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UNLOCKING DATA INSIGHTS IN THE SUB-NATIONAL ELECTRICITY MARKET:

THE CASE FOR OYO STATE

WRITTEN BY NKWANNA ONYEONORU, SUPERVISED BY OLAYEMI OLALOKU

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POWER REGULATION AND INVESTMENT FRAMEWORK

For decades, electricity in Nigeria was centralised and controlled by a centralised grid. The 2013 implementation of the power privatisation policy brought with it new hope, which did not deliver as expected as supply continued to fall short of demand and forced businesses and households to rely heavily on costly and environment - polluting diesel generators.

A pivotal shift came in 2023, when constitutional amendments placed power generation on the concurrent list – this meant that sub-national entities were empowered to generate, transmit, and distribute electricity independently. This led to the subsequent passage of the Electricity Act of 2023 and ultimately to the enactment of the Oyo State Electricity Law in 2024, which established the Oyo State Electricity Regulatory Commission (OSERC); one of Nigeria's earliest, fully operational state-level power markets.

This framework has provided a transparent, predictable, and investment-friendly environment, where private investors can work directly with the State to design, build, and operate power solutions that align with local priorities.

With a framework in place, tools to support investment decisions and drive investment for specific energy projects are necessary and this is where *data* comes in. Data that provides information about the energy demand, the availability of consumers and their capacity to pay. This report shares some data insights into the profile of the Oyo State Electricity Market which is a useful format for other sub-national markets to develop.

INSIGHTS INTO THE OYO STATE ELECTRICITY MARKET

The energy demand in Oyo State is about 350 MW of electricity, however the current supply from the grid stands at 183 MW, leaving a 167 MW gap[1]. This gap highlights the State's strong investment potential, particularly in strategically defined **demand clusters**. It is relevant to note that regardless of the supply, the State has the capacity

1. ALP NG & Co. (2025). *Clusterisation Report*. Lagos.

and infrastructure to generate **560 MVA.** What this means is that there is an opportunity for Oyo State to **quickly and easily scale up electricity generation and distribution.**

A useful way for policymakers and investors to understand and therefore organise the local electricity market is to undertake a study of the area, defining consumers by type, commercial activity and population.

What follows is a snapshot of customer clusters across Oyo State.

DEMAND PATTERNS

RESIDENTIAL CONSUMERS

Residential consumers in the state represent 97.3% of electricity connections in Oyo State[2], particularly in urban areas such as Ibadan and Oyo. Although, these consumers form the largest group, their overall consumption is lower than that of commercial and industrial users, with demand peaking in the evenings and on weekends.

To ensure efficiency and revenue growth, supply should be balanced such that it meets residential demand during peak hours while maintaining steady daytime power for high-demand sectors. Load management strategies, including off-peak pricing, smart metering, and demand scheduling, can optimise supply, improve service reliability, and free capacity for commercial and industrial users.

COMMERCIAL CONSUMERS

A 2025 Budgit report indicates that Oyo state recorded a 27.40% increase in its internally generated revenue between 2023 and 2024, and commercial consumers constitute a critical segment of Oyo State's electricity demand[3]. These consumers are concentrated in vibrant business districts such as Dugbe, Molete, Apata, and Oyo Town, which power much of the State's daily economic activities. Consequently, their productivity depends heavily on the availability of consistent and reliable electricity which are served by mid- to low- capacity feeders (Bands C and D) that experience frequent voltage fluctuations, capacity constraints, and recurring outages. These disruptions increase operational costs and limit the contribution of commercial activity to the State's Gross Domestic Product (GDP). Addressing this challenge is

2. ALP NG & Co. (2025). Clusterisation Report. Lagos.

3. Alabi, V. (2025, 03 06). Ten Richest States in Nigeria. Retrieved October 2025, from Intercity: https://intercity.ng/blog/richest-states-in-nigeria#

therefore imperative, as it has revenue implications for not just investors, but the nation at large.

INDUSTRIAL CONSUMERS

Despite being fewer, industrial users consume the most electricity per connection. Key clusters, such as the Oluyole Industrial Estate in Ibadan and industrial areas in Oyo Town, host manufacturing and processing facilities that rely on continuous, high-quality power. Many of these facilities are spread across residential areas. The current supply in these zones does not fully meet demand, which can lead to production delays, higher costs from self-generation, and limits on expansion. With access to an abundance of local energy resources, the State offers multiple pathways to provide stable, lower-cost energy to these industries. Some of which include; gas, solar, hydro, and biomass. Given that Industrial Consumers provide a high return on investment, there is a need to upgrade infrastructure and integrate local energy resources can provide stable power.

