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Alternative Energy & Power 2021

Nigeria
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NIGERIA

Law and Practice

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1. GENERAL STRUCTURE AND OWNERSHIP OF THE POWER INDUSTRY

1.1 Principal Laws Governing the Structure and Ownership of the Power Industry

The Electric Power Sector Reform Act, 2005 (EPSRA or "the Act") is the principal legislation governing the structure and ownership of entities in the Nigerian Electricity Supply Industry (NESI). The EPSRA was passed for the purpose of unbundling the existing vertically integrated and state-owned Nigerian Electricity Power Authority (NEPA), creating an independent regulator for the industry – the Nigerian Electricity Regulatory Commission (NERC) – and achieving market liberalisation. The Act introduced several reforms including:

- the formation of 18 successor companies from the unbundled NEPA and the privatisation of the successor companies, except the Transmission Company of Nigeria (TCN);
- the establishment of the Rural Electrification Agency (REA) and a rural electrification fund; and
- the establishment of the Power Consumer Assistance Fund (PCAF).

Structure of the NESI

The NESI is structured as a progressively competitive market with a three-phased approach to liberalisation.

- The transitional electricity market (TEM) – this is the first stage of the market which is characterised by an unbundled service structure and contract-based transactions, thereby introducing competition into the NESI. The NESI is currently in this first stage, although the relevant industry contracts have not been activated.
- The medium-term market – this second stage is characterised by full competition in the NESI. This stage will witness more competition in electricity generation, a centrally administered balancing system for the market and limited retail competition.
- The final market – this is the final stage envisaged by the EPSRA and it will be characterised by full wholesale and retail competition, governed by bilateral contracts.

Market Participants

The NESI is comprised of several fully unbundled entities across the value chain overseen by an independent regulator empowered to regulate the generation, transmission, distribution, and supply of electricity.

The structure of ownership of NESI participants depends on the nature of the entity. The NESI comprises successor companies and other independent companies, and the ownership structure of the successor companies depends on the modality of privatisation employed in respect of the particular asset.

The Federal Government of Nigeria (FGN) employed several methods to privatise successor companies, such as core investor sales, asset sales, management contracts and concessions. The hydro generation plants were concessioned for a 15-year period to investors, while the thermal generation plants were privatised via asset sales. The distribution companies were privatised under a core investor sale. The transmission service remains within the control of the FGN.

In addition to the successor companies, there are several private entities licensed by NERC including independent power producers (IPPs), such as the Azura power plant (the first project-financed power generation plant in Nigeria). NERC has also licensed some independent elec-

tricity distribution networks (IEDN) for specific closed uses.

To prevent the emergence of vertically integrated entities, the EPSRA prohibits any licensee from the acquisition, purchase or otherwise of any other licence from a person in the business of electricity generation, transmission, system operation or trading, except as permitted under the Act.

Regulatory Bodies

In addition to NERC, the following government bodies also have an impact on the NESI:

- the Federal Ministry of Power – responsible for policy direction for the NESI; and
- the Gas Aggregation Company of Nigeria – responsible for co-ordinating the domestic gas supply.

1.2 Principal State-Owned or Investor-Owned Entities

The ownership of power utilities in Nigeria is organised as follows.

State-Owned Power Utilities

Generation

Following the privatisation of the successor generation companies, the FGN retained ownership of the hydro-power generation plants. However, these have been concessioned to private companies for initial terms of 15 years each.

Transmission

TCN is wholly owned by the FGN and is responsible for electricity transmission in Nigeria. TCN was established and licensed to manage the electricity transmission network and it houses two business units which are licensed by NERC to provide electricity transmission services and system operations. TCN is comprised of three operational departments: transmission service provider (TSP), system operator (SO) and market operator (MO).

TCN initially operated under a management contract by Manitoba Hydro International for a period of three years. Upon termination of the management contract, the management and operation of TCN reverted to the FGN.

Investor-Owned Power Utilities

There are several investor-owned companies operating in the NESI under licences issued by NERC. These include some of the privatised successor distribution and generation companies.

Generation

Investor-owned successor generation companies in Nigeria include:

- Afam Power Plc Egbin Power Plc;
- Kainji Hydro Electric Plc;
- Sapele Power Plc;
- Shiroro Hydro Electric Plc; and
- Ughelli Power Plc.

There are also several licensed IPPs operating in different parts of the country. The generation licences issued by NERC are for on-grid, off-grid and embedded power generation.

Transmission

No investor-owned company transmits power in Nigeria.

Distribution

No distribution network is wholly owned by investors.

Investor/State-Owned Power Utilities

Generation and transmission

No generation or transmission assets are jointly owned by investors and the FGN.

Distribution

Distribution of electricity in Nigeria is carried out by 11 successor distribution companies ("Discos") operating within their franchise areas. The Discos are jointly owned by the FGN and private investors, with each investor holding 60% and the FGN holding 40%. The Discos are:

- Abuja Electricity Distribution Company Plc;
- Benin Electricity Distribution Company Plc;
- Eko Electricity Distribution Company Plc;
- Enugu Electricity Distribution Company Plc;
- Jos Electricity Distribution Company Plc;
- Ibadan Electricity Distribution Company Plc;
- Ikeja Electricity Distribution Company Plc;
- Kaduna Electricity Distribution Company Plc;
- Kano Electricity Distribution Company Plc;
- Port Harcourt Electricity Distribution Company Plc; and
- Yola Electricity Distribution Company Plc.

Of the 11 Discos, the Yola Disco was repossessed by the FGN following the exercise of the put-call option by the initial investor due to insurgency within its franchise area. The FGN recently approved the sale of the Yola Disco to a new investor. As at the date of publication, the sale is yet to be finalised.

