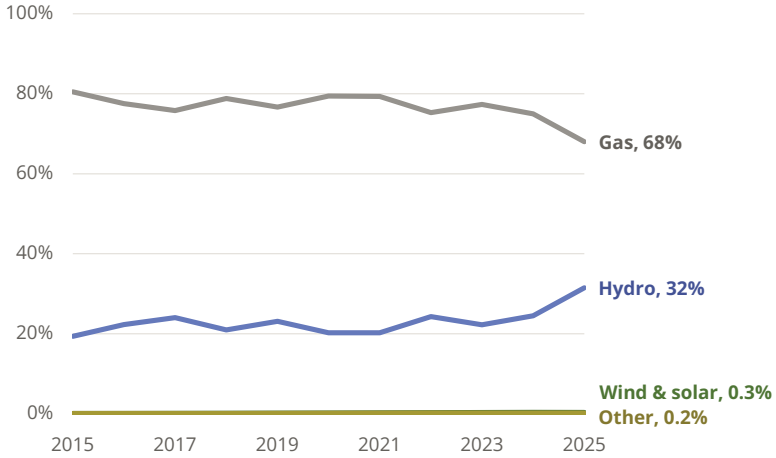
Nigeria at a glance

Nigeria's transition is access-led and increasingly decentralised, with distributed renewables expanding around a fragile gas-dependent grid, while oil and gas remain central to economic security.

Key transition conditions: The Electricity Act 2023 and fast-growing distributed energy open space for local power markets, but a weak grid and the centrality of oil and gas constrain change.

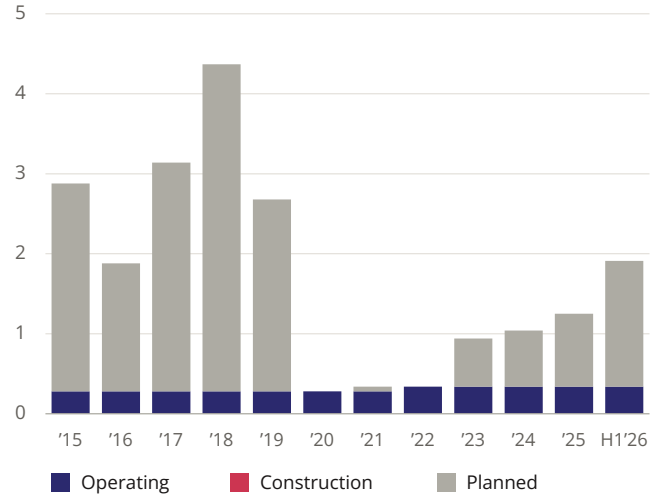
Electricity generation by source

2015–2025

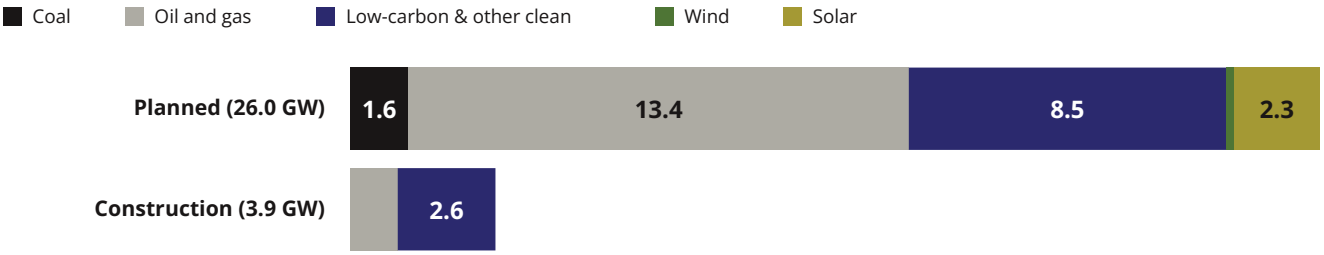


Coal capacity by status

GW, 2015–H1 2026



Capacity under development by source



Wind 0.2 GW (planned) · Oil and gas 1.3 GW (construction)

Power system landscape

Gas supplies **77%** of grid electricity, hydropower around 23% and solar under 1%. The grid delivers a peak of about 5.7 GW from 13 GW installed, against roughly 20 GW of demand. 86–110 million people lack reliable power.

Clean transition trends

DARES has reached roughly **5.3 million** of its 17.5 million 2028 goal; solar home systems (about 38% of target) lead, renewable capacity build-out lags furthest. The Electricity Act 2023 shifted authority to states. Gas is treated as a bridge fuel.

