

# NIGERIA
# TEN YEARS OF TRANSITION UNDER THE PARIS AGREEMENT

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## CONTEXT

Nigeria is the most populous country in Africa, with over 200 million people, and it boasts the largest economy in sub-Saharan Africa, with a real Gross Domestic Product (GDP) of approximately USD569.52 billion in 2024[1]. From 2011 to 2022, the country's GDP annual growth rate averaged 2.67%, reaching an all-time high of 6.88% in the first quarter of 2011 and a record low of -6.10% in the second quarter of 2020 due to the COVID pandemic. The International Monetary Fund (IMF) recently projected a growth rate of 3.4% for Nigeria in 2025[2]. Much of this growth is driven by fossil fuel exports and usage. Consequently, Nigeria is susceptible to fluctuations in global energy prices and international geopolitical tensions, as well as rapid advancements in low-carbon technologies and resources, in response to the climate crisis.

However, Nigeria ratified the Paris Agreement in March 2017, thereby affirming its commitment to the global ambition of limiting average global temperature rise to well below 2°C, with efforts to further constrain it to 1.5°C above pre-industrial levels. This landmark decision underscored Nigeria's recogni-

1 https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?locations=NG-ZA-EG-DZ
2 https://www.imf.org/en/Publications/CR/Issues/2025/07/01/Nigeria-2025-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-568220

tion of the severe implications of climate change, particularly for vulnerable countries in Sub-Saharan Africa. Climate-related challenges such as desertification in the North, coastal erosion in the South, increased frequency of floods, and food insecurity threaten the country's economic development and human wellbeing[3].

In line with the Paris Agreement, Nigeria submitted its first Nationally Determined Contribution (NDC) in 2015 and reaffirmed it with an update in 2021. The NDC articulates an ambitious dual target, to reduce greenhouse gas (GHG) emissions by 20% unconditionally and up to 47% conditionally by 2030 compared to a business-as-usual (BAU) scenario. The conditional component is predicated on international support through finance, technology transfer, and capacity building[4]. In July 2021, Nigeria submitted its updated NDC, which highlights a more robust climate ambition, incorporating gender responsiveness, just transition principles, and expanded mitigation actions in key emitting sectors. Notably, the energy sector, which accounts for over 55% of national emissions, has received increased attention, with strategic plans for renewable energy penetration, energy efficiency, and gas flare reduction[5].

Nigeria's evolving climate response showcases a growing alignment between global commitments and national priorities. The country's ratification of the Paris Agreement, updated NDC, LT-LEDS, and the DDP initiative reflect a multidimensional approach that integrates climate mitigation, adaptation, and sustainable development. However, the successful implementation of these frameworks will require enhanced financial and regulatory instruments for climate-compatible investments, institutional coordination, technological innovation, and stakeholder engagement, particularly from the private sector, sub-national actors, and civil society.

## GREENHOUSE GAS EMISSION TRENDS

Total economy-wide emissions, including land-use, have risen from approximately 333 $MtCO_2e$ in 2005 to about 408 $MtCO_2e$ in 2015 and 435 $MtCO_2e$ in 2021(see Figure X.1), with the energy sector contributing over 56% of the emissions. Post-2015 data show a gentle upward bend led principally by the energy sector (fuel combustion plus fugitive methane) and agriculture (enteric fermentation, rice paddies, land clearing). Specifically, the energy sector dominates because gas-fired generation (approx. 75% of grid output) and widespread fossil-fuelled mobilities and diesel back-up generators drive $CO_2$[6]. Meanwhile, Nigeria's NDC measures could eliminate 30 Mt $CO_2e$ of emissions from AFOLU by 2030.

The gentle upward growth is an indication that the country's effort to bend the emission curve is undermined by the effort to grow the economy through industrialisation and a massive increase in oil and gas exploration and refining. Nigeria has witnessed a rebound in oil production, with output reaching approximately 1.8 million barrels per day in late 2024, up from 1.2 million barrels per day in previous years[7]. One of the most significant infrastructure milestones is the commissioning of the Dangote Refinery, with a daily capacity of 650,000 barrels[8]. Moreover, Nigeria is increasingly diversifying its exploration focus toward deep offshore fields. This strategic shift is exemplified by ExxonMobil's USD1.5 billion investment in deepwater operations[9]. However, Nigeria legally enshrined a net-zero target year of 2060 in its Climate Change Act, and the goal

3 Federal Ministry of Environment. (2021). Second Biennial Update Report of the Federal Republic of Nigeria to the UNFCCC. Abuja: Government of Nigeria.