OPPORTUNITIES FOR INVESTMENT

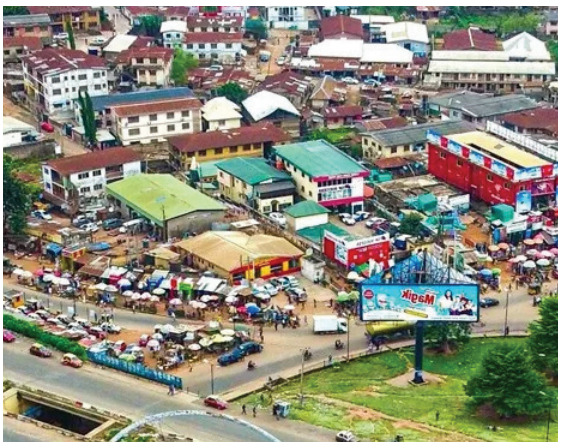
The following areas identified present opportunities for targeted electricity investments. These areas are positioned to drive the State's next phase of economic growth and development.

IBADAN

Ibadan is the largest city in Oyo State and serves as its main commercial and industrial hub. It hosts a diverse mix of residential, commercial, and industrial consumers, including key clusters such as the Dugbe, Oluyole and the University of Ibadan, making it the primary centre of electricity demand in the State.

While the city's electricity network is relatively developed, supply remains inconsistent across several districts. This inconsistency has forced residents, businesses, and industries to rely heavily on diesel generators, causing higher costs and operational disruptions. There is, however, an opportunity to meet the city's growing electricity demand by leveraging available local resources.

An alternative would be to utilize gas pipelines from Ogun State as a reliable fuel source for power generation within the city. Another option is to harness hydropower from the Eleyele and Asejire dams to complement the grid, providing a cleaner and more sustainable energy supply. Targeted investments here could stabilize supply for over 4 million[4] residents and businesses.



IBADAN

4. WORLD POPULATION REVIEW. (n.d.). *Ibadan*. Retrieved October 2025, from https://worldpopulationreview.com/cities/nigeria/ibadan

SAKI AND ISEYIN

Saki and Iseyin, located in the northern part of Oyo State, are emerging agro-industrial hubs. Both towns focus on farming, processing, and small-scale manufacturing. These communities are largely underserved, experiencing limited and sometimes inconsistent electricity supply, which has led many households and businesses to rely on self-generation. Similar to Ibadan, these areas have significant potential to improve supply by utilizing locally available resources. For example, the Sepeteri Dam near Saki can support small-scale hydropower generation. Saki's position as a boundary town near Kwara State also offers the possibility of supplying surplus electricity to neighbouring regions, while Iseyin's strategic location makes it ideal for supporting regional electrification and industrial growth.

SAKI AND ISEYIN

PATHWAYS FOR INVESTORS

Oyo State's electricity market offers multiple entry points for private investors seeking both impact and returns. The gaps in supply, combined with strong demand in residential, commercial, and industrial clusters, create clear opportunities to deploy capital and expertise.

INFRASTRUCTURE DEVELOPMENT

Investors can participate by upgrading and expanding the transmission and distribution network. Key opportunities include modernising feeders in commercial districts, improving substation capacity, and implementing smart grid solutions to enhance reliability and reduce losses. Microgrids in underserved areas such as Saki and Iseyin can provide localised, consistent power, and support both communities and small businesses.

LOCAL AND RENEWABLE GENERATION

Gas pipelines, hydropower from Eleyele, Asejire, and Sepeteri Dams, as well as solar and biomass resources, offer diverse options for generation projects. Private investment in these resources can supplement the grid, reduce reliance on diesel generation, and provide clean, sustainable energy to high-demand areas.

PUBLIC-PRIVATE PARTNERSHIPS (PPPS)

Through the Oyo State Electricity Law and the state regulator, investors may engage in structured partnerships with government agencies. These PPP arrangements may include co-development of generation facilities, feeder upgrades, or renewable energy projects, providing a clear regulatory framework and reducing implementation risks.

INNOVATIVE SERVICE MODELS

Beyond generation and infrastructure, investors may explore service-based models such as prepaid metering, energy-as-a-service solutions, and off-peak pricing strategies. These approaches not only improve operational efficiency but also create new revenue streams while meeting consumer demand.

By strategically targeting high-demand clusters, leveraging local energy resources, and working within the State's supportive regulatory framework, there are opportunities for investors to close the electricity gap, drive economic growth, and secure long-term returns in a rapidly expanding market.

Strategic investments in infrastructure upgrades, local and renewable generation, and innovative service models can close supply gaps, enhance reliability, and drive economic growth. By engaging with government priorities and leveraging Public-Private Partnerships, investors can generate sustainable returns while contributing to the State's industrial expansion and long-term position as a model for electricity development in Nigeria.

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ALP NG & Co.
AFRICA LAW PRACTICE NG & COMPANY
WWW.ALP.COMPANY

CONTACT US:

Lagos
15 Military Street, Onikan, Lagos

+234 201 700 2570-9

Abuja
3 Lobito Crescent, Wuse 2, Abuja

+234 209 700 2570-9

www.alp.company

alp@alp.company

ALP NG & Co

alpng.co

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