Enablers and bottlenecks

Pension assets reached **$22.85bn**, up 51% in two years, and over 14 GW has been licensed since 2017. But only about 1% of pension assets reach infrastructure, electricity tariffs sit below cost, and 36% of capacity was available in early 2026.

Opportunities for international cooperation with *Nigeria*

- **A coordinated country platform could align partners** on project preparation, aggregation and blended finance, turning underused domestic liquidity into deployable capital.
- **Distributed grid integration can be scaled:** metering and network upgrades for net billing, with DARES-style aggregation and results-based finance at grid scale.
- **Diversification beyond oil and gas is an emerging area,** building on the Beyond Oil and Gas Alliance Fund's early analytical work towards concrete policy.

Sources: *Ember annual electricity data; Global Energy Monitor annual capacity charge data and coal plant tracker data*

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Nigeria's profile

Outline and domestic political economy context

Nigeria relies on non-renewable energy for almost all its energy needs, with fossil fuels – mainly oil products and gas – accounting for over 50%, biofuels and waste 45% and hydropower roughly 1%.[1] Biomass barely registers in electricity data, given it is consumed almost entirely off-grid for household cooking and heating. On the grid, gas supplies 77% of generation; the remaining share of around 23% is made up of clean resources, mainly hydropower, with solar under 1%.[2] Coal plays no meaningful role in grid-connected power generation. Nigeria's transition challenge is not a coal phase-out but reducing gas dependence, improving electricity supply reliability and expanding affordable access.

Nigeria is a net exporter and producer of crude oil and gas, **and a net importer of oil products, in aggregate.**[3] Nigeria holds Africa's largest gas reserves (~215 trillion cubic feet) and its second-largest oil reserves (~37 billion barrels),[4] the ninth- and eleventh-largest globally.[5] However, these large reserves have not translated into reliable domestic supply: only around half of gas production is used domestically, while a significant share is exported, mainly as LNG.[6] In fact, oil and gas generated around 30% of government revenue[7] and over 80% of export earnings[8] in 2025, leaving public finances and the currency's value highly exposed to production and price swings.

[1] IEA, 2023, **Nigeria** (webpage, accessed 6 August 2026)
[2] US Energy Information Administration, 2025, **Nigeria** (webpage, accessed 6 August 2026)
[3] IEA, 2023, **Nigeria** (webpage, accessed 6 August 2026); It briefly became a net petrol exporter for the first time in its history in March 2026, though the margin was narrow, and Nigeria still imports substantial volumes of other refined products and feedstocks; see The NG Guardian, April 2026, **Reps committee hails Dangote Refinery as Nigeria becomes net petrol exporter**.
[4] Nigerian Upstream Petroleum Regulatory Commission, 1 April 2026, **Media Release on The National Annual Petroleum Reserves Position As At 1st January 2026**
[5] Worldometer, 2025, **World Oil and Natural Gas Statistics** (webpage, accessed 6 August 2026)
[6] US Energy Information Administration, 2025, **Nigeria** (webpage, accessed 6 August 2026)
[7] International Monetary Fund, 9 June 2026, **IMF Executive Board Concludes 2026 Article IV Consultation with Nigeria**
[8] Nigeria's National Bureau of Statistics, **Foreign Trade in Goods Statistics** (webpage, accessed 6 August 2026)

The unreliability of Nigeria's grid functions as a structural barrier precisely because it pushes both supply and demand towards largely fossil-based off-grid rather than renewable sources. On the demand side, households and businesses bypass the grid and turn to alternatives**.** Households without reliable electricity default to firewood and charcoal; both grid-connected and unconnected users alike also rely on petrol and diesel generators to fill the gap left by a grid[9] that delivers only around a peak of 5.7 GW of an installed 13 GW against roughly 20 GW of demand – leaving between 86 to 110 million Nigerians without reliable access.[10] On the supply side, the same unreliability discourages exactly the kind of investment that could green the system. Only 36% of all installed capacity was available in early 2026 – just 4.9 GW of 13.6 GW on average, well below even the system's peak capacity – and the grid frequently operates outside normal frequency.[11] Even well-sited utility-scale solar or wind projects most likely face this same delivery uncertainty once connected to the grid; this means investors and developers price in higher risk or avoid grid-tied renewable projects altogether. The result is a self-reinforcing bypass economy on both ends: demand-side responses are overwhelmingly biomass and diesel rather than rooftop solar or storage,[12] while the supply-side responses are capital retreats from grid-connected renewables. Coordinated initiatives such as the World Bank's Mission 300 and its flagship programme, the Nigerian Distributed Access through Renewable Energy Scale-Up (DARES),[13] as well as national policies like Net Billing Regulations 2026[14] are beginning to target this mismatch; nonetheless, the underlying grid instability remains the core unresolved challenge for Nigeria.

