends heavily on stable generation. However, recurrent challenges such as gas supply shortages, vandalism of oil and gas infrastructure, turbine outages, and low water levels for hydropower can limit reliable generation. If domestic supply remains unstable, Nigeria may struggle to honour export commitments or maintain synchronisation during periods of national grid stress.

5. Increased Security and Cybersecurity Vulnerabilities

Cross-border interconnected systems introduce greater cybersecurity exposure since attacks in one country can propagate through shared control systems. Nigeria must enhance cybersecurity protocols for transmission, dispatch centres, and generation plants. Physical attacks on cross-border transmission lines, common in remote areas, also pose risks that could disrupt regional operations or damage trust in Nigeria's reliability as a power supplier.



What's Next?

Following the successful four-hour synchronisation, NISO and WAPP plan to conduct an extended **48-hour test**. This is the final step before permanent integration into the WAPP regional grid. Once permanently synchronised, Nigeria will become a central player in the regional electricity market, unlocking deeper economic, technical, and geopolitical benefits across the ECOWAS region.

As Nigeria advances toward full integration into the unified WAPP grid and prepares for the transition to a more interconnected regional electricity market, navigating the evolving technical, commercial, and regulatory landscape will become increasingly complex.

At Stren & Blan Partners, we are well-positioned to support investors, utilities, state governments, IPPs, and financiers in understanding and leveraging these developments.



48-hour
test

About Stren & Blan Partners

Stren and Blan Partners is a world-class ingenious law firm with a beautiful blend of the brightest minds and well-rounded individuals championed with sole responsibilities of providing solutions to business problems and equally finding answers to the questions of our clients. We are a team always guided by our professional ethics. Also, honesty and transparency have been our watchwords in practice.

Stren & Blan Partners is a full-service commercial Law Firm that provides legal services to diverse local and multinational corporations. We have developed a clear vision for anticipating our clients' business needs and surpassing their expectations, and we do this with an uncompromising commitment to Client service and legal excellence.

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