

FEDERAL REPUBLIC OF NIGERIA

**WORLD BANK
PROGRAM-FOR-RESULTS FINANCING**

**POWER SECTOR RECOVERY PROGRAM
(PSRP)**

FINAL REPORT

**ENVIRONMENT AND SOCIAL SYSTEMS
ASSESSMENT
(ESSA)**

MAY 2020

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LIST OF ACRONYMS

ATC&C	Aggregate Technical Commercial and Collection
BPE	Bureau of Public Enterprise
CBN	Central Bank of Nigeria
DISCOs	Distribution Companies
DLI	Disbursement Linked Indicators
DPR	Department of Petroleum resources
EAD	Environmental Assessment Department (Federal Ministry of Environment)
EGASPIN	Environmental Guidelines and Standards for the Petroleum Industry in Nigeria
EIA	Environmental Impact Assessment
ERGP	Economic Recovery and Growth Plan
ESSA	Environmental and Social Systems Assessment
FEPA	Federal Environmental Protection Agency
FGN	Federal Government of Nigeria
FME _{env}	Federal Ministry of Environment
FMOP	Federal Ministry of Power
GACN	Gas Aggregation Company of Nigeria
GDP	Gross Domestic Product
GenCos	Generation Companies
GW	Giga Watts
IPF	Investment Project Financing
KW	Kilo Watts
LFN	Laws of the Federation of Nigeria
MW	Mega Watts
MYTO	Multi Year Tariff Order
NBET	Nigeria Bulk Electricity Trading Company
NEPA	National Electric Power Authority
NERC	Nigerian Electricity Regulatory Commission
NESI	Nigerian Electricity Supply Industry
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGC	Nigeria Gas Company
NIWRMC	Nigeria Integrated Water Resources Management Commission
NWRA	National Water Resources Institute
O&G	Oil and Gas
OP/BP	Operational Policies/Bank Procedure
OPEC	Organization of Petroleum Exporting Countries
PAP	Program Action Plan
PforR	Program for Results
PPA	Power Purchase Agreement
PIP	Performance Improvement Plans
PSRP	Power Sector Recovery Program
SWOT	Strengths-Weaknesses-Opportunities-and- Threats
TCN	Transmission Company of Nigeria
TEM	Transitional Electricity Market
TOR	Terms of Reference
UNCED	United Nations Conference on Environment and Development

EXECUTIVE SUMMARY

ES 1 BACKGROUND AND PURPOSE OF THE ESSA

- 1 The World Bank is proposing to support the Nigeria Power Sector Recovery Program (PSRP) with a Program-for-Results (PforR) instrument. The PforR links the disbursement of funds directly to the delivery of defined results and builds on increased reliance on borrower safeguard and oversight systems. The Program Development Objectives are to improve the reliability of electricity supply and achieve financial and fiscal viability and enhance power sector accountability. The PforR promotes the sustainable performance of the power sector by supporting results in three key areas: reliability of electricity supply is improved; financial and fiscal sustainability is reached; and accountability is enhanced. These key results areas are complementary and include measures to support key financial, operational/technical, governance, and policy interventions of the PSRP. The proposed amount of the program is USD seven hundred and fifty million.

- 2 The Environmental and Social Management System Assessment (ESSA) for the Nigeria Power Sector Recovery PforR (hereafter, the Program) examines the extent to which the Federal Government's existing environmental and social management systems: operates within, an adequate legal and regulatory framework to guide environmental and social impact assessments, mitigation, management and monitoring at the PforR Program level; incorporate recognized elements of good practice in environmental and social assessment and management, including: (i) early screening of potential impacts; (ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative); (iii) explicit assessment of potential induced, cumulative, and transboundary impacts; (iv) identification of measures to mitigate adverse environmental or social risks and impacts that cannot be otherwise avoided or minimized; (v) clear articulation of institutional responsibilities and resources to support implementation of plans; and (vi) responsiveness and accountability through stakeholder consultation, timely dissemination of the PforR Program information, and responsive grievance redress mechanisms; among others¹. The ESSA thereafter defines measures to strengthen the system, and recommends measures that should be integrated into the overall Program. The ESSA is undertaken to ensure consistency with six core principles outlined in paragraph 8 of the World Bank Policy for Program-for-Results Financing to effectively manage Program risks and promote sustainable development. These six principles are:
 - i. **Environment:** Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts
 - ii. **Natural Habitats and Cultural Resources:** Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program
 - iii. **Public and Worker Safety:** Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other

¹ See World Bank (2019) Bank Directive: Program-for-Results Financing

- dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards
- iv. **Land Acquisition:** Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards
 - v. **Vulnerable Groups:** Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups
 - vi. **Social Conflict:** Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.
- 3 The ESSA analyses the system for environmental and social management as relevant for the Program vis-à-vis each of these principles. The gaps identified through the ESSA and subsequent actions to fill those gaps directly contribute to the Program's anticipated results to enhance institutional structures related to the Program activities. The ESSA analysis, presents a detailed description of the Program activities and the baseline conditions for existing environmental and social management systems. The Report draws on baseline information and presents an analysis of the existing system vis-à-vis the core principles for environmental and social management in Bank Policy and Directive for Program-for-Results financing and presents a Program Action Plan (PAP) that will be incorporated into the overall Program loan documentation.

ESSA Methodology

- 4 The ESSA was prepared by Bank staff through a combination of reviews of existing program materials and available technical literature, interviews with government staff, non-governmental organizations, regulatory agencies and sector experts. As part of the project appraisal process consultations were conducted with government and civil society stakeholders. The findings, conclusions and opinions expressed in the ESSA document are those of the Bank.