Sale of Electricity

The sale of electricity is conducted by the Nigerian Bulk Electricity Trading Plc ("NBET" or the "Bulk Trader"), which is licensed by NERC. Generation companies ("Gencos") sell power generated in bulk directly to NBET, and NBET sells this power to the Discos and other eligible customers. This arrangement was designed to guarantee the demand and supply of electricity in the NESI.

NBET enters into power purchase agreements (PPAs) with the Gencos for the bulk purchase of power and vesting contracts with the Discos for the resale of electricity. Transmission from the Gencos to the Discos is executed by TCN through grid connection agreements with the Gencos and transmission agreements with the Discos.

Electricity sale to end-users is undertaken by the Discos within their franchise areas. Payment for electricity is made by consumers to the Discos and then remitted to NBET for settlement of all invoices along the value chain to the various market participants.

1.3 Foreign Investment Review Process

Generally, there are no specific laws that promote or restrict foreign investment in the NESI. During the privatisation era, bids for successor companies were made by both foreign and local companies, with the emphasis on the bidder who could offer the most value. Most of the core investments in the successor companies were in the form of foreign direct investment (FDI).

Incentives for Investing in the NESI

Post-privatisation, the FGN has taken steps to attract FDI into the sector by creating policies to improve financial rewards for investors. The primary benefit to investors is the implementation of the Multi Year Tariff Order (MYTO), which is designed to create a cost-reflective tariff that accounts for operating costs and guarantees capital recovery, incentivising efficient operations based on the best capabilities and technology.

Foreign investments in the NESI are generally subject to the usual foreign investment laws, guidelines and incentives. The desired investment may be brought in by way of an equity investment, a loan to a local company or a mix of equity and debt. This equity or loan may take the form of cash or equipment. Investors are guaranteed repatriation of their investments brought into Nigeria through the authorised channels.

The licensing of NBET to guarantee offtake and resale of power generated until the Discos become credit-worthy and capable of entering bilateral contracts with the Gencos was also an initiative to incentivise investment.

In addition, the general incentives for investment, in the form of tax breaks applicable to other sectors of the economy, also apply to the NESI. For example, companies manufacturing transformers, meters, switch gears, control panels, etc, are guaranteed a three to five-year tax holiday.

Protection against Seizure and Forfeiture

Nigerian law protects FDIs against seizures and forfeitures. The Constitution of the Federal Republic of Nigeria 1999 (as amended) (the "Constitution") generally prohibits the seizure of a citizen's property but provides a procedure to divest a person of their property.

Furthermore, Section 25 of the Nigerian Investment Promotion Council Act encourages foreign investment in Nigeria and assures foreigners that such investments are preserved from expropriation or compulsory acquisition by any government of the federation.

Compulsory acquisitions are only permitted where such acquisition is in the national interest or for a public purpose, and under a law that makes provision for (a) payment of fair and adequate compensation and (b) a right of access to the courts for the determination of the investor's interest or right and the amount of compensation to which the investor is entitled. Nigeria is a party to several bilateral investment promotion and protection agreements and treaties which signal its efforts to attract and protect foreign investment. Every investor in the power sector is guaranteed access to the Nigerian courts, as well as arbitration of the parties' choice. Foreign arbitral awards can be enforced in Nigeria, since Nigeria is a signatory to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

1.4 Principal Laws Governing the Sale of Power Industry Assets

There are no sector-specific laws dealing with the sale or transfer of power assets. Any such sale or transfer will be subject to regular Nigerian laws governing such transactions, such as the Companies and Allied Matters Act, the Investment and Securities Act, the Securities and Exchange Commission (SEC) Rules (where the entity is a public company), and the Federal Competition and Consumer Protection Act (FCCPA).

Regulatory Consents for Sale of Assets

Section 69 of the EPSRA prohibits transfers or assignments of power assets and licences without the consent of NERC. The NERC order on the procedure for obtaining the approval of the Commission for the assignment/ceding of a licence, transfer of undertaking or change in shareholding of licensed entities, issued in September 2013 pursuant to Section 69 of the EPSRA, regulates the transfer of assets or interest in assets in the NESI.

NERC has also issued guidelines for the determination of fit and proper entities and persons engaged in electricity undertakings in the NESI. This document sets out the minimum standards to be met by any market participant and any person in a directorship or executive management position in a licensee, who holds more than 5% equity in a relevant licence.

Under said guidelines, the transferee must have technical and financial capacity, must be able to establish a sustainable business, and must also satisfy personal and corporate governance requirements.

The objective of these regulations is to prevent vertical arrangements in the NESI and to foster competition. The EPSRA is attentive to cross-holdings or cross-ownership between licensees and requires that applicants for licences disclose their interest in any other licensee where such holding is at or above 10%.

Competition Regulation

The sale of power assets will be regulated under the FCCPA. This act prohibits restrictive agreements and abuses of dominant position resulting from a sale or merger of business entities or assets. The FCCPA also provides for notification of any mergers or acquisitions, or arrangements which meet certain thresholds.

Section 93 (1) of the FCCPA provides that all large mergers and some small mergers occurring in Nigeria shall be notified for review and approval to the Federal Competition and Consumer Protection Commission (FCCPC). In considering a transaction for the purpose of approval, the FCCPC will typically request proof of sector-regulatory approval.

A merger or acquisition or a relevant notifiable transaction may not be implemented without the approval of the FCCPC, which may approve a transaction unconditionally or impose conditions or prohibit the implementation of a merger. It is worth noting that the FCCPC has extraterritorial jurisdiction. Thus, foreign transactions which have an impact in Nigeria may also be notifiable.