The country's energy transition focuses less on phasing out a single dominant fuel than on closing the country's large energy-access gap and making electricity reliable enough to support households, businesses and industrial growth. Its Energy Transition Plan (ETP)[15] treats gas not as a fuel to be phased out but as a bridge, providing dependable electricity, supporting renewables' expansion and improving clean cooking and transport access. The Electricity Act 2023 has meanwhile shifted authority to states, opening space for locally tailored electricity markets.[16] The social and economic case for transition is therefore framed around poverty reduction, industrial development and improved energy access as much as reducing emissions.

[9] World Bank Group, May 2026, **Access to Electricity: Who Remains Without Power?**
[10] Africa Policy Research Institute, 2026, **Enhancing Nigeria's Clean Energy Transition: Mapping Chinese Investment and Strategic Priorities**
[11] Olalekan Adigun, 9 February 2026, **NERC report shows grid frequency breaches, 36% availability in January 2026**
[12] World Bank Group, 2026, **National Energy Compact for the Federal Republic of Nigeria** (PDF)
[13] World Bank Group, 2023, **Nigeria- Distributed Access Through Renewable Energy Scale-Up Project**
[14] Nigerian Electricity Regulatory Commission, 2026, **Net Billing Regulations 2026** (PDF)
[15] Nigeria's Energy Transition Plan, 2024, **Objectives**
[16] Policy and Legal Advocacy Centre, 2023, **Nigerian Electricity Act 2023** (PDF)

Nigeria's transition challenge is not necessarily a shortage of ambition, capital or even licensed projects, but a bankability and delivery-efficiency gap. Its pension fund assets alone reached around US$22.85 billion, up 51% in two years (2026),[17] yet around 1% of these total assets are allocated on actual infrastructure, far below the regulatory benchmark[18] – potentially up to 25%, depending on the fund category.[19] Banks, meanwhile, deposited a cumulative 336.24 trillion naira (~US$233 billion) in excess liquidity with the Central Bank of Nigeria in 2025 alone, rather than lending it into the real economy.[20] Nor is it a shortage of projects on paper: the Nigerian Electricity Regulatory Commission issued 645 new licences between 2017 and 2025, with total licensed capacity exceeding 14 GW whilst actual generation remained flat.[21] The gap is bankability. Developers routinely arrive with weak feasibility studies, unclear off-take arrangements and thin governance track records that financiers cannot underwrite regardless of available capital; renewable projects also carry high capital intensity that smaller developers struggle to absorb, leaving only a small pool of local firms able to deliver bankable projects at scale.[22] Underneath this sits a revenue problem: electricity tariffs remain below cost-reflective levels, costing the Federal Government 1.93 trillion naira (~US$1.3 billion) in subsidies in 2025 alone;[23] distribution companies' weak collection of bill payments further undermines lenders' confidence regardless of individual project quality. What is needed is not more capital, but a mechanism that aggregates small projects into fundable scale, standardises project preparation and gives capital a single credible "front door" into the sector.

Nigeria's emerging country-platform effort addresses this gap directly. Currently, there is no single interface that connects climate funds, carbon markets, Development Finance Institutions' capital and blended instruments. Moreover, the existing policy architecture remains fragmented enough to undermine investor confidence. The emerging new design explicitly rejects a "donor-driven replica of other JETPs", favouring instead a development-rooted, multi-stakeholder model.[24] Nigeria's mini-grid ecosystem is a test case for what this kind of coordination can achieve. DARES is designed to bundle technical assistance, standardised project templates and results-based financing to make distributed projects bankable at scale, targeting over 17.5 million Nigerians and the displacement of 250,000-plus polluting diesel generators; it reached roughly 5.3 million people and

[17] CNBC Africa, 14 July 2026, **Nigeria pension assets jump 51% to $22.8 billion, regulator says**
[18] National Pension Commission of Nigeria, June 2026, **Monthly Industry Summary May 2026** (PDF)
[19] National Pension Commission of Nigeria, 2025, **Revised Regulation on Investment of Pension Fund Assets** (PDF)
[20] This Day, 5 January 2026, **Banks Deposit With CBN Reached N336.24trn in 2025 on Credit Risk Concerns**
[21] Energy For Growth Hub, 22 December 2025, **Nigeria's Energy Transition Is Stalling Between Ambition and Delivery: Insights from licensing data from 2017 to 2025**
[22] Africa Policy Research Institute, 2025, **Energising Africa: enabling private sector development in renewable energy**
[23] Nigeria Electricity Regulatory Commission, 2026, **2025 Annual Report and Accounts** (PDF)
[24] Africa Policy Research Institute, 2025, **Insight Brief: Global South Peer Learning Workshop on Country Platform and Just Energy Transition**

delivered just over 1 million solar home systems by 2026,[25] including legacy pre-DARES programmes.[26] This highlights the potential of deliberate coordination (pre-packaged, bankable structures, aggregation and blended finance applied together) to convert stranded ambition into deployed projects. What remains to be seen is whether this logic can scale from the off-grid space, where it has been piloted, to the grid-scale pipeline, where the bulk of Nigeria's 14 GW of stranded capacity and underused institutional capital actually sit.

