

NISO Unplugged: Opportunities in Nigeria's Transforming Power Sector

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Nigeria's power sector has undergone significant transformation over the past decade, navigating the complexities of managing a national grid. In 2013, the Transmission Company of Nigeria (TCN) assumed the dual role of managing electricity transmission infrastructure and serving as an independent system operator. Despite TCN's efforts, persistent challenges such as aging infrastructure and operational inefficiencies revealed the need for reform. The Electricity Act of 2023, signed by President Bola Tinubu, ushered in strategic change by unbundling TCN and establishing the Nigerian Independent System Operator (NISO), a process formalised through the NERC Order on the Establishment of the Independent System Operator (Order no: 2024/45).

This restructuring assigns NISO responsibility for critical system operations, including generation dispatch, grid coordination, and market oversight, while allowing TCN to focus solely on transmission infrastructure. Such a shift promises a more reliable and accountable electricity grid, opening new possibilities for private investment in Nigeria's dynamic power sector. In this article, we explore NISO's role in the Nigerian Electricity Supply Industry (NESI) and highlight the promising avenues it opens for investors.

► NISO's Role in the Nigerian Electricity Supply Industry (NESI)

NISO's creation marks a pivotal step for NESI, as it independently manages the national grid to ensure reliable operations and transparent market administration. By operating free from conflicts of interest, NISO fosters competition, ensures equitable grid access, and aligns Nigeria's power sector with international standards. Its key responsibilities include:

► **Grid Management and Reliability:**

Balances power supply and demand to maintain stable frequency and voltage levels, reducing the risk of grid failures.

► **Equitable Transmission Access:**

Guarantees fair access to the transmission network for all market participants, including

generation (GENCOs) and distribution companies (DISCOs).

► **Market Oversight:**

Streamlines wholesale electricity trading by facilitating clear communication and processes between generation and distribution entities.

► **System Planning:**

Identifies future transmission needs and recommends infrastructure upgrades in collaboration with regulators and investors.

► **Compliance Monitoring:**

Enforces grid codes and operational standards, imposing penalties for violations to uphold market integrity.

► **Renewable Energy Integration:**

Facilitates the connection of renewable energy sources such as solar, wind, and hydro to the grid while addressing challenges associated with intermittent supply.

By guaranteeing equal grid access, promoting market equity, and bolstering system stability, NISO

is positioned to reduce grid failures significantly while encouraging private investment and the integration of renewable energy. Its independent oversight will help address conflicts of interest, align operations with global standards, and minimise market inefficiencies; ultimately nurturing a more dependable, transparent, and competitive electricity market in Nigeria.

► Opportunities for Private Investors

NISO's establishment creates fertile ground for private investment throughout the power sector. Improved grid reliability and equitable transmission access encourage investments in power generation, giving private entities including independent power producers (IPPs) the confidence to develop projects in gas, solar, or hydro power. Furthermore, NISO's mandate to promote renewable energy paves the way for increased private involvement in sustainable projects such as solar, wind, and energy storage initiatives.

The transmission sector, now ripe for modernisation, offers significant potential for private capital. Historically, TCN has struggled with underfunding and aging infrastructure, but NISO's emphasis on efficiency highlights the urgent need for upgraded transmission lines, substations, and modern grid

technologies. Public-private partnerships, such as Build-Operate-Own-Transfer (BOOT) models, where investors finance and manage infrastructure before transferring ownership offer attractive opportunities. These arrangements allow private capital to fund critical upgrades while earning returns through structured tariffs or incentives.

Finally, NISO's transparent market operations remove barriers to wholesale electricity trading, enabling investors to engage directly in energy markets. This streamlined system supports opportunities in energy trading, ancillary services, and cross-border commerce, leveraging Nigeria's strategic geographic position. A supportive policy environment, with incentives like tax holidays and pioneer status, further enhances the appeal of these ventures.



Conclusion

Far more than a reorganisation, NISO addresses longstanding challenges in Nigeria's power sector, from TCN's overburdened role to chronic grid inefficiencies. By coordinating power generation, managing transmission operations, and regulating market activities, NISO should lay a strong foundation for a modernised, competitive electricity market. This transformation not only tackles persistent power challenges but also creates exciting prospects for private investors. As NISO drives reliability, transparency, and renewable energy integration, it should position Nigeria's power sector as a promising destination for investment in Africa's largest market.

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