ES 2 STRATEGIC CONTEXT

Country Context

- 5 In 2019, Nigeria continued recovering from the 2016 recession, with annual 2019 growth strengthening marginally to 2.2 percent. The collapse of global oil prices during 2014–16, combined with lower domestic oil production, led to a sudden slowdown in economic activity. Nigeria's annual real GDP growth rate, which averaged 7 percent from 2000 to 2014, fell to 2.7 percent in 2015 and to -1.6 percent in 2016. Growth slowly rebounded in 2017, levelling about 2 percent in 2018-2019. Growth is primarily driven by the services sector (50 percent of the economy) primarily telecoms, with positive contributions from agriculture, which, however, remains affected by ongoing conflicts and is weather-dependent. Non-oil industry growth is slow, constrained by lack of private sector credit growth, high cost of financing, weak domestic demand, and insufficient/unreliable power

supply². Policy and regulatory uncertainty are impeding domestic and foreign investment. Without acceleration in structural reforms to build a competitive and diversified economy, growth was expected to hover just above 2 percent over the medium-term, but highly vulnerable to oil sector shocks.

- 6 With population growth (estimated at 2.6 percent) outpacing economic growth in a context of weak job creation, per capita incomes are falling. Today, an estimated 85 million Nigerians (40 percent of the population) live below the poverty line. In 2018, Nigeria's unemployment rate was already high by regional standards at 11 percent, having risen from 5 percent in 2015.³
- 7 Low revenues, rising debt service and large public subsidies limit the fiscal space for productive investments in infrastructure and human capital. At 8 percent of GDP, Nigeria's general government revenues are very low by the standards of comparable countries. Consequently, the general government expenditure is very small relative to the size of the economy (12 percent of GDP, about half the level expected for its level of development), unable to meet the needs of its growing population. Oil revenues are volatile and reduced by sizeable deductions (including for the unbudgeted petrol subsidy), while growth in non-oil revenues (about 4 percent of GDP) is constrained by slow tax policy and administration reforms. Public debt remains relatively modest as share of GDP (around 20-25 percent) but continues rising with sustained fiscal deficits. With low revenues and high domestic interest rates, the Federal Government (FGN) is spending a significant share of its revenues to service its debt (since 2016, the FGN spends an estimated 60 percent of its revenues to pay interests on its debt), with unproductive, regressive subsidies (main ones being fuel and power) further limiting fiscal space for productive investments in infrastructure and human capital. The annual power sector tariff shortfalls requiring FGN funding reached NGN 524 billion (US\$1,720 million) in 2019, equivalent to 0.4 percent of GDP and 11 percent of FGN revenues.
- 8 Nigeria's economy will be severely affected by the global economic disruption caused by COVID-19. The extraordinary oil-price shock has profoundly affected the Nigerian economy, downgrading its growth outlook by 5-10 percentage points in 2020. Under a scenario of oil prices averaging US\$30/barrel, a relatively contained COVID-19 spread in Nigeria and continuation of current policies, Nigerian economy is projected to contract by 3 percent in 2020. Falling domestic demand (sensitive to oil-dollar liquidity) will contract the non-oil economy, despite central bank's attempts to scale-up targeted interventions. Only agriculture is expected to positively contribute to growth in 2020. With current trade policies, including foreign exchange (FX) restrictions and land border closure⁴, contracting imports could limit the widening of the current account deficit despite rapidly contracting exports, softening the negative impact from the capital account on the external reserves. External capital flows will likely follow the global flight to safety, adding to the pressures on external

² World Bank Enterprise Surveys, World Bank Doing Business, Central Bank of Nigeria 'January 2020 business expectations survey report'

³ Unemployment rates quoted follow the International Labor Organization's definition, applied to NBS data. Using Nigeria's national definition of unemployment, the unemployment rate was 23 percent in 2018.

⁴ Introduced in August 2019, it intended to reduce smuggling, protect domestic producers and address security concerns.

reserves and the nominal exchange rate. The situation resembles the one Nigeria faced in 2015-2016 when oil prices fell sharply, but this time Nigeria has fewer fiscal buffers (for example, the Excess Crude Account is depleted) and other policy instruments to cushion the adverse effects of any shocks. Two key risks may aggravate Nigeria's outlook: further or protracted fall in oil prices and domestic spread of COVID-19.

- 9 The FGN has been implementing an Economic Recovery and Growth Plan (ERGP) from 2017 in response to the 2016 recession. The ERGP set out to restore macroeconomic stability in the short-term and to undertake structural reforms, infrastructure investments and social sector programs to diversify the economy and set it on a path of sustained inclusive growth over the medium- to long-term. It had an ambitious target of achieving 7 percent real annual GDP growth by 2020, to be initially driven by the oil sector and then increasingly by strong non-oil sector growth.⁵ So far, progress on implementation of the plan has been mixed with outcomes stronger in some areas than in others.
- 10 Reliable power supply is central to supporting the ERGP targets for growth in the non-oil sectors, particularly in manufacturing and services. Firm-level data from the 2014 Nigeria World Bank Enterprise Survey shows that provision of electricity supply is the biggest constraint to doing business in Nigeria. Electricity is the most significant obstacle in all regions except the Northwest. Younger firms, exporters, and manufacturers are most likely to identify provision of electricity as their biggest obstacle. Having reliable electricity supply is consistently associated with higher levels of firm productivity.

Sectoral and Institutional Context

- 11 Nigeria's power sector is unbundled and largely privately-owned. Following the passage of the Electric Power Sector Reform Act (2005), the sector was unbundled into six generation companies (GENCOs), eleven distribution companies (DISCOs) and the Transmission Company of Nigeria (TCN). The privatization of the DISCOs and GENCOs was completed in 2013. Three of the five thermal GENCOs (that use natural gas as fuel) were sold in their entirety to new owners, while three hydropower plants were concessioned to private operators. TCN has remained a fully Government-owned monopoly. In the current stage of market development, known as the Transitional Market, the Government-owned Nigerian Bulk Electricity Trading Company (NBET) fulfills the role of bulk trader, buying electricity from GENCOs (including Independent Power Producers) under Power Purchase Agreements (PPAs) and reselling it to DISCOs under Vesting Contracts.
- 12 The transition from a publicly-owned to largely privately-owned power market, which began in 2013, did not bring the expected outcomes and the sector is under severe stress. The causes for the stress are interlinked and the result of sector's key stakeholders - Government ministries and agencies, Nigeria Electricity Regulatory Commission (NERC), and the private sector falling short of their expected contributions for achieving sector turnaround. As a result, there is lack of trust between key stakeholders and among the general public with respect to power sector improvement. A credible reform process would require an

⁵ Following missed ERGP growth targets in 2017 and 2018, the growth target for 2020 in the Government's medium-term expenditure framework was moderated to 2.9 percent.

integrated approach of resolving regulatory and policy failures, establishing a credible and fiscally sustainable financing plan by the FGN to ensure full funding for tariff shortfalls, implementation of comprehensive performance improvement plans (PIPs) by DISCOs with approved capital expenditure and clearly specified business continuity arrangements for dealing with DISCOs that would fail.