4 Federal Ministry of Environment. (2021). Nigeria Updated Nationally Determined Contribution (NDC). Abuja: Government of Nigeria

5 UNFCCC (2021): https://unfccc.int/sites/default/files/NDC/2022-06/NDC%20INTERIM%20REPORT%20SUBMISSION%20-%20NIGERIA.pdf

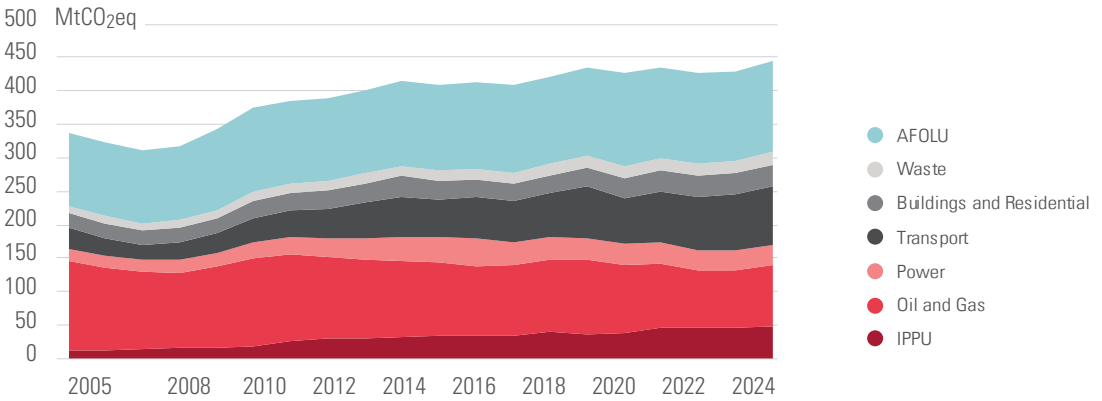
6 Owebor, K., Okereke, C., Diemuodeke, E.O., Owolabi, A.B., and Nwachukwu, C.O. (2025) *A systematic review of literature on the decarbonization of the Nigerian power sector*, Energy, Sustainability and Society, Vol. 15(34). https://doi.org/10.1186/s13705-025-00527-x

7 NNPCL (2024). NNPC Ltd Announces 1.8mbpd Production, Eyes 2mbpd by Year End 2024. https://nnpcgroup.com/insights/nnpc-ltd-announces-1-8mbpd-production-eyes-2mbpd-by-year-end-1

8 Dangote Refinery (2025). Dangote Refinery's a Game Changer capable of driving Africa's Refining Revolution. https://www.dangote.com/fg-dangote-refinerys-a-game-changer-capable-of-driving-africas-refining-revolution/ .

9 Szymczak PD (2025). ExxonMobil to Invest $1.5 Billion in Nigeria's Usan Deepwater Oil Field. Journal of Petroleum Technology 2025

**Figure 1.** Nigeria's emissions profile and share by sources




*Sources: harmonised from multiple sources by the authors : UNFCCC Nigeria's BUR2, EDGAR, Climate Watch, Climate Brief and Gütschow, J.; Pflüger, M. (2023): The PRIMAP-hist national historical emissions time series v2.4.2 (1750-2021). zenodo. doi:10.5281/zenodo.7727475*

is reiterated across its updated Nationally Determined Contribution (NDC), its Energy Transition Plan (ETP) and its Long-Term Low-Emission Development Strategy (LT-LEDS)[10].

## Oil and gas-dependent economy and economic diversification

Nigeria has proven oil reserves of approximately 37.5 billion barrels and natural gas reserves of about 210.5 trillion cubic feet, making it a significant player in the global fossil energy market. This wealth of resources offers substantial potential for economic development and energy security[11]. In 2022, the oil-and-gas sector contributed only about 5.7% of Nigeria's GDP, yet it still generated more than 85% of merchandise export earnings and roughly half of federal revenues[12]. The 2024 WTO Trade-Policy Review draws the same picture, i.e., in 2023, crude oil still accounted for 80.6% of goods exports, LNG another 10.5%. This concentration leaves public finances, and by extension, climate spending, highly exposed to oil-price swings. However, the government has committed to diversifying the economy away from oil and gas through deliberate policies and actions, including the Nigeria Agenda 2050[13] (a long-horizon commitment to shift from oil dependency toward a knowledge-based and export-diverse economy), Nigeria Startup Act 2022[14] (to drive innovation and startups in the creative and digital sector), Fuel Subsidy Removal (reallocation of revenue to develop power, transport and human capital) and Sustainable Bond Framework 2025[15] (provide a framework for a green and diversified economy).

