

Energy Sub-Saharan Africa Programme in Nigeria

Largest economy in Africa in 2022 with 3.3% real GDP growth

Ninth largest oil exporter in 2022

Large chemical producer



Nigeria is a large producer and exporter of oil and gas, although bioenergy still holds an important place in total supply. Electricity is generated predominantly from natural gas, followed by hydro. The residential sector is the largest consumer, mostly using bioenergy. Electricity accounts for 5% of total final consumption. Nigeria is endowed with 209.26 Tcf of natural gas and 37.5 Gbbl of oil reserves, placing the country amongst the largest producers globally. Presently, challenges in the power supply and limited economic diversification constrain economic growth.

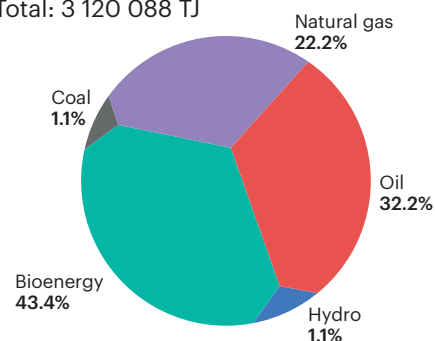
KEY POLICIES

- The **National Development Plan** (2021–2025) aims to maximise the country's potential and promote inclusive growth and sustainable development. It seeks to deliver greater energy access and a shift towards a green economy.
- The **National Energy Policy** (2022) and **National Energy Masterplan** (2022) emphasise leveraging abundant resources for sustainable energy development and engaging the private sector. The **Sustainable Energy for All Action Agenda** (2016) established Vision 30-30-30, which targets 30 GW grid capacity by 2030, with 30% from renewables. This target has since been updated in the **Nigeria Energy Transition Plan** (2021) to 42 GW of grid capacity and 6.3 GW of decentralised renewables. This plan also targets **carbon neutrality by 2060**, universal modern energy access, and a just transition for fossil fuel, requiring around USD\$ 10 billion of annual investments. The country's **Nationally Determined Contribution** aims to eliminate diesel generators by 2030.
- The **Integrated Energy Plan** (2022) seeks 100% electrification and the elimination of kerosene lighting by 2030. The **National Clean Cooking Policy** (2024) targets universal access by 2030 and includes a Rural Electrification Fund for grid connection subsidies and renewable energy systems. The country is also part of the **G7 Energy for Growth Initiative**, which will help develop bankable clean energy projects.
- Energy statistics in Nigeria are governed by the **Statistics Act of 2007**, the legal instrument established by parliament.

ENERGY MIX

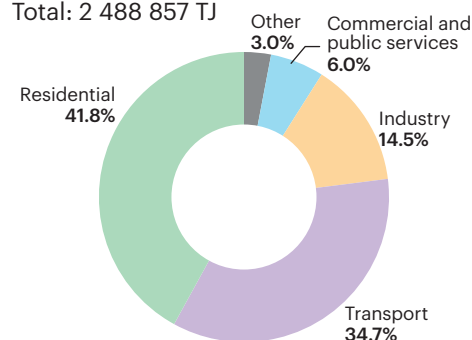
Total energy supply, 2022

Total: 3 120 088 TJ



Total final consumption, 2022

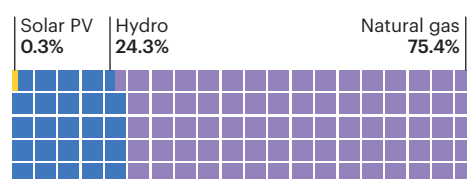
Total: 2 488 857 TJ



ELECTRICITY MIX

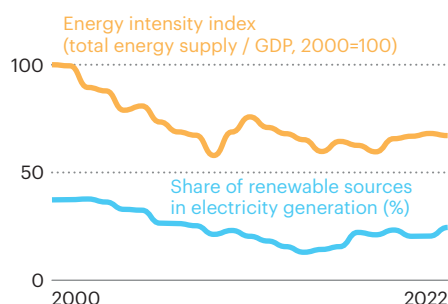
Electricity generation by source, 2022

Total: 37 916 GWh



KEY DATA

Data refer to year 2022 ▲ ▼ indicate the evolution of the indicator compared to 2021



Population ▲

218.5 million



CO₂ emissions per capita ▼

0.47 tCO₂ per capita



Energy intensity ▼

5 820 MJ per thousand 2015 USD



Gross Domestic Product ▲

534.7 billion USD (2015 prices and ex rates)



Net exports ▲

2062.7 PJ



Share of renewables in electricity generation ▲

24.5 %



ACCESS TO CLEAN COOKING AND ELECTRICITY

144 million

people rely on **traditional biomass** for cooking



22%

of population has access to clean cooking



67%

of population has access to electricity



While Nigeria ranks in the top third of countries in sub-Saharan Africa for electricity access, progress has been slow, with a big urban-rural divide. Current policies see a **strong role for solar home systems and mini-grids** in bridging this divide.