- 13 Inconsistent implementation of the regulatory and contractual framework of the power sector hinders the sector's sustainable operation. The inconsistent application of the tariff policy (the Multi-Year Tariff Order or MYTO) has resulted in the deterioration of the financial situation of sector companies (especially DISCOs) and in the inability to enforce contractual obligations on majority privately-owned GENCOs and DISCOs since privatization in 2013. It has also created lack of clarity on the end-date of loss reduction and capital and operational expenditure targets in the Performance Agreements of DISCOs, which are input parameters used in the MYTO.
- 14 The power sector, in particular distribution, is operationally inefficient with high losses. The sector's aggregate technical commercial and collection (ATC&C) losses are extremely high, with DISCOs reporting on average 41 percent in 2019, versus 26 percent allowed in NERC's MYTO (allowed losses are based on the targets in DISCOs' Performance Agreements). The high losses coupled with lack of payment discipline by DISCOs (and weak enforcement of payment discipline by NBET and NERC) result in DISCOs' low remittances to NBET (about 29 percent for 2018 invoices of NBET that are not adjusted for tariff shortfalls).

Poverty and Electricity Access

- 15 Nigeria had around 12 million electricity customers⁶ in 2016 (NERC projection). The number of customers per DISCO varies widely,. The true number of customers is not accurately known, however. DISCOs' own figures for their tariff revision submissions totalled 8.5 million customers, while the latest household survey estimates that around 22 million households have some access to electricity. The wide variation could be due to illegal connections or multiple household connections (multiple households registered as one customer). Residential customers in Nigeria account for about 62% of electricity consumed. About 21% of electricity is consumed by commercial customers, and industrial customers account for about 11%. The relatively small share of electricity consumed by industrial customers (in South Africa, by comparison, this proportion is about 60% (IEA statistics)) may be related to the prevalence of own-generation by industrial businesses. Among households, electricity access is still limited in Nigeria (around 56%). However, there is a large variation across regions, with connectivity higher in the South and in urban areas. Up to 86% of the urban population had access against only 36% of the rural population.

⁶ In this context 'customers' are defined as those (households and businesses) who have an account with a DISCO. In the residential sector (customers on tariffs R1, R2, R3 and R4) this equates to households. 'Consumers' are individuals who use electricity, whether or not it is supplied directly by the DISCO and paid for.

- 16 Yet, access is often unreliable since electricity supply suffers from frequent outages. About two-thirds of households connected to the grid reported having 9 or more outages in the 7-day period (a median duration of interruption equals 8-9 hours). Rural areas were particularly hit by black-outs, where number of interruptions in supply were almost double of that in urban areas. More affluent households can afford to use generators to compensate for the lack of consistent supply of grid electricity while poorer households resort to candles and flashlights for lighting and firewood for cooking, which are inefficient and potentially harmful sources of energy.

Tariffs

- 17 In 2008, NERC introduced a Multi-Year Tariff Order (MYTO) as the framework for determining the industry pricing structure. In 2012, with the unbundling of the Power Holding Company of Nigeria (PHCN) and establishment of successor companies, including eleven DISCOs, NERC issued the second MYTO to establish the schedule of tariffs between June 2012 and May 2017. However, the high loss allocation under the January 2015 MYTO caused a public backlash, resulting in an order in March 2015 (MYTO 2.1, Amended) eliminating pass-through of collection losses. The revision kept the lifeline tariff (applicable to all households consuming no more than 50 kWh per month) constant at 4 Naira/kWh, but adjusted upward tariffs for all other customer classes.⁷ For most customer classes and DISCOs, the tariffs increased by up to 60% between 2015 and 2016, but the increase has varied between DISCO.⁸ The unweighted average R2 tariff is now around Naira 27.6.

Social Issues

- 18 **Gender:** While female-headed households are more likely to be connected to the grid (61 percent) compared to male-headed households (55 percent),⁹ female-headed households tend to consume less electricity, probably because their households are smaller. The burden of ensuring access to energy (through electricity or traditional fuels) often primarily falls on women, and they also bear the health impacts of unclean cooking. The OECD's Social Institutions and Gender Index (SIGI) measures discrimination against women and girls in social institutions. By this measure, discrimination against women in Nigeria's social institutions is very high, with significant gender gaps in education, economic empowerment and political participation. Discriminatory laws and customary practices, which differ between states within Nigeria, are barriers to greater gender equality. Nigeria ranks 118 out of 134 countries in the Human Development Report's Gender Equality Index.

⁷ The MYTO framework classifies residential customers into four classes with different tariff levels based on the type of connection. The first class (R1) includes those with low usage (consumption of 50kWh or less per month) and is the only class eligible for lifeline tariff. The second class (R2) contains the majority of residential customers and includes households that are on a low voltage single phase or three phase connection. The third class (R3) includes households with low voltage maximum demand where power is metered at 400V. The final class (R4) includes households with high voltage maximum demand where power is metered at 11kV or 33kV.

⁸ In 2016, six of the eleven DISCOs introduced different tariffs for residential customers with single phase or three phase connections.

⁹ More than two thirds (79.4%) of households in Nigeria are male headed, but they are, on average, slightly poorer than female-headed households.

- 19 Women and men, girls and boys, have different energy needs and may have different priorities in relation to access and use of electricity services. They also have different access to information and control of household income and expenditure, which can affect the adoption and use of different electrical goods. Differences in access to and ownership of financial assets, access to education and information, and mobility can also affect access to electricity. Women and men are therefore likely to be impacted differently by changes in the availability and supply of electricity.
- 20 The inequality faced by women is recognized by government policy. The National Gender Policy focuses on women’s empowerment and the mainstreaming of gender in economic development.