## Energy mix and electricity energy mix

Biofuels and waste dominate the country's energy at 43.4%, which is followed by crude oil (32.2%), natural gas (22.2%), renewable energy (1.1%) and coal (1.1%) in 2022. The domination of the energy mix by biofuels is undermining forest reserves vis-à-vis a natural carbon sink. The electricity access hovered around 62% in 2022, with rural access lagging below 40%[16]. The poor electricity access is compounded by frequent grid collapses and capacity shortfalls (only one-third of the 13.5 GW installed power plant capacity

10 Federal Government of Nigeria. (2024). Nigeria's Long-Term Low Emission Development Strategy – 2060 (LT-LEDS). https://unfccc.int/documents/638193

11 NUPRC (2024). Nigeria's Oil and Gas Reserves Soar: NUPRC Unveils Impressive Figures 2024. https://www.nuprc.gov.ng/nigerias-oil-and-gas-reserves-soar-nuprc-unveils-impressive-figures/#:~:text=Engr Komolafe revealed that as,trillion cubic feet (TCF)

12 World Trade Organisation (2024). *Trade Policy Review: Nigeria (WT/TPR/S/462), Geneva, Switzerland: WTO Secretariat

13 Nigeria Agenda 2050, https://faolex.fao.org/docs/pdf/nig217433.pdf?

14 Federal Government of Nigeria (2022) https://pwcnigeria.typepad.com/files/nigeria-startup-act-2022-signed.pdf?

15 Nigeria Deabt Management Office (2025) https://www.dmo.gov.ng/fgn-bonds/green-bond/5336-federal-republic-of-nigeria-sustainable-bond-framework/file

16 International Energy Agency, World Bank, & UN DESA. (2023). Tracking SDG 7: The Energy Progress Report 2023. Paris: IEA

is typically available), pushing households and SMEs to rely heavily on petrol/diesel generators, which aggravates emissions. On this basis, the NDC, LT-LEDS and ETP target universal and reliable electricity by 2030 as a core social-justice pillar, by front-loading mini-grids and solar home systems for rural communities.

In 2022, Nigeria's electricity grid mix remained dominated by fossil fuels (mainly natural gas-fired power plants at 75.4% share)[17], as renewable energy supplied roughly 24.6% of total electricity, almost wholly from large hydropower (Kainji, Jebba, Shiroro), since utility-scale solar and wind together accounted for less than 1%[18]. However, solar PV electricity generation through mini-grids and rooftops has been increasing in recent times, driven by upward adjustments in electricity tariffs and the removal of fuel subsidies[19]. Looking forward, the ETP targets a 30% renewable share (mostly solar PV + hydro) by 2030 and 60% by 2060, conforming with the LT-LEDS net-zero pathway; yet, unlocking that pipeline will require de-risking PPAs, strengthening transmission corridors, and scaling concessional finance.

17 K. Owebor, E.O. Diemuodeke, T.A. Briggs, M. Imran (2021) Power Situation and Renewable Energy Potentials in Nigeria – a Case for Integrated Multi-generation Technology, Renewable Energy, Vol. 177, Pp. 773-796, https://doi.org/10.1016/j.renene.2021.06.017

18 Federal Ministry of Power. (2022). Nigeria Energy Transition Plan. Abuja: Government of Nigeria

19 Business day (2025) https://businessday.ng/news/article/nigerias-solar-industry-sees-unprecedented-growth-but-affordability-remains-a-challenge/?utm_source=chatgpt.com

## ROLE OF LONG-TERM VISION

Nigeria developed and submitted a robust Long-Term Low-Emission Development Strategy (LT-LEDS)[20], which provides the keystone of Nigeria's post-Paris transition architecture. The quantification of the LT-LEDS was anchored on Nigeria's Deep Decarbonisation Pathways (DDP) programme[21]. Nigeria's LT-LEDS was submitted to the UNFCCC on 25 April 2024, elaborating on the 2060 net-zero pledge already embedded in the Climate Change Act (2021) and the Energy Transition Plan (ETP). It provides four unique actionable strategies that the updated NDC (2021) and the ETP horizon instruments cannot do on their own, as presented in **Table 1**.

### The LT-LEDS and Nigeria's transition

In the energy and industrial sectors, the strategy aims to eliminate unabated gas-firing in the power sector by the year 2040. Furthermore, it mandates that upstream operators adhere to rigorous methane leak and flaring reduction standards, as enshrined in the Petroleum Industry Act 2021. These standards provide clarity for utilities, independent power producers (IPPs), and financiers regarding the depreciation schedule for gas assets, but recent reports

20 https://unfccc.int/sites/default/files/resource/Nigeria_LT-LEDS_01122023_240425_094617.pdf?

21 Okereke, C., et al. (2024) Deep Decarbonisation Pathways (DDP) for Nigeria's Low Emission Development Up to 2060, National Council on Climate Change

**Table 1. Strategic roles of LT-LEDS**

| | Implication |
|---|---|
| **Sets the endpoint and pace** | Defines a whole-economy GHG budget to 2060 and provides sector-based action plans so investors and ministries can backcast sector pathways. |
| **Aligns near-term policies** | Serves as the platform that screens new programmes, e.g. the 2024 NDC-Implementation Framework and the Petroleum Upstream Decarbonisation Template (UPDT) for oil-licence bidders, ensuring they drive toward net-zero rather than lock in high-carbon assets. |
| **Creates a finance and investment narrative** | Provides a pathway to estimating finance and investment volume in additional capital and prioritising pipelines (e.g. renewable, low carbon energy and afforestation) for concessional and private funding windows. It can thus turn the ETP's sector wish-lists into bankable project pipelines. |
| **Hard-wires governance and accountability** | Provides a governance structure for climate actions and transition to integrate climate criteria in fiscal policy, and reporting, closing the oversight gap identified in earlier NDC reviews. |

indicate poor adherence to the standards[22]. Concurrently, within the Agriculture, Forestry, and Other Land Use (AFOLU) sector, the LT-LEDS prioritises agroforestry, climate-smart rice production, and extensive afforestation and reforestation initiatives to facilitate significant carbon dioxide removal. This approach integrates AFOLU firmly within the national carbon budget rather than permitting it to serve merely as an offset for deferred reductions in the energy sector.