The FCCPC has established several procedures for the notification process, as follows:

- the expedited process – this is a 15-day notification process which may be adopted upon payment of the relevant fees;
- the simplified process – this process lasts 45 days and may be adopted for transactions which parties do not envisage will raise any competition concerns; and
- the standard procedure – this is a standard notification process that lasts 60 days.

An applicant may combine the expedited and simplified procedures by paying the relevant fees.

The FCCPC has published regulations and guidelines aimed at clarifying which entities have been processed under the FCCPA and has shown willingness to engage with parties to avoid a breach of the FCCPA.

1.5 Central Planning Authority

The determination of electricity supply adequacy and generation planning and development falls within the purview of TCN, as does transmission system planning and the development and enforcement of system reliability standards.

TCN's functions are primarily to build, operate, expand and upgrade transmission facilities for the efficient and effective transmission of generated electricity, to create adequate network redundancies to ensure at least 99.9% reliability, and to reduce transmission losses to less than 5%.

TCN comprises three semi-autonomous units:

- the transmission service provider (TSP) – responsible for construction, maintenance and operation of the transmission infrastructure, grid expansion and grid reliability, and for providing secure reliable evacuation of power and for establishing new interconnection points;
- the system operator (SO) – responsible for system operations, maintaining system reliability and stability, enhancing system security, facilitating merit order dispatches, and conducting system studies, among other things

(the SO is also responsible for the design, installation and maintenance of supervisory control and data acquisition (SCADA) and other communication facilities for effective grid operations); and
- the market operator (MO) – responsible for the administration of the wholesale electricity market, the implementation of market rules and settlement arrangements.

1.6 Recent Material Changes in Law or Regulation

There has been no recent change in the primary legislation governing the NESI. However, NERC has issued several regulations and guidelines that are instrumental to the development of the power sector.

The most recent guidelines issued by NERC include the 2020 Guidelines on Filing Applications for Competition Transition Charge by Electricity Distribution and Trading Licensees, which are targeted at adequately compensating Discos and electricity traders for losses suffered as a result of the exit of an eligible customer from the network.

NERC has also issued Guidelines on Distribution Franchising in the NESI, to regulate franchising arrangements entered by the Discos and to ensure that customer care standards are complied with.

There is a bill pending before the National Assembly that seeks to amend the EPSRA. This bill proposes to provide for NERC's effective supervisory role over the distribution companies through the provision of a regulation for tariff increments, consumer education and alternative energy sources for sufficient power supply, and other related matters.

1.7 Announcements Regarding New Policies

There have been no significant policy changes regarding the NESI. However, there are several programmes which have been announced by the FGN or which are being implemented in the NESI.

The World Bank Power Sector Reform Programme (PSRP) is driven and funded by the World Bank and designed to achieve policy actions and operational and financial interventions to be implemented by the FGN to attain financial viability in the NESI. The FGN also introduced the National Mass Metering Programme in collaboration with Discos and local meter manufacturers to provide smart prepaid meters to all unmetered customers.

1.8 Unique Aspects of the Power Industry

The NESI has certain characteristics and faces several challenges that are unique to it. One major feature of the NESI is the existence of NBET, which is designed to function as an interim body to reassure investors and guarantee the demand and supply of electricity pending the declaration of full competition in the market. To ensure performance of its functions, NBET is supported by the FGN and the World Bank through the issuance of credit enhancement guarantees.

Another unique feature of the NESI is the lack of active contracts. Several years after the declaration of TEM, strategic contracts such as the PPAs and vesting contracts are still not active. This has resulted in liquidity challenges and the emergence of FGN bail-outs.

Following the Central Bank of Nigeria-Nigerian Electricity Market Stabilisation Fund (CBN-NEMSF) introduced in 2014 to plug the losses incurred during the interim rules period estimat-

ed at NGN213 billion, the FGN introduced the payment assurance facility (PAF) in 2017 – worth NGN701 billion – to guarantee payment of the Gencos' invoices.

Like the CBN-NEMSF, the PAF is described as a loan to NBET to meet its obligations and is to be paid back over an agreed period. The success or otherwise of both schemes is arguable.

2. MARKET STRUCTURE, SUPPLY AND PRICING

2.1 Structure of the Wholesale Electricity Market

The NESI wholesale market is structured as progressively competitive, currently based on the single-buyer model co-ordinated by NBET. The NESI is currently in TEM which ought to be characterised by active contracts and the introduction of competition.

EPSRA Regulations

Section 68 of the EPSRA provides for the granting of trading licences for purchasing, selling and trading of electricity. The EPSRA also provides for the granting of temporary licensing for bulk purchasers who will have the right to purchase power and ancillary services from successor Gencos and IPPs, and to resell these to Discos and other eligible customers. NBET was licensed as a bulk purchaser pursuant to this provision.

Role of the PPAs

The wholesale electricity market has been designed around NBET as the bulk purchaser. NBET has entered several PPAs with successor Gencos and IPPs for energy generated and capacity maintained, whether this was commensurate with the energy generated or not. NBET has also entered energy-only PPAs. Although this latter type of PPA includes a capacity component, the payments made are equivalent to the energy generated. The result is that the NESI consists of two types of PPAs.

The price of wholesale electricity is largely determined by the PPAs on a Genco-by-Genco basis. Although NERC issues tariffs to the Gencos, these form the baseline for the Gencos' tariffs and do not indicate the actual cost of wholesale electricity. These rates are reviewed periodically, taking into consideration the prevailing exchange rate, the rate of inflation and the current price of gas. Consequently, the price of power generated varies from Genco to Genco.

Sale of Electricity

NBET then sells bulk electricity to the Discos and, upon reconciliation with the MO, settles the relevant market invoices. The MYTO for the respective Discos sets out the tariff applicable to each Disco.