ES 3 PROGRAM DESCRIPTION

Government Program

- 21 The FGN recognizes the critical role of the power sector in Nigeria’s economic development. “Ensuring energy sufficiency” is one of the key priorities of the national ERGP for 2017-2020. The PSRP originally approved by FEC in 2017 aims to: a) restore the sector’s financial viability; b) improve power supply reliability to meet growing demand; c) strengthen the sector’s institutional framework and increase transparency; d) implement clear policies that promote and encourage investor confidence in the sector; and e) establish a contract-based electricity market.

Program Development Objective/s (PDO) and Key Results

- 22 The Program’s development objectives (PDO) are to improve the reliability of electricity supply, achieve financial and fiscal sustainability and enhance power sector accountability. Consistent with the PSRP, the PforR seeks to achieve these development objectives by helping the power sector establish a track record of sustainable performance, thus unlocking private financing for the sector. The PforR supports results in three areas: (i) reliability of electricity supply is improved; (ii) financial and fiscal sustainability is reached; and (iii) accountability is enhanced. The following outcome indicators will be used to measure achievement of the PDO:
 - PDO Indicator 1: Annual electricity supplied to the distribution grid is increased¹⁰;
 - PDO Indicator 2: Annual tariff shortfalls decline, and new tariff shortfalls are funded from sustainable sources of financing; and
 - PDO Indicator 3: Public awareness about ongoing reforms and performance in the power sector improves.

¹⁰ Electricity production and distribution is in line with environmental and social sustainability requirements of the World Bank.

PforR Program Scope

23 The PforR component will support implementation of the Critical PSRP that the FGN has prioritized for implementation in 2020-2022. The program boundary is in Figure ES1.

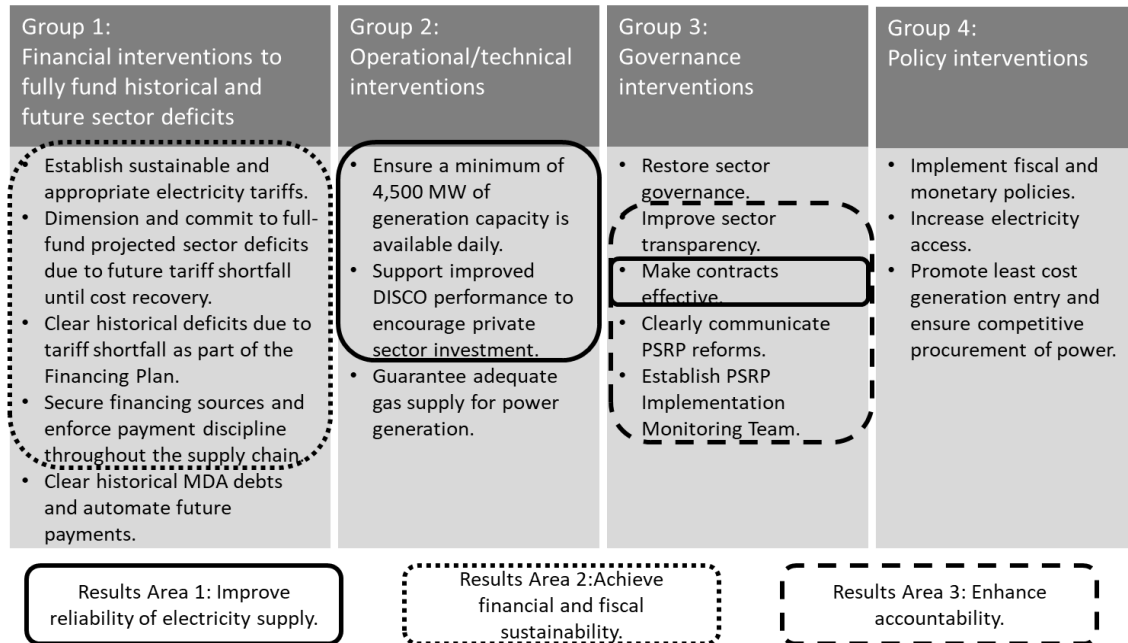


Figure ES1: Program Boundaries

Excluded activities

- 24 The PforR does not support any investment-related activities and rather aims to improve service delivery by strengthening power sector financial viability and accountability. The PforR expenditure framework is the Financing Plan of the FGN and does not include high-value contracts. The specific PSRP interventions which have been excluded from this Program include fiscal and monetary incentives (e.g. tax holidays, duty waivers); as well as investments in increased electricity access (electrification) and the rehabilitation of transmission and distribution infrastructure. Complementary World Bank IPF operations under preparation support investments in electrification and the alleviation of transmission and distribution network constraints.
- 25 The disbursements under the proposed PforR will be governed by a set of seven Disbursement Linked Indicators (DLIs), consisting of two Global DLIs and five standard DLIs. The DLIs articulate the actions necessary to set the sector on the path to financial and operational sustainability and accountability.

Results Chain of the PforR

PDO: Improve the reliability of electricity supply, achieve financial and fiscal sustainability and enhance power sector accountability		
Results Area 1: Reliability of supply	Results Area 2:	Results Area 3: Accountability

	Financial and fiscal sustainability	
Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review		
Global DLI 2: A credible and fiscally sustainable Financing Plan is approved and executed to fully fund the tariff shortfalls of the sector		
DLI 1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced DLI 2: Business continuity arrangements are implemented for DISCOs	DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and measures for protecting the poor DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls	DLI 5: Financial and operational transparency of DISCOs is improved

ES 4 POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS OF THE PROGRAM FOR RESULTS

Potential Environmental Benefits and Risks

Potential Environmental Benefits

26 The review of MYTO and implementation of PIPs will lead to efficient electricity pricing and reduction of technical and non-technical losses in electricity distribution. This will, in turn, generate some climate co-benefits due to reduction in carbon emission. Efficient pricing and performance improvement, that will be achieved by the implementation of the DLIs, could also lead to reduced pollution due to reduction in the use of fossil fuels for powering generators by households and businesses. This will also result in reduction in deforestation from the use of fuel wood, charcoal at household level.