From a social justice and just transition perspective, the LT-LEDS anticipates job creation and incorporates metrics for gender and youth inclusion. Nigeria's LT-LEDS serves as more than merely a vision document; it functions as a comprehensive framework that integrates Nigeria's diverse climate initiatives, guides public investment decisions, and conveys a credible message to both domestic and international investors regarding the country's coherent strategy for achieving net-zero emissions by 2060. In its absence, the Nationally Determined Contributions (NDC) and the Energy Transition Plan (ETP) would remain uncoordinated policy silos, with their implementation evolving into a series of interconnected actions within a single, measurable transition pathway.

## CONCRETE PROGRESS AREAS

### Paris-compatible policies

*Renewable energy market reforms*

Three market-moving regulations were enacted after the 2023 Electricity Act: (i) service-reflective tariffs for grid customers, approved by Nigerian Electricity Regulation Commission (NERC) in September 2023, narrow the utilities' revenue shortfall and unlock PPAs for utility-scale solar and wind[23] (ii) mini-grid Regulations 2023 replace the 2017 rules, granting developers the right to set retail tariffs, raise the project-size ceiling to 5 MW, and streamline dispute resolution, which is already spurring 250 MW of new mini-grid permits in Q1 2025[24], and (iii) the Electricity Act 2023 devolves generation licensing to the states, catalysing sub-national solar parks and crowding in private investment.

*Clean-cooking initiatives*

Nigeria adopted a National Clean-Cooking Policy in May 2024, backed by the LPG Expansion Plan and a new e-cooking component (target: 30 million electric + LPG stoves by 2030). Implementation began with a free-cylinder scheme aimed at five million rural households and a Central Bank of Nigeria (CBN) credit line for local cylinder manufacturing[25].

*Methane reduction in oil and gas*

The Nigerian Gas Flare Commercialisation Programme (NGFCP), a government initiative aimed at eliminating gas flaring by attracting investments and creating a transparent market for gas, completed its first competitive bid round in September 2023, awarding 49 flare sites to 42 domestic firms, projects now in Engineering, Procurement and Construction (EPC) that will capture an estimated 2.8 $MtCO_2e$ annually and mobilise USD 2.5 billion in private capital[26]. Complementing this is the Upstream Petroleum Decarbonisation Template (UPDT), effective January 2025, which requires every new field licence to submit methane-management and energy-efficiency plans aligned with the Global Methane Pledge, as part of the Petroleum Industrial Act.

*Carbon-Market Activation Policy*

Nigeria has moved from exploratory discussions to the full design phase of a regulated carbon-market architecture that can coexist with voluntary, high-integrity crediting schemes

22 Africa oil and gas report (2025) https://africaoilgasreport.com/2025/05/in-the-news/operators-poor-compliance-with-greenhouse-gas-emissions-puts-nigerian-regulator-in-a-bind/#:~:text=A%20review%20by%20Adeniyi%20Adeoloye,Industries%20Transparency%20Initiative%20(NEITI)%20

23 https://pubs.naruc.org/pub/CA69CDF2-0442-54F0-1273-D800CD2E8733?

24 https://www.dentonsacaslaw.com/en/insights/articles/2024/january/6/key-highlights-of-the-nerc-mini-grid-regulations

25 https://naccnigeria.org/wp-content/uploads/2024/05/National-Clean-Cooking-Policy-v2.pdf?

26 https://nannews.ng/2025/02/27/nigerias-gas-flare-commercialisation-programme-to-unlock-2-5bn-investment-nuprc/

through the Carbon Market Activation Policy[27]. The policy, finalised in March 2025, aimed at unlocking a carbon market worth between USD 736 million and USD 2.5 billion by 2030. The policy is part of broader energy reforms and seeks to generate green jobs and attract investment in sustainable initiatives. The policy establishes a national carbon registry and framework for participating in the Article 6 Carbon Market, also aiming to establish a robust and transparent carbon market, attracting both local and foreign investment.