2.2 Imports and Exports of Electricity

Nigeria currently supplies power to Togo, the Benin Republic and Niger under bilateral agreements entered between the governments of Nigeria and these countries. At the time of writing, none of these countries supplies power to Nigeria.

Nigeria is also a member of the West African Power Pool (WAPP), an agency of the Economic Community of West African States (ECOWAS), under which arrangement it trades electricity with some of its neighbouring ECOWAS countries. WAPP is an initiative conceived to achieve a regional electricity market for the ECOWAS region.

2.3 Supply Mix for the Entire Market

The supply mix for the NESI comprises thermal, hydro and solar-generated power. NBET currently has three hydro PPAs and over 20 thermal PPAs. There is also the famous Azura PPA entered with Azura Power for the development

of the Azura-Edo IPP Project, the first project-financed electricity IPP in Nigeria.

Although NBET reportedly signed agreements with about 14 solar PPAs to promote on-grid solar projects, none of these PPAs has achieved financial success. However, there are several mini solar projects in Nigeria which supply power to homes and businesses on an isolated level.

In this publication, the focus is on hydro and thermal sources.

2.4 Principal Laws Governing Market Concentration Limits

There are no specific laws governing market concentration limits in the NESI. However, NERC is empowered by the EPSRA to enforce competition in the electricity sector at the different stages of the NESI.

NERC is also responsible for ensuring that the abuse of market power is prevented or mitigated, and it may conduct investigations, undertake inquiries or monitor licensees for this purpose.

Furthermore, NERC can issue cease-and-desist orders to discontinue certain behaviours, impose penalties, levy fines, and make any other orders consistent with discharging its role as regulator.

2.5 Agency Conducting Surveillance to Detect Anti-competitive Behaviour

The EPSRA contains provisions to determine anti-competitive behaviour. Generally, anti-competitive behaviour will be considered in the context of market power, exclusivity or disparate treatment. The major indicators are:

- the ability of a seller or group of sellers to maintain prices above a competitive level; and
- the ability to maintain stable prices while reducing the quality of the product or service provided over a significant period.

The FCCPC is also empowered to monitor competition across various segments of the Nigerian economy and may sanction any anti-competitive or monopolistic business operations. The FCCPC is empowered to conduct investigations, request documents, and compel witnesses to provide information where necessary. Further to an investigation, the FCCPC may prohibit certain conduct, require corrective measures to be taken, sanction companies for gun-jumping or violation of other provisions of the FCCPA and where necessary, prosecute offenders.

The recently published FCCPC administrative fines and penalties guidelines 2020, sets out the principles for determining applicable penalties and the mode of calculating these penalties.

3. CLIMATE CHANGE LAWS AND ALTERNATIVE ENERGY

3.1 Principal Climate Change Laws and/or Policies

Given the developments in the global energy market, the development of a climate change policy and response strategy is critical to the Nigerian economy. The government's vision 20:2020 identified investment in low-carbon fuels and renewable energy as one of its key pillars. Successive governments have also identified investments in alternative energy sources and reduction of emissions as important to the economy.

While there is no legislation targeted specifically at addressing climate change issues in Nigeria, piecemeal provisions have been included in

some legislation and policy documents issued by successive governments. These include:

- the National Environmental Standards and Regulations Enforcement Agency Act (NESREAA), Section 7 of which mandates the agency to enforce compliance with the provisions of international agreements, protocols, conventions, and treaties on the environment; the NESREAA also issued the National Environmental (Energy Sector) Regulations, 2014 for the power industry;
- the Environmental Impact Assessment Act;
- the Harmful Waste (Special Criminal Provisions etc) Act;
- the Nuclear Safety and Radiation Protection Act; and
- the National Policy on Climate Change Nigeria 2013.

There is presently a climate change bill pending before the National Assembly that seeks to establish a legal framework for climate change. The relevant documents on climate change laws in Nigeria include the following:

- National Policy on Climate Change;
- UN Framework Convention on Climate Change;
- National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007;
- National Environmental Standards and Regulations Enforcement Agency (NESREA);
- National Adaptation Strategy and Plan of Action on Climate Change for Nigeria;
- Climate Policy Database;
- NESREA National Policy on Environment;
- NESREA Draft Objectives and Strategies for Nigeria's Agenda;
- WHO Country Planning Cycle Database; and
- Flare Gas (Prevention of Waste and Pollution) Regulations, 2018.

International Conventions

In 2011, the Federal Executive Council approved a national adaptation strategy and plan of action on climate change for Nigeria (NASPA-CCN) as a national document for implementing climate change activities in Nigeria. The NASPA-CCN is in line with the United Nations framework convention on climate change and the Kyoto Protocol.

The National Assembly has ratified the United Nations Framework Convention on Climate Change (the Paris Agreement) and the Kyoto Protocol, making them binding under domestic law.

Under the Paris Agreement, Nigeria has committed to the unconditional reduction of greenhouse gas emissions by 20% below business-as-usual projections by 2030, and a conditional contribution of a 45% reduction, based on commitments with international support.

While Nigeria does not have a set emission threshold, it has adopted the clean development mechanism (CDM) under the Kyoto Protocol to limit carbon emissions. The CDM is designed to encourage investment in, and the transfer of, environmentally safe technologies that reduce emissions of greenhouse gases.

3.2 Principal Laws and/or Policies Relating to the Early Retirement of Carbon-Based Generation

Carbon-based power generation in Nigeria emanates from two sources: coal and gas-fired plants. All the coal-fired power plants built in Nigeria have been retired, albeit not by any deliberate policy. Today, all thermal power generation plants in Nigeria are gas-fired. There is no specific legislation encouraging the early retirement of such facilities.