Potential Environmental Risks

27 Overall, the potential adverse environmental impacts of the Program are expected to be consistent with the provisions of PforR operations as it does not support construction of new infrastructure. The PforR therefore excludes activities which could have significantly adverse environmental and social impacts that are large-scale, irreversible, sensitive, diverse, cumulative or precedent-setting (defined as Category A by the World Bank). As a result, the PforR is not expected to impact the Core Principles 1 and 2 outlined in Bank Policy and Directive for Program-for-Results Financing, respectively dealing with Environmental Sustainability and Natural Habitats and Physical Cultural Resources in an unprecedented manner.

Potential Social Benefits and Risks

28 Assessing the potential social risks and benefits of the PSRP is an iterative and nuanced process and requires an understanding of the recent history of energy consumption and delivery in Nigeria. There are several drivers and factors that have had an effect and impact on energy consumption, most notably governance, political welfare, and consumer

perceptions and stakeholder relationships with the DISCOs. Thus, the following section of the social effects of the program speaks to some of the effects of the program as well as the direct historical and potential social impacts of power sector reform in Nigeria.

- 29 Improving the reliability of electricity supplies and enhancing power sector financial viability and accountability, by ensuring the receipt of full revenue requirement by the power sector companies and recovery of tariff shortfalls from reliable sources, will enable an increase in electricity supply and consumption. This, in turn, will contribute to economic production and poverty reduction. As shown in the figure below (impact pathway of electricity consumption) these will be achieved through macro-level, or economy-wide, effects and through effects at the consumer level.

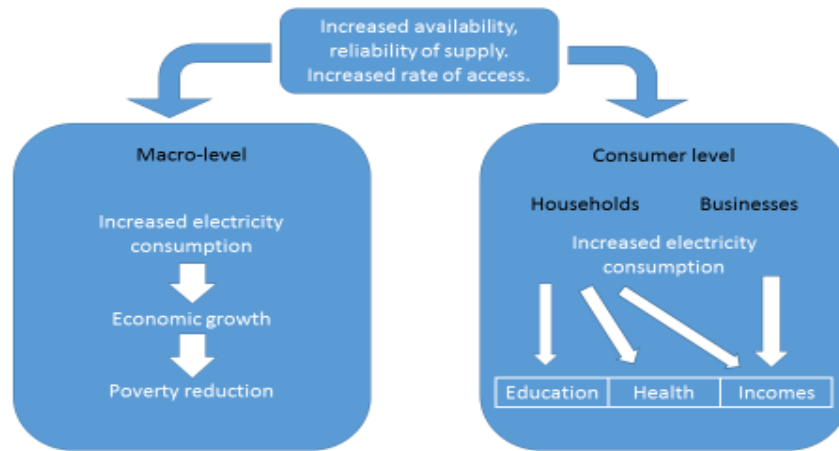


Figure ES2: Impact pathways of electricity consumption

Source: adapted from Pueyo et al. (2013).

Households

- 30 For residential consumers, numerically the largest category of customer and the category that consumes most electricity, improved reliability will increase the number of hours that electricity is actually available.

Businesses

- 31 Electricity is reported to be a major constraint by businesses. Around 27% of enterprises identify electricity as the main obstacle to doing business, which is more than twice the Sub-Saharan Africa (SSA) average. On average, firms experienced 32.8 outages a month in 2014, the typical outage being 8 hours long (World Bank, 2014a). For business consumers, improved reliability of power will reduce losses due to outages, and reduce expenditure on alternative sources of energy. Productivity improvements may be felt, which can lead to higher employment, and opportunities to increase productivity by investing in electric machinery and equipment may be opened.

Gender Implications

- 32 With respect to women’s welfare, increased availability and reliability of electricity can be expected to increase educational opportunities for women and girls, by enabling lighting in the home and allowing educational facilities to use electrical equipment.

Affordability

- 33 In the current context of large unmet demand, highly unreliable supply, substantial non-payment of electricity bills, and a lack of information about consumers, it is difficult to assess the effect of possible tariff adjustments on total electricity consumption and on the consumption of individual or groups of consumers. A priori, consumer responses to the 45% increase in tariffs in February 2016 might have been felt through reduced consumption, higher levels of non-payment of bills.

Household welfare (Poverty and Social Impact Analysis)

- 34 Access to electricity is low among households, particularly poorer ones (only 37% of households in the bottom 40 percent, ranked by per capita household expenditures, reported connecting to the grid). Poorer households also reported spending less on electricity. As a result, the fiscal expenditure on tariff shortfalls largely benefits the rich: 80% of the fiscal expenditure on tariff shortfalls benefits the richest 40 percent of the population, while only 7% benefits the bottom 40 percent, and less than 2% benefits the poorest 20 percent. The envisaged tariff reviews would need to be accompanied with measures to protect the poor. The approval and implementation of capped billing for unmetered customers (which tend to be poorer), who currently have no control over their bills and are often billed much higher than their metered counterparts, would reduce the bills of unmetered customers even with tariff adjustments. The implementation of PIPs by DISCOs (currently under review for approval by NERC) should help improve service delivery and ensure rollout of metering allowing grid-connected poor residential customers to benefit from the affordable tariff set for the first 50kWh/month of consumption.

ES 5 SYSTEMS ASSESSMENT AND IDENTIFICATION OF GAPS

- 35 The Program-for-Results financing of PSRP was assessed against core principles incorporated into OP/BP 9.00. Thus, based on a review of the available information and detailed analysis of the environmental and social effects of the Program and the institutional context, the assessment was carried out in line with each of the six Core Principles outlined in OP/BP 9.00.

Core Principle 1: General Principle of Environmental and Social Management

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to (a) promote environmental and social sustainability in Program design; (b) avoid, minimize or mitigate against adverse impacts; and (c) promote informed decision-making relating to a program’s environmental and social effects.