### Paris-compatible projects

Table X.2 shows eight concrete, "on-the-ground" projects that moved from policy announcement to full-scale implementation between 2015 and 2025 and are explicitly aligned with Nigeria's transition to a net-zero economy by 2060. Each example shows (i) when it crossed the implementation threshold, (ii) the scale of the intervention, and (iii) how it contributes to long-term decarbonisation. Aggregating the projects, it shows that, despite the weak fiscal and infrastructure landscape, Nigeria has started to convert its climate commitments into concrete assets, regulations, and revenue streams that will keep future emissions on a downward, i.e. Paris-compatible track.

## CONCRETE BLOCKAGES

Despite the observed positive progress in climate-responsive policies and projects, there are entrenched bottlenecks (demonstrated in Table X.3) that continue to slow Nigeria's progress towards its 2060 net-zero goal. The bottlenecks spread across finance, implementation, technical, policy planning, MRV capacity, etc.

27 Carbon Market Activation Policy: https://ossapcfse.org/wp-content/uploads/2025/04/Nigerias-Carbon-Market-Activation-Policy-Draft-020425.pdf

**Table 2. Concrete Paris-compatible projects**

| S/No | Sector and intervention | Implementation milestone (2015-25) | Net-zero relevance |
|---|---|---|---|
| 1 | 700 MW Zungeru hydropower project | Started operation in October 2023 to delivers about 2.6 TWh annually | To avoids approx.1.4 $MtCO_2e$ annually |
| 2 | Nigeria Electrification Project (NEP);125 solar-hybrid mini-grids, etc. | 5.5 million new beneficiaries, at least 5,000 green jobs, and 85 % of funds disbursed | Permanent displacement of diesel generators[1] |
| 3 | Solar Power Naija (5 million connections) | National roll-out launched in 2021; over 500,000 units installed by mid-2024 across 36 states | Universal electricity access goal without extra fossil capacity[2] |
| 4 | Sovereign Green Bonds (USD16.7 million*, 2017 and 2019)[3] | 23 completed projects: 7 university solar grids, afforestation in 31 states, etc.[4] | Delivers verified annual cuts of about 42 $ktCO_2e$ |
| 5 | NGFCP and first floating LNG licence | NGFCP bid awards (2023) now entering EPC stage; UTM Floating LNG got FGN licence in Sept 2024 | Captures 2.8 $MtCO_2e$ annually of flared gas, supporting the NDC pledge to end routine flaring by 2030[5] |
| 6 | Presidential Compressed Natural Gas Initiative (Pi-CNG) | Convert 100,000 vehicles by late 2024, convert an additional **1 million vehicles** by 2027, unveiling **64 CNG buses** to drive mass transit[6] | Cleaner air and reduced greenhouse gas emissions |
| 7 | Clean cooking (LPG) and improved cookstoves | LPG demand hits 1.5 million tons/year (2024); the 80 million improved cookstoves initiative was launched in 2023 | Reduces the 3.5% annual forest loss to support natural carbon capture and storage |

1 Word Bank: https://www.worldbank.org/en/news/feature/2025/03/07/expanding-nigeria-s-mini-grid-market?
2 Nigeria's Rural Electrification Agency: https://rea.gov.ng/solar-power-naija/149/?
3 Nigeria's Debt Management Office: https://www.dmo.gov.ng/fgn-bonds/green-bond/5338-fgn-series-iii-green-bond-investor-presentation/file
4 Nigeria's Debt Management Office: https://www.dmo.gov.ng/fgn-bonds/green-bond/5337-green-bond-issuance-impact-report-may-2025/file
5 https://gasoutlook.com/analysis/utm-offshore-license-to-build-nigerias-first-floating-lng-a-milestone-experts/#:~:text=%E2%80%9CThe%20NMDPRA%20issued%20a%20Licence,is%20a%20multibillion%20dollar%20project.%E2%80%9D
6 https://finance.gov.ng/fg-rolls-out-sixty-four-cng-buses-to-mark-nigerias-64th-independence-anniversary/