3.3 Principal Laws and/or Policies to Encourage the Development of Alternative Energy Sources

There are several policies geared at driving investments in alternative energy sources, especially for remote, unserved and under-served areas. NERC has issued several regulations to promote the development of alternative energy sources in Nigeria.

Investment in renewable energy technology is driven by the private sector, with support from the government and some international organisations. This support typically takes the form of grants to private companies investing in renewable energy from funding secured by the government, from donor organisations such as the African Development Bank Group (AfDB) and the World Bank.

Policies

In 2015, the FGN issued the national renewable energy and energy efficiency policy (NREEEP), 2015 to harmonise several existing policies on renewable energy and energy efficiency. The NREEEP is to be implemented by the national renewable energy action plan for 2015–30 (NREAP). Other FGN policies include:

- the national energy policy, 2015;
- the national bio-fuel policy and incentives, 2007;
- the national economic empowerment and development strategy (NEEDS), 2004; and
- the renewable energy master plan (REMP) 2006 (implemented by the Ministry of Environment and the UNDP) which sought to increase the supply of renewable electricity from 13% of total electricity generation in 2015, to 23% in 2025 and 36% by 2030.

Some of these policies are no longer implemented for several reasons, not least of which has been a change in administration and the introduction of new policies. Several FGN agencies are charged with co-ordinating renewable energy technology to make it accessible.

Currently, the REA is charged with providing decentralised energy solutions through renewable energy technology, aimed at reducing unserved and under-served areas in Nigeria.

REA, in collaboration with the World Bank and AfDB, is the implementing agency for government policies aimed at providing funding for investments in alternative energy sources. The Nigeria Electrification Project (NEP) signed by the AfDB in 2019 aims to provide electricity to one million households and 250,000 micro, small and medium-sized enterprises in off-grid communities.

The FGN, in April 2021, launched the Solar Power Naija programme for deployment of solar home systems under the economic sustainability plan. This plan is also to be implemented by the REA.

Regulations

NERC has also issued some regulations to incentivise investments in renewable energy solutions. The Regulation on Renewable Energy Generation was issued in 2015 with the aim of providing a feed-in tariff that encourages new renewable energy development. This regulation created long-term financial incentives to investors who generate renewable electricity, offering a standardised and streamlined process to do so, thereby easing the entry of the new systems.

To incentivise investment in renewables, NERC has stated that the following incentives will be available to such investments:

- guaranteed price and priority access to the grid;

- feed-in tariffs for solar, wind, biomass and small hydro plants;
- PPAs based on a plant life cycle of 20 years;
- obligation of the Discos to source at least 50% of their total commitments from renewable energy, among others; and
- NBET will procure a minimum of 1,000 MW of the total projected renewable sourced electricity.

NERC has also issued the following:

- mini-grid regulations, which provide the framework for the registration and operation of mini-grids in Nigeria; and
- independent electricity distribution network (IEDN) regulations, which regulate the licensing and operation of IEDN systems.

4. GENERATION

4.1 Principal Laws Governing the Construction and Operation of Generation Facilities

The EPSRA regulates the construction and operation of electricity generation facilities in Nigeria and provides that no person may construct or operate power generation facilities without a licence granted by NERC.

NERC Generation Licence

A generation licence entitles the holder to construct, own, operate and maintain a generation station for the purposes of the generation and supply of electricity. The licence is issued for a duration of ten years and is renewable for a further term of five years.

NERC Licensing Regulations

The NERC Application for Licences (Generation, Transmission, System Operations, Distribution and Trading) Regulations 2010 (the "Licensing Regulations"), cover the procedures for the application and obtaining of licences issued by NERC, and their renewal, extension, suspension, cancellation and withdrawal.

NESIS Regulations

In addition, the Nigerian Electricity Supply and Installation Standards Regulations 2015 (NESIS Regulations) provides standards for the design, construction and commissioning of power systems throughout the value chain of electricity generation, transmission and distribution.

The NESIS Regulations cover site requirements, plant design, construction of power plants, and power evacuation. The NESIS Regulations also set out the engineering, health and safety, and environmental standards which must be complied with by a generator.

4.2 Regulatory Process for Obtaining All Approvals to Construct and Operate Generation Facilities

Approvals to Construct

The NESIS Regulations provide that a Genco must obtain the following approvals to construct a generation facility.

- Site approval: This approval is granted by NERC and other relevant agencies. The Genco must also obtain the consent of the host community.
- Plant design approval: The Genco must submit a detailed engineering design for the power station, based on applicable national and international engineering codes, to NERC for approval.
- Construction permit: The Genco must then obtain a construction permit from NERC for the commencement of construction of the plant.

In addition, the Genco may need to obtain permits from other agencies, such as the Federal Inland Waterways for use of inland water bodies

and the Federal Ministry of Environment for an environmental impact assessment.

The NESIS Regulations provide for a detailed consideration of environmental factors and standards which must be complied with, and make specific provisions for waste disposal, stack emissions, fuel source, etc.

Approval to Operate

Operation of generation facilities is conducted pursuant to a generation licence. The Licensing Regulations provide the documentation and procedure for licence applications.

An application for a generation licence will typically go through the following stages.

- Application stage: The application is made in writing by completing and submitting an application form in the required format. The application must be accompanied by documents and a non-refundable processing fee.
- Evaluation stage: The application will be evaluated by three divisions of NERC – legal, engineering and market competition. The applicant must arrange an environmental impact assessment (EIA) of the site as well as an evaluation of how effluents and discharges will be handled. The applicant must have entered an off-take agreement or, where the applicant proposes to supply power to the grid, a PPA will have to be entered with NBET.
- Publication stage: Upon satisfaction that all the relevant information has been provided, NERC will notify the applicant that the application has been filed and request that the statutory public notice be published. The publication of the notice will be made at the applicant's cost within 30 days, and in at least two daily newspapers, giving the public an opportunity to raise any objections.
- Approval stage: NERC will thereafter grant or refuse the application upon due consideration.