Summary of key domestic transition factors

- **The strongest enabling conditions are the gradual decentralisation of the electricity sector under Nigeria's Electricity Act 2023, the growth of distributed energy (mini-grids, solar home systems, commercial solar) and access to sizable domestic and international capital.** These create room to build local electricity markets and expand supply faster than conventional grid extension, provided the capital deployment gap is addressed.

- **The biggest constraining factors are the continued weakness of Nigeria's national grid**, which continues to push households and investors alike away from grid-connected solutions, and **the deep economic and political centrality of oil and gas**, positioned in Nigeria's own strategy as a transition fuel rather than a target for phase-out. This dual dependency makes a rapid fossil fuel shift difficult, both economically and politically, and raises the risk that new gas infrastructure becomes a long-term fixture rather than a bridge.

Opportunities for international collaboration

1. **Operationalise a coordinated country platform.** A country-led platform, building on announced but not yet disbursed vehicles like the Nigerian Climate Investment Platform and National Climate Change Fund,[27] could coordinate international and domestic actors around earlier-stage project preparation (technical studies, financial modelling, standardised documentation, aggregation models bundling smaller projects into institutional-scale portfolios) alongside capital-mobilisation instruments (blended finance, guarantees, local currency structures, clearer pension fund frameworks) that convert Nigeria's underused liquidity into deployable capital. This should also include stronger local content requirements and closer federal and state coordination, so project readiness is not undermined by fragmented rules or unequal access for domestic developers.

[25] World Bank Group, 2026, **Implementation Status and Results Report: Nigeria Distributed Access through Renewable Energy Scale-up Project (P179687)** (PDF)
[26] ODI Global, 30 June 2026, **The World Bank says Mission 300 'accelerated' 50 million electricity connections in Africa. We checked**
[27] Presidential Villa, State House, 14 January 2026, **National Statement by President Tinubu at the Abu Dhabi Sustainability Week (ADSW) 2026**

2. **Scale distributed energy into a more integrated electricity system.** DARES and the Net Billing Regulations 2026 are beginning to address the electricity delivery challenge from different angles – expanding distributed renewables and enabling surplus power to flow into distribution networks, though both remain at an early stage. International cooperation could help scale these approaches by supporting the metering and network upgrades needed to integrate distributed generation. This would help translate electrification ambitions into delivery models suited to Nigeria's network constraints, investment conditions and increasingly decentralised electricity market.

3. **Support Nigeria's broader diversification beyond oil and gas.** The multinational Beyond Oil and Gas Alliance (BOGA) Fund's Nigeria programme offers an early foundation: it is building analytical and policy capacity to assess the economic risks and opportunities of moving beyond oil and gas, including impacts on revenue and associated industries and workers. International collaboration could further support translating these analytical findings into concrete diversification policy; Nigeria's needs as a fossil fuel exporter could then also inform the wider transition away from fossil fuels (TAFF) architecture for producer economies.

ABOUT E3G

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AUTHORS

Dido Gompertz is a Policy Advisor in the Global Clean Power Diplomacy team, whose work focuses on building the coalitions and enabling conditions for the transition to clean power systems in various regional contexts.

Jeongha Ju is a Senior Policy Advisor in the Political Economy and Governance team. Her expertise lies in comparative political economy analysis and methodological design, focusing on the structural forces shaping energy transitions across countries.

Samora Levy is a Programme Lead in the Global Clean Power Diplomacy team, who leads work on the power sector transition and diplomacy including in Africa and China, an on the team's research and analysis.

Suzie Marshall is a Policy Advisor in the Global Clean Power Diplomacy team, where her focus includes accelerating the global exit from coal power, and energy security and the impact of the Hormuz crisis on power sector transitions.

Oyku Senlen is a Senior Researcher in the Global Clean Power Diplomacy team and is an expert on Turkish climate and energy policy. She leads E3G's Türkiye strategy and produces data analyses on the global clean energy transition.

Hamsa Srikanth is a Researcher in the Global Clean Power Diplomacy team. She works on research, analysis and data visualisations of the global power sector transition and the politics and policy that underpin it.

Matt Webb is Associate Director for the Global Clean Power Diplomacy team.