Bank Directive for Program-for-Results Financing: Program procedures will:

- Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the program level.
- Incorporate recognized elements of environmental and social assessment good practice, including:
 - early screening of potential effects;
 - consideration of strategic, technical, and site alternatives (including the “no action” alternative);
 - explicit assessment of potential induced, cumulative, and trans-boundary impacts;
 - identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized;
 - clear articulation of institutional responsibilities and resources to support implementation of plans; and
 - responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and responsive grievance redress measures.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<ul style="list-style-type: none"> • Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review • 	<ul style="list-style-type: none"> • ESIA regulatory framework aligns well with the Core Principle. • Specifically: • National policies, regulation and other legislation for environmental management are well defined. Also, institutional systems identifying environment procedures and legislation to be followed in the country is well defined. States have their own environment department or directorate, 	<ul style="list-style-type: none"> • There is no requirement within ESIA processes for consulting with local communities or vulnerable people • There is weak coverage of social issues in EIA legislation • The capacity of the federal ministry of environment to monitor and enforce ESIA requirements is weak • There is weak capacity in delivering a robust ESIA process at the State level • Weak monitoring 	<ul style="list-style-type: none"> • A robust public consultation strategy (currently envisaged as part of the MYTO extraordinary review) is required to improve citizen engagement • ESIA processes to incorporate socio-economic assessments • Strengthening the implementation of environmental and social monitoring/auditing systems • Establishing a tracking system to monitor environmental and social risks, performance, consultations, etc. • The Federal Ministry of Environment (FMEnv) to reinforce its mandate of monitoring activities.

	<p>who can be contacted for permits or any clarifications if necessary.</p> <ul style="list-style-type: none"> • The national EIA system (EIA Act No. 86 of 1992) provides a comprehensive legal and regulatory framework for environmental and social impact assessment that is broadly consistent with the Core Principle 1 of the Bank Policy and Directive. FMEnv and FMOWPH are aware of ensuring compliance with EIA procedures. • Good grievance mechanisms by NERC call centres established for customer complaints, readily available website with instructions of how to make a 	<p>and evaluation of environmental and social systems</p> <ul style="list-style-type: none"> • . • 	<ul style="list-style-type: none"> • Technical staff responsible for environmental and social management must monitor and supervise E&S compliance at least once per quarter, environmental and social management audits every two years. • Strengthening of environmental management capacity: Training in environmental and social management/sessions for budgeting for environmental and social mitigation measures for technical staff in FMEnv; •
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	<p>complaintThe process for extraordinary review includes public consultations and public hearings</p>		
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Core Principle 2: Natural Habitats and Physical Cultural Resources

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.

Bank Directive for Program-for-Results Financing: As relevant, the program to be supported:

- Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.
- Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.
- Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects.

Applicability: Not applicable
 It is not expected that the PforR will have adverse impact on natural habitats and physical cultural resources since it does not directly involve new or upgrading of infrastructure. Thus core principle two is not applicable.

Core Principle 3: Public and Worker Safety

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or promoted under the program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Bank Directive for Program-for-Results Financing:

- Promotes community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections, or remedial works incorporated as needed.
- Promotes use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated through program construction or operations; and promotes use of integrated pest management practices to manage or reduce pests or disease vectors; and provides training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with international guidelines and conventions.
- Includes measures to avoid, minimize, or mitigate community, individual, and worker risks when

program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.			
Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<p>The following DLIs have implications for public and worker's safety:</p> <p>DLI1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced</p> <p>DLI4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p>	<ul style="list-style-type: none"> The legal/regulatory system of the country includes provisions for protecting people and environment. 	<p>The national EIA system does not comprehensively encompass aspects of public and worker safety</p> <p>Lack of awareness of relevant authorities' staff to appreciate the need to ensure occupational health and safety.</p>	<ul style="list-style-type: none"> The FMEnv should work towards improving the EIA system to incorporate important aspects lacking in the system, for example, issues relating to public and workers' safety and broader ESHS. Meanwhile, they should ensure that EIA reports submitted for review cover social issues especially relating to public and worker safety. Build the capacity of the leaders in the different institutions in the sector in order for them to become knowledgeable on issues relating to occupational health and hazard and how to deal prevent and deal with it.

Core Principle 4: Land Acquisition

Bank Policy for Program-for-Results Financing: Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.

Bank Directive for Program-for-Results Financing: As relevant, the program to be supported:

- Avoids or minimizes land acquisition and related adverse impacts;

- Identifies and addresses economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may lack full legal rights to assets or resources they use or occupy;
- Provides compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land or restricting access;
- Provides supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment); and
- Restores or replaces public infrastructure and community services that may be adversely affected.

Applicability: Not applicable

It is not expected that the PforR areas will involve land acquisition. Thus, core principle 4 is not applicable.

Core Principle 5: Social Considerations - Indigenous Peoples and Vulnerable Groups

Bank Policy for Program-for-Results Financing: Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.

Bank Directive for Program-for-Results Financing:

- Undertakes free, prior, and informed consultations if Indigenous Peoples are potentially affected (positively or negatively) to determine whether there is broad community support for the program.
- Ensures that Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples.
- Gives attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups. If necessary, special measures are taken to promote equitable access to program benefits.

Note: There are no groups in Nigeria that meet the World Bank's criteria for Indigenous Peoples. Thus, this section has adapted Core Principle 4 to look at the systems that address the needs of vulnerable people, including people with disabilities including female headed households. Given that PSRP may entail tariff adjustments the Federal Government would need to ensure that low income and low use consumers and consumers with disabilities, who can be defined as vulnerable in this context, are not inadvertently negatively impacted by the reforms.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<p>The following DLIs have implications for indigenous peoples and vulnerable groups.</p> <p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review.</p>	<ul style="list-style-type: none"> • Part VI - Consumer Protection and Licensee Performance Standards - of The Electric Power Sector Reform Act 	<ul style="list-style-type: none"> • Poor uptake by NERC of the Power Consumer Assistance Fund and other agencies in accordance with the Power Sector Reform Act • Poor 	<ul style="list-style-type: none"> • Ensuring that any future tariff adjustments are accompanied with protection consumers in the lowest income