4.3 Terms and Conditions Imposed in Approvals to Construct and Operate Generation Facilities

A licensee constructing a generation plant is required to comply with the conditions in the NESIS Regulations. These include compliance with:

- design specifications;
- fuel specifications, including emission requirements as prescribed by the NESREAA;
- environmental considerations, such as noise control and aesthetic treatment of the project; and
- engineering and construction standards, and compliance with Nigeria's National Building Code as well as federal, state and local government building and health and safety regulations and procedure.

The NESIS Regulations may only be derogated from on the approval of NERC. The Guidelines on Derogation from Technical Codes and Standards in Electricity Generation, Transmission, Distribution and Supply in Nigeria provide for the application and review process for derogation from technical codes and standards in relation to electricity generation, transmission, and distribution licences.

Terms and Conditions for Operation of a Licence

The EPSRA outlines certain terms and conditions which may be imposed on a licensee. These include requirements:

- to enter into agreements with other parties for the provision or use of electric lines, etc, operated by the licensee;

- that the licensee purchases power and resources in an economical and transparent manner;
- that the licensee refers disputes for arbitration, mediation or determination by NERC;
- prohibiting assignment or transferral of the licence or its generation business to another entity without NERC's prior written consent;
- prohibiting change to the ownership structure, exceeding 5% of authorised share capital, without notifying NERC at least 30 days prior to the proposed changes, and obtaining NERC's consent to such changes;
- to insure all generating station equipment and facilities;
- for a licensee who owns more than 10% of the shares in a company, and who holds another licence issued by the commission, to divest itself of said shares or adhere to a code of conduct determined to be in the public interest;
- to provide information to NERC on a periodic basis;
- to comply with termination or amendment conditions;
- to restrict generation beyond the capacity for which the licence was issued, and to restrict generation outside the specific site in relation to which the licence was issued;
- to pay operating charges, as specified in the regulations for licence and operating fees, at the end of each month, and to pay the prevailing inter-bank lending rate +1% interest charged in respect of delayed payments;
- or exemptions to prepare and submit accounting information to NERC in respect of each year; and
- to comply with the market rules to the extent applicable.

4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

The holder of a generation licence is generally required to privately source the land for the construction of the generation facility.

Nigerian law does not grant a proponent land or eminent domain or surface rights. Under the Land Use Act (LUA), title to all lands in a state are vested in the governor of the state, who holds the land in trust for the people of that state. The state governor can grant a right of occupancy (leasehold interest) for a maximum period of 99 years to anybody seeking an interest in land in that state, and title is typically evidenced by a certificate of occupancy. A generation licensee may acquire title from the existing holder of a right of occupancy.

Land Acquisition under the EPSRA

Where an applicant for a generation, transmission or distribution licence requires a parcel of land in which a person has a legal interest, the EPSRA empowers NERC to make a declaration that said land is required by a licensee, provided that the landowner is given an opportunity to make representations against such a declaration.

Following the declaration by NERC, the president will issue a notice in the official gazette to the effect that such land is required by the FGN for a public purpose. The governor of the state where the land is situated will thereafter, in accordance with the provisions of Section 28 (4) of the LUA, revoke the existing right of occupancy and vest that right on the licensee to the exclusion of the previous holder(s). The previous holder(s) may claim compensation in accordance with the provisions of the LUA. The provisions of the declaration must include the provision of funds for meeting any liabilities that may arise from the exercise of the rights granted.

Once this process is concluded, the licensee will be entitled to access its rights over lands, buildings or streets to discharge its licence obligations.

4.5 Requirements for Decommissioning

The National Guidelines for the Decommissioning of Facilities in Nigeria, issued by the Federal Ministry of Environment, provide that a decommissioning plan will be developed in accordance with the Ministry's stated guidelines in relation to environmental sustainability. These guidelines specify the decommissioning requirements and acceptable standards required for eliminating environmental and health hazards during decommissioning and site clean-up.

In the absence of any sector-specific provisions on decommissioning of power facilities in the EPSRA or any regulations to that effect, a licensee will be required to comply with these guidelines and any others prescribed by a relevant body from time to time. The guidelines provide for the following:

- the removal of structures on or beneath the ground;
- the disposal or secure isolation and/or treatment of contaminated equipment in situ or off site;
- the remediation of aesthetics;
- containment control of contaminants;
- a general site clean-up of access to physical structures remaining on site that are unsafe or hazardous to humans or animals;
- remediation of aesthetically unacceptable portions of the site (filling in of pits, removal of stained soil and odorous material, levelling of mounds, disposal of waste rock, etc); and
- a clean-up of the site to a level that will provide long-term environmental protection and be safe for intended future use.

5. TRANSMISSION

5.1 Regulation of Construction and Operation of Transmission Lines and Associated Facilities

5.1.1 Principal Laws Governing the Construction and Operation of Transmission Facilities

Construction and operation of the transmission network are vested in TCN, which is licensed under the EPSRA. TCN's licence entitles it to carry on grid construction, operation and maintenance of the transmission system within Nigeria, and transmission systems that connect Nigeria with neighbouring jurisdictions.

Construction of Transmission Facilities

The construction of transmission lines and associated facilities is mainly regulated by the NESIS Regulations, which provide for:

- the regulation of engineering design, installation, commissioning and maintenance of electrical power systems, setting out the standard technical requirements for civil works and buildings for 330/132/33 kV transmission substations in the national grid; and
- civil works including layouts, structures, buildings and foundations, electromechanical works, and bus-bar arrangements.

