Energy Policy Workshop Report:

Nigeria's Electricity Challenges and Policy Bottlenecks

21st May, 2019 | Abuja, Nigeria

Executive Summary

This report outlines the proceedings of the Energy Policy Roundtable – a coordinated workshop to present research-based, practical options and solutions specific to the Nigerian power sector. The session was designed to engage sector stakeholders with the aim of determining specific challenges, and translating the conversations to adoptable government policies, strategies and programmes.

The consensus revolved around issues such as gas supply, regulatory misalignment (between the gas and electricity sectors), lack of validated data, poor enforcement of contracts, low but politically-sensitive electricity tariff/pricing, rampant electricity theft/non-payment, and liquidity shortfalls.

Many of these challenges are due to deadlocks created by a weak coordinating body with misaligned incentives. It will require significant realignment of policy incentives by the government in order to begin to unwind the interconnected issues. Significantly higher quality data is also required for policy planning, and stricter enforcement of existing rules must be implemented. None of these challenges can be addressed piecemeal, and broad sector coordination by the government is required to enable a fair and transparent electricity market.

1. Background

Nigeria is Africa's largest economy, and has one of the widest energy gaps in the world. To provide the necessary economic growth for its growing population, Nigeria urgently needs to improve its power sector. The country's current installed capacity is close to 13,000 megawatts, but in practice only about 3,800 megawatts gets evacuated for consumption due to the various breakdowns across the value chain. The government's aim to boost electricity access from 45% today to 90% by 2030 require extensive plans for rural and urban electrification, and will drive even more demand. The government privatized part of the power sector in 2013, hoping to promote efficiency, attract private investment, and increase generation, but this has yet to deliver results due to misaligned incentives. Post-privatization, many of the challenges witnessed have been centred on unreliable gas supply, electricity tariffs below cost recovery, vandalism, insufficient metering, and liquidity shortfalls.

2. Overview of Nigeria's Electricity Challenges and Policy Bottlenecks

Policymaking is currently severely hamstrung by the lack of strong coordination, resulting in a piecemeal approach to implementation that limits effectiveness and induces bottlenecks in the market.

Key challenges discussed in the session:

- The lack of basic validated data, such as electricity demand, electricity supply, ATC&C losses, and stranded generation capacity is a major challenge for planning and investment in the power sector.
- Contract implementation is erratic. A coordinating tool between institutions will be required to ensure better contract adherence.
- With regards to the government's numerous bailouts and intervention funds, the incessant cycle of 'throwing good money after bad money', with the hope to resolve or recoup losses, needs to halt. The government and market operators must now come up with resourceful and innovative models to raise capital and to encourage payment all along the value chain.

3. Solving Barriers in the Gas-to-Power Value Chain

Currently, gas thermal power systems accounts for about 85% of installed capacity and 80% of grid capacity. Yet unsolved gas shortages have been the foremost challenge in power generation, as neither commitments nor frameworks (including regulatory and policy) have been provided gas distribution infrastructure to enable gas-to-power growth.

Proposed ideas during the session included:

- A renewed focus on long-term contracting and gas pricing mechanism, seeking non-power sector anchor customers to help develop the gas market, and as well as building more LNG export capacity -- and even considering building gas import capacity to help establish a functional market for gas.
- Vesting contracts between the Distribution Companies (DisCos) and Nigerian Bulk Electricity Trader (NBET) should be better enforced and aligned with evacuation contracts, Power Purchase Agreements (PPAs), Gas Supply Agreements (GSAs) and Gas Transportation Agreements (GTAs). This will enable a transition to bilateral agreements between the market operators, as well as a spot electricity market.
- The government must prioritize reform, as the current noncommittal approach to the sector results in regulatory misalignments.

- Gas prices should be cost-reflective for the related stakeholders in the gas-to-power value chain.
- Gas price setting mechanisms must be incorporated in long-term contracts for gas supply, gas distribution, power purchase and cost-reflective tariffs.
- Legacy debts owed to gas suppliers must be resolved, which will require fixing policy, regulatory, and commercial challenges.