* At 1USD to N1,535

**Table 3. Bottlenecks to Nigeria's transition to a net-zero economy**

| Blocked domain | |
|---|---|
| How the blockage shows up in practice | Why it matters for the national transition |
| Gas-centric development model | |
| The Decade of Gas policies prioritise LNG export and CNG vehicles, yet gas flaring rose 12% in 2024, giving Nigeria the world's second-largest increase[1].<br>The 614 km Ajaokuta-Kaduna-Kano (AKK) natural gas pipeline, the backbone of domestic gas supply, remains delayed after financiers quit over cost inflation.<br>Most gas-fired power plants still run below 40% capacity because of the feed gas.<br>CNG vehicle conversions number only about 100,000 versus the 1 million target due to limited petrol=to-CNG conversion stations and fuelling stations. | Lock-in to gas crowds out renewables in the generation mix and worsens the risk of stranded gas assets after 2030.<br>Persistent flaring negates methane-abatement pledges and weakens Nigeria's claim to transition finance. |
| Power sector reform delays | |
| A decade after privatisation, six of eleven distribution companies and Nigeria's largest generator (Egbin) are now in court-ordered receivership, with an estimated sector debt of USD1.31 billion[2]<br>Key market stabilisation rules in the 2023 Electricity Act, cost-reflective tariffs, contractual PPAs, and a sector liquidity fund are still awaiting implementing regulations.<br>Unresolved gas-supply arrears continue to strand about 3 GW of installed capacity. | Investors demand higher returns or sovereign guarantees, delaying new solar, wind and hybrid projects tendered under the Energy Transition Plan. This is associated with high risk perceptions and the high cost of capital.<br>Without reliable off-take agreements, international climate finance cannot securitise utility-scale renewables. |
| Poor infrastructure and technology base | |
| The national grid rarely transmits more than 5 GW (against more than 13 GW installed), with frequent collapses[3].<br>World Economic Forum analysis highlights grossly under-investment in transmission, metering and digital monitoring as a top barrier to the green transition[4].<br>The productive sectors, e.g power and transport, are dominated by ageing equipment, skill shortages, and corruption as systemic obstacles to integrating variable renewables[5]. | Frequent grid failures force industries and households to use diesel gensets, erasing emissions gains.<br>Inadequate data and SCADA systems make grid-level demand forecasting, large-scale renewable penetration, technically risky and costly.<br>Inadequate infrastructure to support transport modal shift because road and rail networks are in a poor state. |
| **Capacity shortage** (technical, managerial and institutional) | |
| There is fragmented climate and transition-oriented knowledge<br>Limited staff in key ministries<br>Limited monitoring, reporting, and verification (MRV) expertise. | Poor human and institutional capacity slows the delivery of transition policies, which may push project timelines beyond the 2030 and 2060 target horizons.<br>Limited engineering and regulatory expertise increases project risks and raises the cost of capital, deterring private investors from grid upgrades, renewables and clean-cooking supply chains.<br>Weak MRV capacity undermines access to results-based climate finance and carbon market revenues |
| **Climate finance (volume, terms and allocation)** | |
| Total tracked climate finance reached only USD 1.2 billion in 2023, an order of magnitude below the USD 10–17 billion per year implied by the ETP.<br>Nigeria lacks the financial capacity to match the over USD1.9 trillion cumulative funding required to achieve net-zero by 2060.<br>There is an absence of clear de-risking instruments for investors | Without closing the finance gap, critical investments, renewable generation, transmission reinforcement, e-mobility, methane-flaring abatement and clean-cooking roll-outs cannot scale at the speed required for a net-zero pathway.<br>Heavy reliance on hard-currency debt exposes Nigeria to exchange rate shocks and heightens sovereign risk premiums, crowding out social spending and eroding political support for the transition.<br>Limited concessional and blended finance slows technology adoption and keeps household energy costs high, threatening the "just" dimension of Nigeria's transition. |

1 https://www.worldbank.org/en/programs/gasflaringreduction/global-flaring-data
2 https://www.reuters.com/sustainability/boards-policy-regulation/lenders-appoint-receiver-major-nigerian-power-firms-notice-shows-2025-08-06/?
3 Emodi, N.V. and Diemuodeke, E.O. (2022) Why Nigeria's electricity grid collapses and how to shore it up, The Conversation.
4 Word Economic Forum: https://www.weforum.org/stories/2023/05/how-nigeria-is-tackling-barriers-to-its-green-energy-transition/?
5 Adeshina, M.A. et al. (2022) From Potential to Power: Advancing Nigeria's Energy Sector through Renewable Integration and Policy Reform. https://doi.org/10.3390/su16208803

## LINK WITH NON-CLIMATE QUESTIONS

Nigeria's climate debate has steadily spilt out of the environment levers and into the country's fiscal space, financial regulation, export strategy, job creation and social welfare linkage. However, when there is a lack of capacity, concessional capital, or safety nets, this same linkage can lead to resistance. This highlights that Nigeria's journey towards achieving net-zero emissions depends not only on technological choices but also significantly on macroeconomic reforms and social policies. In Nigeria, five broad fronts illustrate how climate objectives are intertwined with questions of growth, equity and financial stability, as demonstrated in the following.

### Fiscal stability and macroeconomic policy

The Central Bank of Nigeria (CBN) increasingly frames climate change as a fiscal-risk story. The country's transition needs about USD 1.9 trillion by 2060, according to the Energy Transition Plan. Yet, a single season of extreme floods in 2022 wiped out an estimated USD 6.7 billion, while the government still spent USD 9.3 billion on fuel subsidies in the same year. This perspective supported the removal of petrol subsidies and the push to phase out subsidies in the power sector, as well as the unification of exchange rates and the allocation of free budget space for green spending. Broadly, the conversation in Nigeria treats fiscal and macroeconomic stability as a prerequisite for climate investment, giving the transition steam to propel.