The NESIS Regulations deal with major transmission equipment, the SCADA system and related health and safety matters.

Operation of Transmission Facilities

The operation of the transmission system is governed by the EPSRA and the grid code. The EPSRA provides for the licensing of the SO, which is responsible for operating the transmission network to ensure system reliability and stability.

The grid code regulates the operation, procedures and principles for the transmission system, and is geared towards achieving an effective, well co-ordinated and economic transmission system for the NESI. The grid code applies to TCN and all users of the transmission system. "Users" are defined as persons using the transmission network as permitted by the TSP and NBET.

See **1.5 Central Planning Authority** for more on TCN.

The following documents contain the regulations relating to transmission:

- Electric Power Sector Reform Act (EPSR), 2005;
- NERC Grid Code; and
- Nigerian Electricity Supply and Installation Standards Regulations 2015.

5.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Transmission Facilities

Approval to Construct

The regulatory approval to construct transmission facilities is embedded within the transmission licence granted by NERC. Section 65 of the EPSRA authorises the transmission licensee to carry out grid construction and maintenance. The transmission network in operation today was constructed by the FGN.

While the NESIS Regulations are clear that licensees must comply with its provisions in constructing or installing electrical facilities, the approval procedure for construction of transmission facilities is not clearly provided. In practice, TCN informs NERC of the construction of any transmission substations, and further to Chapter 3 of the NESIS Regulations, TCN obtains written approval from NERC prior to the construction of transmission lines.

Approvals to Operate

See **4.2 Regulatory Process for Obtaining All Approvals to Construct and Operate Generation Facilities** for the procedure on obtaining licences from the NESI.

5.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate Transmission Facilities

A transmission licensee must comply with NESIS Regulations in constructing and installing transmission facilities. The NESIS Regulations provide for the following, among other things:

- the minimum qualification of engineering personnel;
- documentation and reporting obligations;
- where required, the equipment or materials to be used must meet the specified ISO standards for various transmission equipment;
- the design of civil works and specification of materials must consider the environmental impact of all elements;
- where required, NIS (Nigerian Industrial Standards and Codes) for safety machinery and other materials must also be met; and
- the design of all buildings and structures under the civil works must comply with the Nigerian National Building Code.

The NESIS Regulations provide that every licensee must ensure that it has an EIA Report and a certificate from the Federal Ministry of Environment prominently displayed in its principal place of business.

The grid code provides that the development of the transmission network must be planned in advance, with adequate time to obtain all necessary approvals, such as EIAs, forest clearance, road or railway clearance, clearance from aviation authorities and rights of way. A proposed development plan must also allow for detailed

engineering and construction work to be carried out.

See also **4.3 Terms and Conditions Imposed in Approvals to Construct and Operate Generation Facilities**.

5.1.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

See **4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights**.

5.1.5 Transmission Service Monopoly Rights

Transmission is the exclusive preserve of TCN, and its jurisdiction covers the whole country. TCN has exclusive rights to construct and operate transmission facilities within Nigeria. It determines what improvements or developments may be made to the transmission network and determines the way these are carried out, including timing. Invariably, there is no competition in this segment of the industry, and any ongoing construction of a transmission facility will be at the behest of TCN, pursuant to some contractual arrangement.

Even though there are plans to unbundle the TSP and SO from TCN, it is unlikely that this will introduce competition as there is only one transmission network in the NESI.

5.2 Regulation of Transmission Service, Charges and Terms of Service

5.2.1 Principal Laws Governing the Provision of Transmission Service, Regulation of Transmission Charges and Terms of Service

The EPSRA is the primary legislation regulating the provision of transmission services in Nigeria.

Transmission charges and terms of service are regulated by NERC. NERC has established the Transmission Use of System charge (TUoS) pursuant to the MYTO 2015 for TCN which is levied on Discos and retailers for the transmission of electricity. The TCN MYTO sets cost-reflective tariffs, which enable proper funding of TCN.

The Market Rules issued by the MO prescribe the conditions for participation in the NESI and require every participant to enter a market participation agreement with the MO and be bound by the market rules. In addition, Gencos enter into grid connection agreements and ancillary services agreements with TCN, while Discos enter into use-of-transmission service agreements with TCN. Together, these agreements prescribe the terms of use of the transmission network.

5.2.2 Establishment of Transmission Charges and Terms of Service

Transmission tariffs are determined by NERC in accordance with the provisions of the TCN MYTO, taking into consideration that:

- the licensees recover the full costs of business activities and earn a reasonable return on capital;
- incentives are provided for improving performance, quality of service and encouraging efficient use of the network;
- there is no undue discrimination between consumers and consumer categories;
- certainty and stability of the pricing framework are provided, which encourages investment;
- incentives are provided to improve technical and economic efficiency; and
- incentives are provided to reduce costs, improve the quality of service and encourage the efficient use of the network.

Section 50 of the EPSRA allows any person aggrieved by any decision of NERC in relation to tariffs and prices, or by any of its other decisions, to apply to NERC for a review of that decision.

Furthermore, NERC has the power to call for objections or representations in connection with proposed tariffs prior to adoption. Any licensee with concerns regarding the transmission tariffs proposed by NERC may make representations before these tariffs are adopted.

5.2.3 Open-Access Transmission Service

Open-access transmission is provided for under the grid code. The grid code provides that transmission services can be accessed by all Gencos and Discos, as agreed and permitted by the TSP and NBET.