<p>Global DLI2: A credible and fiscally sustainable Financing Plan is prepared and executed to fully fund the tariff shortfalls of the sector</p> <p>DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and measures for protecting the poor</p> <p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p>	<p>(2005) stipulates that there will be special codes of practice for the provision of assistance to special needs customers such as the people with disabilities, the elderly or severely ill. Additionally, the Act describes procedures for dealing with and assisting customers who have difficulty in paying bills.</p> <ul style="list-style-type: none"> • Part VIII – The Power Consumer Assistance Fund – of The Electric Power Sector Reform Act (2005) - requires NERC to set up and administer a fund which will, among others, be used to subsidies 	<p>knowledge/understanding of how to operationalise the fund and to monitor progress</p> <ul style="list-style-type: none"> • Lack of data on consumers’ vulnerability profile (e.g. income levels, access to electricity, etc. 	<p>bracket¹¹ (especially women and vulnerable persons). They should ensure, through the tariff structure, that a basic level of consumption remains affordable. The consumers should be made to become aware about of these mitigation measures.</p> <ul style="list-style-type: none"> • NERC should collect data on customer vulnerability profile.
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¹¹ Through the set-up of the Power Consumer Assistance Fund

	underprivileged power consumers.		
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Core Principle 6: Social Conflict

Bank Policy for Program-for-Results Financing: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Bank Directive for Program-for-Results Financing: Considers conflict risks, including distributional equity and cultural sensitivities.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<p>The following DLIs have implications for Social Conflicts:</p> <p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review.</p> <p>Global DLI2: A credible and fiscally sustainable Financing Plan is prepared and executed to fully fund the tariff shortfalls of the sector</p> <p>DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and measures for protecting the poor</p> <p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p>	<ul style="list-style-type: none"> Nigeria Federal and State presence is strong throughout the country with well-trained police and security forces who maintain the rule of law. There are Federal and state level agencies and ministries with mandates to address conflict. States which are more conflict prone receive proportionately more resources to tackle conflict 	<p>Weakness of grievance redress system especially in terms of robust consumer engagement and feedback mechanism and lack of transparency of tariff reform.</p>	<ul style="list-style-type: none"> Strengthened stakeholder engagement and grievance redress mechanisms and increased transparency to provide information and communication avenues for complaints and their resolutions.

ES 6 CONCLUSION AND PROGRAM ACTION PLAN

36 The ESSA presented has identified strengths, gaps and opportunities in the Government’s environmental and social management system for effectively addressing the environmental and social risks associated with the Program and aligning with the Core Principles of Bank

Policy for Program-for-Results Financing. These gaps and opportunities have been translated into a viable strategy to strengthen and monitor environmental and social management capacity and performance of the FGN and incorporated into the Program’s overall Action Plan. The Program Action Plan (PAP), presented below, covers environmental and social actions linked to the ESSA. These actions are subject to further refinement during the negotiation process or during implementation, as required.

Table 1: Program Action Plan for Environmental and Social Management

	Action Description	Due Date	Responsible Party	Completion Measurement
1	Create framework under MYTO reviews and PSRP Financing Plan updates to ensure that tariff adjustments are accompanied with mitigation measures	During PSRP Financing Plan updates	PSRP Policy and Oversight Committee, PSRP Finance Technical Committee and NERC	MYTOs includes mitigation measures consistent with the PSRP Financing Plans
2	Build on current system and institutionalize guidelines to strengthen stakeholder and citizen engagement and grievance redress mechanism. Develop clear targets and monitoring criteria for NERC’s customer complaints system.	Six months after the Program effectiveness	PSRP Secretariat and NERC	Developed/updated guidelines for stakeholder engagement, number of stakeholder meetings, workshops and town hall meetings held etc.
3	Engage suitable Environmental and Social Risk Management Specialists by the PSRP Secretariat in a manner that will be satisfactory to the Bank.	Six months after the Program effectiveness	PSRP Secretariat	PSRP Secretariat engaging qualified Environment and Social Risk Management Specialists
4	Evaluate and report on the Environmental and Social Risk Management Actions of the Program	Commence 12 months after Program effectiveness	PSRP Secretariat	Quarterly, Bi-Annual and Annual Progress Reports
5	Formulate guidelines and manuals for mainstreaming stakeholder engagement process, and environmental, health and safety issues into the implementation of the Program	Twelve months after Program effectiveness	NERC, FMOP, EAD, NESREA	Completed guidelines in booklet form disseminated to stakeholders, training provided, and the guidelines operationalized.
6	Conduct annual monitoring of progress on environmental and social issues, especially regarding the compliance of the Program activities with the environmental standards and regulations	Within 12 months of end of each FY	NERC, FMOP, Project implementation team	Completed report with recommendations about E&S issues, including the progress of the implementation of actions indicated in this table. Follow-up measures to the recommendations taken in the following FY.

ES 7 STAKEHOLDER CONSULTATIONS

- 37 Formal and informal stakeholder consultations have been an integral part of the ESSA process during the project preparation phase. For the preparation of the ESSA, Bank specialists undertook a series of meetings and engagements with various stakeholders including federal agencies, development funding partners, and technical experts aimed at information- gathering and risk analysis. What follows are the key issues that emerged from the formal consultations with federal government representatives, electricity distribution and generating companies and a large representation of NGO and CSO organizations. A virtual Public Consultation for the ESSA was held on May 7, 2020. A list of attendees for the consultation meeting can be found in Annex 1.