Nigeria is in the middle third of countries in sub-Saharan Africa regarding clean cooking access and has seen **rapid improvements over the past 10 years**, with clean cooking a clear political priority. The national strategy envisions that more than half of the households will **gain access to clean cooking with LPG**, and 20% will do so with **electricity** by 2030. Improved biomass cookstoves will remain important in rural communities.

Electricity access breakdown

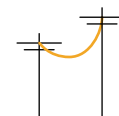
93%

of the population in **urban areas** has access to electricity



37%

of the population in **rural areas** has access to electricity



73 million

people are **without access to electricity**



TRACKING SECURE ENERGY TRANSITION

- Nigeria relies **heavily on natural gas for electricity production**. Due to grid reliability issues, many households and businesses rely on backup generators. The National Gas Expansion Program aims to **boost domestic natural gas use** for power and industry, reducing fuel imports and improving grid reliability. The government is also **investing in renewable energy**, particularly solar, to diversify electricity generation and is seeking to enhance grid infrastructure.
- Nigeria has some of the **largest oil and gas reserves** globally. However, refining capabilities have sharply declined over the past two decades, leading to almost all refined oil products being imported. To address this, Nigeria recently opened a refinery with a 650,000-barrel-per-day capacity and is working to rehabilitate state-owned refineries.
- Oil theft poses a **significant challenge** for the country and is estimated to affect as much as 25% of production, causing considerable **production declines** in recent years.

Nigeria imports and exports (energy security)

TJ	Exports	Imports
Crude oil	-2 395 988	
Oil products		1 008 853
Electricity	-8 341	
Natural gas	-667 242	
Total	-3 071 571	1 008 853

--- Net trade

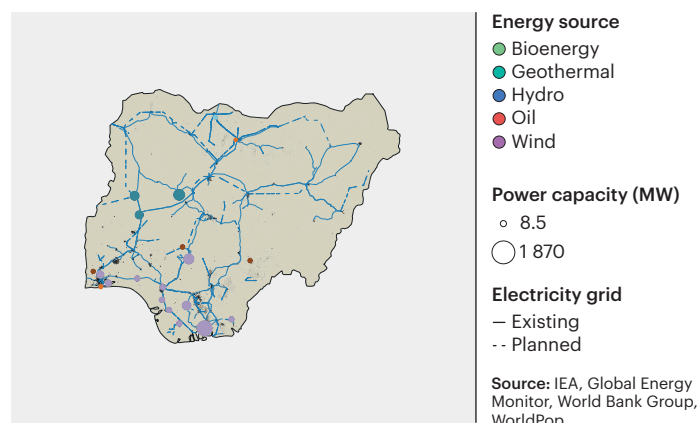
Note: Positive net value indicates that the country is dependent on imports of the energy source. Negative net value indicates that the country is a net exporter of the energy source.

Nationally determined contribution targets for energy

Base year (2016)	Unconditional (2035)	Conditional (2035)
94.5 Mt CO ₂	146.3 Mt CO ₂	136.2 Mt CO ₂

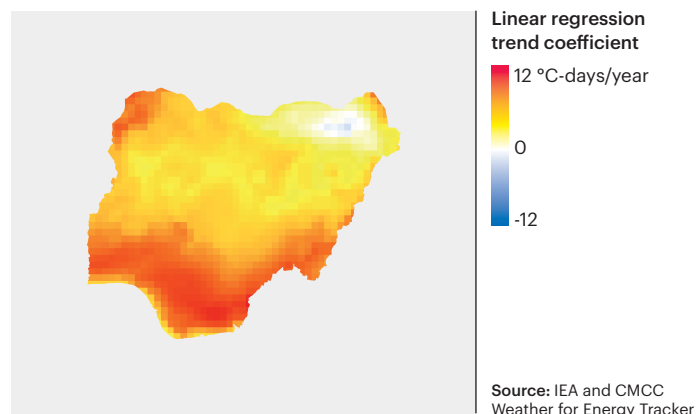
Power infrastructure map

The map below shows the types and capacities of power plants in the country as well as the electricity grid.



Weather trend map

The map below shows the annual trend of cooling degree days (indicator for space cooling needs) at grid level for 1979-2023.



These maps are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