An applicant for access will be required to submit an application form to TCN that contains, among other things:

- a description of the plant or apparatus to be connected to the transmission system or a modification relating to the user's plant or apparatus that is already connected to the transmission system;
- confirmation that the user's plant and apparatus at the connection point will meet the required technical standards in the grid code, as agreed with the TSP where appropriate;
- confirmation that the user's plant, apparatus and procedures will meet the safety provisions as contained in the grid code;
- the technical data anticipated for the user's modified or new plant or apparatus, specifying the load characteristics and other data;
- the desired connection and operational date of the proposed user's development; and
- a proposed commissioning schedule, including commissioning tests, for the final approval of the system operator and the TSP.

The required agreements for obtaining transmission services include the following:

- the Grid Connection Agreement;
- the Ancillary Services Agreement; and
- the Transmission Line Agreement or Transmission Project Agreement, and the Transmission Use of System (TUoS) Agreement.

6. DISTRIBUTION

6.1 Regulation of Construction and Operation of Electricity Distribution Facilities

6.1.1 Principal Laws Governing the Construction and Operation of Electricity Distribution Facilities

The EPSRA governs the construction and operation of distribution facilities in the NESI. A company intending to construct a distribution network must first obtain the approval of NERC.

The current distribution networks were constructed by the defunct NEPA and are now owned by the successor Discos. Expansion and maintenance of these networks is the responsibility of the Discos pursuant to their licence terms and conditions.

NERC has also issued the IEDN Regulations for the licensing and operation of independent power distribution networks other than the franchised Discos. These regulations contain the requirements and processes for obtaining an independent electricity distribution licence, which is typically for closed or private use.

Construction of distribution networks and facilities is regulated by the NESIS Regulations.

6.1.2 Regulatory Process for Obtaining Approvals to Construct and Operate Distribution Facilities

A distribution licence entitles the holder to construct and expand its distribution network. Construction and maintenance of distribution networks is regulated by the Distribution Code for

the Nigeria Electricity Distribution System and the NESIS Regulations. The Distribution Code contains the criteria and procedures to be followed by the Discos in the planning and development of the distribution system.

Approval to Operate

See **4.2 Regulatory Process for Obtaining All Approvals to Construct and Operate Generation Facilities** on the procedure for obtaining licences in the NESI.

6.1.3 Terms and Conditions Imposed in Approvals to Construct and Operate

The terms and conditions imposed in approvals to construct and operate distribution networks are stated in the licence itself.

Construction

The NESIS Regulations set out detailed terms and conditions to be adhered to in the construction of distribution networks. The NESIS Regulations provide the standards which must be observed in the construction of distribution networks, which include:

- environmental standards;
- the standard of engineering designs and materials to be used in electrical installations;
- safety standards and standards for protection of properties;
- the standards for installation on consumer's premises; and
- the standards for supply to consumers.

Operation

See **4.3 Terms and Conditions Imposed in Approvals to Construct and Operate Generation Facilities**.

6.1.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights

See **4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights**.

6.1.5 Distribution Service Monopoly Rights

See **4.4 Proponent's Eminent Domain, Condemnation or Expropriation Rights**.

6.2 Regulation of Distribution Service, Charges and Terms of Service

6.2.1 Principal Laws Governing the Provision of Distribution Service, Regulation of Distribution Charges and Terms of Service

The EPSRA contains the day-to-day operating procedures and principles governing the development, operation and maintenance of an effective distribution network.

6.2.2 Establishment of Distribution Charges and Terms of Service

NERC is responsible for creating and determining the methodology of the relevant tariffs, fees and other distribution charges. NERC aims to provide a viable and robust tariff policy for the NESI, with the aim of ensuring the following:

- full cost recovery, plus a reasonable return on investment;
- the promotion of technology and market efficiency through incentives;
- fairness and openness to consumers; and
- the reduction or elimination of cross-subsidies.

The MYTO is a tariff model used to set wholesale and retail electricity prices which are cost-reflective and allow for adequate funding of the NESI. This MYTO provides a 15-year tariff path for the NESI, with minor bi-annual reviews and major reviews every five years. The MYTO is comprised of payments for the cost of the energy (fixed charge and energy charge), transmission costs, regulatory and administration charges, Discos' distribution charges and costs associated with metering, billing, marketing and revenue collection. The end-user tariff reflects the cost of the electricity supply throughout the

supply chain of the NESI, from generator to final consumer.

The MYTO establishes the following components for determining various tariffs in the NESI:

- the allowed return on capital, being the return necessary to achieve a fair rate of return on the assets invested in the business;
- the allowed return of capital associated with recouping that capital over the useful life of the assets (depreciation); and
- operating costs and overheads.

The Discos that adopt the MYTO for their operations must then be approved by NERC.

NERC holds consultations with the relevant stakeholders in the industry before it issues the MYTO, and every subsequent amendment thereto. The Discos and the public are invited to present their submissions on the tariff review, and these are considered in the issuance of the MYTO.

The current MYTO for Discos is the 2020 MYTO, which introduced service-based tariffs and reclassified consumers and tariffs according to the quality and quantity of service to be provided to them by the Disco.

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Streamsowers & Köhn is a mid-sized Nigerian law firm, comprising six partners and 30 lawyers. The firm's energy, natural resources and environmental (ENRE) practice group covers power, oil and gas, and mining matters. The firm plays a significant role in developing and interpreting the regulatory framework in these sectors. The ENRE practice group possesses thorough knowledge of the legal and regulatory framework governing the energy sector and has developed competencies in advising on multi-dimensional energy transactions across the value chain of the oil and gas, and energy sectors. The firm provides legal advisory services and business support to clients, including multinationals, indigenous oil and gas companies, and new entrants in the power sector.

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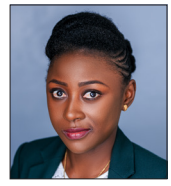

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