4. The Role of Various Stakeholders (NESI)

The Nigerian Electricity Regulatory Commission (NERC) representatives noted that electricity's critical issues include inefficient operations, under-investments, and poor customer relations. Lack of liquidity mainly on account of a non-cost reflective tariff is a barrier; electricity is being sold below the realistic production and delivery cost. As a result, the electricity supply industry has witnessed tariff and market shortfalls in excess of 1.7 trillion naira (2015 - 2019), and 440 billion naira in 2018 alone. Accordingly, addressing the liquidity challenges could start from defining and coordinating the roles of the different stakeholders in the sector.

Some of the highlights from this session included:

- In order to attract investments to the power sector's electricity market, the regulator will need to:
  - update the MYTO methodology to ensure a cost-reflective tariff;
  - review the DisCo's investment/Performance Improvement Plan (PIP);
  - promote regulations that ensure sustainable business practices;
  - drive regulatory certainty and consistency in conducting minor reviews in a timely manner;
  - activate all contracts (PPAs, Vesting Contracts, GSAs, Market Participation, Transmission and Distribution; use of System charges, Ancillary Services);
  - ensure complete disbursement of the NEMSF balance;
  - create a transparent and effective regulatory framework;
  - enforce market regulations on ATC&C loss reduction, power theft, and metering penalties; and
  - increase transparency on industry revenues and cost.

Operators, regulators, policy makers and other stakeholders should collectively work together in a constructive manner, and apply appropriate market reward and sanctions when necessary.

5. Estimated Billing, Energy Theft, and Metering

In 2018, the 11 DisCos supplied 79,850 prepaid meters in 2018, however the metering gap remains at nearly 4.6 million. As such, the total number of consumers with prepaid meters increased only 1% to 1.67 million customers in Q4 2018. The general perception is that the use of estimated billing contributes to general aversion to electricity theft and non-payment by consumers. The general lack of transparency and accountability between the DisCos and consumers further aggravates the situation, leading to constant consumer complaints about exorbitant bills, consumer apathy in paying for electricity, consumer hostility, assault and physical harm on DisCo staffs.

For the DisCo's to ensure sustainable business practices, there is a need to raise capital, invest in infrastructure, improve service delivery, sensitize consumers and adopt innovative business models.

Key challenges from the session included:

- This issue is not the consumers alone. The government should enforce a law that penalizes any party that defaults or engages in corrupt practices.
- Practical measures should be taken to cap and eventually eliminate estimated billing
- Electricity consumers face a monopoly that has no incentive to serve them professionally.
- There is an absence of legislations and criminal codes to check the problems of energy theft, illegal/cluttered connections and estimated billing.
- Case studies and pilot projects are important in resolving illicit activities, such as energy theft, meter bypass/tampering, illegal/clustered connections and estimated billing. It also ensures that the DisCos adopt best and sustainable business practices using technological solutions, innovative business models and Corporate Social Responsibility to improve their revenue stream.

6. Conclusions and Action Points

Some of the key recommendations and action points were aimed at translating what was discussed in the dialogue into policies, strategies and programmes. These included:

- Gas pricing mechanism may not entirely be within the control of the sector due to certain macroeconomic factors such as inflation, foreign exchange rate, militancy, vandalism and gas sector regulations.
- Lack of liquidity largely on account of a non-cost reflective tariff is a fundamental barrier, because electricity is being sold below the realistic cost of producing and supplying it.
- Addressing the challenges facing the sector could start from defining and coordinating the roles of the different stakeholders in the sector, while technological solutions is key in resolving challenges in the distribution
- Consumers also need to be better sensitized and protected to enhance interest in the power sector.
- Gas-to-power supply chain can never be financially viable without adequate collections from electricity consumers.
- To resolve the regulatory misalignment between the gas and electricity sectors, there should be closed-door roundtables involving the gas regulators, electricity regulators and the electricity generating companies.

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