### Domestic and international finance

The financial sector has identified a significant funding gap, with climate-tagged investments averaging only USD 2.5 billion per year in 2021/22, compared to an estimated annual need of nearly USD 30 billion. To address the funding gap, new initiatives are being introduced, such as the 2025 Sovereign Sustainable Bond Framework[28], the 2025 Carbon Market Activation Policy, and a USD 500 million Distributed Renewable Energy Fund led by the Nigeria Sovereign Investment Authority (NSIA), SEforALL, International Solar Alliance (ISA), and Africa50. However, high-risk premiums and currency volatility continue to impede the flow of deals. In response, regulators, including CBN, the Securities and Exchange Commission (SEC), and Nigerian Exchange Group (NGX), investors (such as pension funds), and the sovereign wealth fund are now working together to foster a supportive environment.

### Trade, competitiveness and industrial policy

The Ministries of Trade and Finance, along with Afreximbank and export lobbies, are linking climate action to market access under the African Continental Free Trade Area (AfCFTA) and the upcoming carbon-border measures. The 2024 African Trade Report emphasises that low-carbon supply chains and eco-labelling could protect Nigerian steel, aluminium, and agro-exports from tariff shocks. Since the debate focuses on export opportunities rather than constraints, it tends to promote rather than hinder climate-compatible trade reforms.

### Employment, labour and skills

Nigeria's NDC and LT-LEDS promise positive growth in jobs, especially from smart agriculture. The newly launched National Employment Policy 2025 identifies renewable energy, waste-to-energy, and the «green economy» as priority sectors. Trade unions are actively involved in this process; for instance, the Nigeria Labour Congress' 2025 position paper calls for re-skilling pathways as essential conditions for a just transition[29]. As a result, tripartite dialogue has emerged as a platform that generally supports climate initiatives, although funding for large-scale reskilling remains inadequate.

28 https://www.dmo.gov.ng/fgn-bonds/green-bond/5336-federal-republic-of-nigeria-sustainable-bond-framework/file

29 https://www.nlcng.org/wp-content/uploads/2025/07/NIGERIA-LABOUR-CONGRESS-POSITION-ON-NDC-2.0-AND-ACTION-PLAN-1.pdf

### Inequality and social protection

Only about 14.8% of Nigerians have access to any formal social protection benefits[30]. Since the expansion of safety nets is not keeping pace with climate-related shocks, civil society organisations argue that this lack of coverage could make the transition unjust, potentially hindering more aggressive climate mitigation measures.

## GOVERNANCE

The Nigerian Climate Change Act (CCA), which came into force in November 2021, provides the country's first comprehensive legal framework for addressing climate change in line with its international obligations. The Act established the National Council on Climate Change (NCCC) as the coordinating authority for all climate-related actions across sectors, with direct oversight from the Presidency. Among its key provisions are the requirements to develop a National Climate Change Action Plan and to implement a system of five-yearly carbon budgets, which set legally binding ceilings for national greenhouse gas emissions. In addition, a special Presidential Envoy on Climate (SPEC) and the Presidential Committee on Climate Action and Green Economic Solutions (P-CAGE) have been created to enhance cross-government coordination and mobilise green finance. This process reflects the country's commitment to the Paris Agreement, operationalises its Long-Term Low Emission Development Strategy (LT-LEDS, 2024), and positions the country on the path of net-zero emissions by 2060.

The National Council on Climate Change

The Department of Climate Change (DCC) within the Federal Ministry of Environment serves as the technical focal point for engagements with the UNFCCC and leads climate reporting efforts. Inter-ministerial coordination takes place at three levels: within the National Climate Change Council (NCCC), through the Federal Executive Council, and the P-CAGE/SPEC. Various stakeholder channels include non-state actors and facilitate discussions across federal, state, and local levels. Furthermore, the Energy Transition Plan (ETP) was unveiled in August 2022. It is housed in a dedicated Energy Transition Office with the Vice President's oversight. The ETP aims to decarbonise the energy sector to achieve net-zero by 2060.

The overall governance approach aims to align political, technical, and financial efforts in addressing climate change and promoting a green economy in Nigeria. The post-Paris policy suite, including the 2021 Climate Change Act, the updated Nationally Determined Contributions (NDC), the 2022 Energy Transition Plan (ETP), and the 2024 Long-Term Low Emission Development Strategy (LT-LEDS), directly address these challenges.

## INTERNATIONAL COOPERATION

Nigeria's Energy Transition Plan (ETP) estimates about USD 1.9 trillion in cumulative funding requirements by 2060. Against that, only USD 2.5 billion annually was tracked for 2021/22, which is a fraction of the required investment volume, and roughly equal to what Nigeria paid in foreign-debt service over the same period. Climate finance in 2022 was also dwarfed by US$9.3 billion in fuel subsidies and USD 6.7 billion in flood losses, illustrating why current volumes are insufficient. International public climate finance to Nigeria is mostly debt (about 54% concessional + 35% non-concessional), which strains already tight fiscal space[31]. However, private flows are rising but remain small. By sector, finance is concentrated in solar PV and power access, while buildings, industry, and waste lag. On resilience, adaptation received about USD 0.74 billion, meeting only about 6% of estimated adaptation needs, with significant shortfalls for flood risk and resilient infrastructure. Dual-benefit (mitigation + adaptation) finance exists but

30 ILO: https://www.ilo.org/sites/default/files/2025-06/CO-Abuja%20ToR_Social%20Protection%20Sector%20Review_001.pdf?utm_source=chatgpt.com

31 CPI: https://www.climatepolicyinitiative.org/wp-content/uploads/2025/05/Landscape-of-Climate-Finance-in-Nigeria-2025.pdf

is modest. Over the past decade, international cooperation has shaped Nigeria's transition through the following space.

- Nigeria Electrification Project (NEP) is achieving targets and disbursing a significant portion of funds, along with new programs attracting private developers.
- World Bank's large-scale financing supports macroeconomic stability and household protection to enable climate investments.
- Initiatives like the Siemens Presidential Power Initiative are aimed at improving transmission and grid upgrades for renewable integration.
- The establishment of the USD 500 million DRE Nigeria Fund to promote blended finance for distributed renewables.
- The Carbon Market Activation Policy aims to unlock significant funding by 2030 and international trade rules encouraging industrial decarbonisation.

However, more international cooperation is required in the following priority areas to accelerate Nigeria's transition.

- Increased concessional and local-currency financing: Given Nigeria's heavy debt burden, the country requires a larger share of grants and other friendly climate finance streams to enable pension funds and local banks to participate at scale, particularly in decentralised renewable energy (DRE), commercial and industrial solar projects, and resilient infrastructure.
- A significant focus on adaptation and resilient infrastructure: Current flows for adaptation funding meet only about 6% of the existing needs, while flood losses amount to billions. Partners should prioritise investments in urban drainage, flood protection, water and wastewater systems, climate-resilient roads and power infrastructure, as well as shock-responsive safety nets.
- Enhanced project preparation and pipeline development: The Climate Policy Initiative identified a shortage of bankable, appropriately sized projects. Nigeria and multilateral development banks (MDBs) should expand project preparation facilities, establish standardised power purchase agreements (PPAs) and environmental, social, and governance (ESG) templates, and create data rooms to expedite due diligence across the sectors of power, clean cooking, methane abatement, and adaptation.
- Scaling up methane reduction and flare-out initiatives: Nigeria is one of the leading countries in gas flaring. Cooperation between the Gas Flare Measurement and Reporting (GFMR) initiative and the Nigeria Gas Flare Commercialisation Programme (NGFCP) should be enhanced through friendly financing, standardising offtake agreements, and facilitating carbon crediting. These efforts will provide high-impact, quickly deployable mitigation strategies with significant developmental co-benefits.
- Industrial decarbonisation and trade readiness: It is essential to support measuring, reporting, and verification (MRV) systems, enhance energy efficiency, and promote low-carbon heating in sectors such as cement, steel, and aluminium.
- Ensuring carbon market integrity and transparency: With policy frameworks now in place, Nigeria needs to develop MRV systems, registries, and safeguards to transform Article 6 and voluntary market opportunities into reliable revenue streams, rather than risks.

## CONCLUSION

Nigeria's decade-long journey under the Paris Agreement reflects both measurable progress and persistent challenges in aligning climate ambition with economic and social realities. The country has moved from policy aspiration to tangible action, with frameworks such as the Climate Change Act, the updated NDC, the Energy Transition Plan, and the LT-LEDS providing a coherent strategic direction. Notable achievements, including grid-scale renewable projects, distributed energy roll-outs, clean-cooking programmes, methane-reduction initiatives, and the activation of a national carbon-market policy, demonstrate that Nigeria can convert commitments into concrete results, even within a constrained fiscal and infrastructure context. These advances indicate a growing integration of climate objectives into broader national development priorities.

However, the pace and scale of transformation remain insufficient for the 2060 net-zero goal. Entrenched bottlenecks, for example, a gas-centric development model, slow power sector reforms, inadequate infrastructure, technical and institutional capacity shortages, and a climate finance gap an order of magnitude larger than current flows, pose serious risks of delay and lock-in. The success of Nigeria's transition will depend on addressing these constraints through strengthened governance, accelerated project pipeline development, targeted capacity building, and above all, a significant increase in concessional and local-currency finance to unlock both mitigation and adaptation opportunities.

Looking ahead, Nigeria's pathway requires deepening the synergy between domestic reform and international cooperation. Priorities include scaling adaptation and resilience investments, de-risking renewable and clean energy projects for private capital, expanding methane-abatement programmes, and ensuring industrial readiness for low-carbon trade regimes. By embedding climate action into fiscal policy, industrial strategy, and social protection systems, Nigeria can deliver a transition that is not only Paris-aligned but also inclusive, competitive, and resilient, setting a benchmark for large, fossil-dependent economies in the Global South.

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