Summary of Discussions

- 38 **Overview of the Program for Results:** The proposed Power Sector Recovery PforR contains comprehensive regulatory, financial, operational and governance measures to improve the power sector financial viability and enhance service delivery. These measures include: the MYTO implementation including an extraordinary review in 2020 and semi-annual minor reviews to update the revenue requirements for sector companies; the enforcement of a PSRP Financing Plan to address the tariff shortfalls of the power sector; the approval and enforcement of PIPs by DISCOs; the establishment of business continuity plans for DISCOs with license interventions; the adjustments of electricity tariffs toward cost recovery, with mitigation measures to protect the poor; and the publication of sector financial and operational data to enhance transparency and accountability. The PforR will disburse funds upon demonstration of progress in the achievements of these measures. The expected outcomes include electricity supply and reliability improved, financial self-sustainability achieved, fully contract based market put in place and ATC&C losses reduced substantially.
- 39 **Tariff adjustments and mitigation measures for the poor:** The Government has been directing fiscal resources to keep the electricity running but those resources have primarily benefited the wealthy. Moreover, because of the overall scarcity of public funds, as a result, public expenditures on primary health care, basic education, rural roads and other public goods that benefit the poor and represent investments in Nigeria's children (and its future) have suffered. The point of this operation is to help turn around the power sector and set it on a fiscally sustainable path, and this is particularly urgent at a time when the government needs all the fiscal resources it can marshal to help protect lives and livelihoods. Of course, the priority of the Government ought to be and has been to ensure that the poor and low-income are not hurt by this, and, in fact, what NERC is proposing should cap the impact on the poorest customers. But keep in mind that two thirds of the poorest 40 percent do not have access to grid electricity.
- 40 **ESSA summary:** The ESSA examines the extent to which the FGN's existing environmental and social management systems operates within an adequate legal and regulatory framework and incorporate recognized elements of good practice to guide environmental and social impact assessments, mitigation, management and monitoring at the PforR Program level. The ESSA was undertaking to ensure consistency with six core

principles outlined in paragraph 8 of the World Bank Policy for Program-for-Results. The six core principles are environment, natural habitats and cultural resources, public and worker safety, land acquisition, vulnerable groups and social conflict.

- 41 The result of system assessment and recommendations made to improve the system in order to ensure that the objectives of the critical PRSP was met was presented to the stakeholders. After the presentation, the stakeholders and other representatives all expressed appreciation for the project and in the questions and answer session that followed sought clarification of some issues.

SECTION I: INTRODUCTION

1.1 Background and Purpose of the ESSA

- 42 The World Bank is proposing to support the Nigeria Power Sector Recovery Program (PSRP) with a Program-for-Results (PforR) instrument. The PforR links the disbursement of funds directly to the delivery of defined results and builds on increased reliance on borrower safeguard and oversight systems. The Program Development Objectives are to improve the reliability of electricity supply, achieve financial and fiscal sustainability and enhance power sector accountability. The PforR promotes the sustainable performance of the power sector by supporting results in three key areas: reliability of electricity supply is improved; financial and fiscal sustainability is reached; and accountability is improved. These key results areas are complementary and include measures to support key financial, operational/technical, governance, and policy interventions of the PSRP. The proposed amount of the program is USD seven hundred and fifty million.
- 43 The Environmental and Social Management System Assessment (ESSA) for the Nigeria Power Sector Recovery PforR (hereafter, the Program) examines the extent to which the Federal Government's existing environmental and social management systems: operates within, an adequate legal and regulatory framework to guide environmental and social impact assessments, mitigation, management and monitoring at the PforR Program level; incorporate recognized elements of good practice in environmental and social assessment and management, including: (i) early screening of potential impacts; (ii) consideration of strategic, technical, and site alternatives (including the "no action" alternative); (iii) explicit assessment of potential induced, cumulative, and transboundary impacts; (iv) identification of measures to mitigate adverse environmental or social risks and impacts that cannot be otherwise avoided or minimized; (v) clear articulation of institutional responsibilities and resources to support implementation of plans; and (vi) responsiveness and accountability through stakeholder consultation, timely dissemination of the PforR Program information, and responsive grievance redress mechanisms; among others¹². The ESSA thereafter defines measures to strengthen the system, and recommend measures that will be integrated into the overall Program. The ESSA is undertaken to ensure consistency with six core principles outlined in paragraph 8 of the World Bank Policy for Program-for-Results Financing to effectively manage Program risks and promote sustainable development.
- 44 These six principles are:
- i. **Environment:** Promote environmental and social sustainability in the Program design; avoid, minimize, or mitigate adverse impacts, and promote informed decision-making relating to the Program's environmental and social impacts
 - ii. **Natural Habitats and Cultural Resources:** Avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program
 - iii. **Public and Worker Safety:** Protect public and worker safety against the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous

¹² See World Bank (2019) Bank Directive: Program-for-Results Financing

materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards

- iv. **Land Acquisition:** Manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards
- v. **Vulnerable Groups:** Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups
- vi. **Social Conflict:** Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

45 The ESSA analyzes the system for environmental and social management as relevant for the Program vis-à-vis each of these principles. The gaps identified through the ESSA and subsequent actions to fill those gaps directly contribute to the Program's anticipated results to enhance institutional structures related to the Program activities. The ESSA analysis presents a detailed description of the Program activities and the baseline conditions for existing environmental and social management systems. The Report draws on baseline information and presents an analysis of the existing system vis-à-vis the core principles for environmental and social management in Bank Policy and Directive for Program-for-Results financing, and presents a Program Action Plan (PAP) that will be incorporated into the overall Program loan documentation.

1.2 ESSA Methodology

46 The ESSA was prepared by Bank staff through a combination of reviews of existing program materials and available technical literature, interviews with government staff, non-governmental organizations, regulatory agencies and sector experts. As part of the project appraisal process consultations will be conducted with government, power sector and civil society stakeholders. The findings, conclusions and opinions expressed in the ESSA document are those of the Bank.

47 The scope of the ESSA includes the activities and systems necessary to achieve the Program Development Objective (PDO), and the defined results of the PSRP, represented by the Program's Disbursement Linked Indicators (DLIs)¹³ and Results Area Framework. A scoping analysis was completed to determine the applicability of each of the six PforR Environmental and Social Core Principles to the various Program DLIs and Results Framework as presented in Table 3.3.1. This scoping exercise was subsequently used to structure the remaining analysis of the ESSA which includes the following elements:

- Review of the baseline environmental and social information to understand the context under which the Program activities are undertaken
- Analysis of environmental and social benefits and risks of the Program activities
- Analysis of the federal government level systems for environmental and social

¹³ The projects disburse against eligible expenditure programs based on the achievement of predetermined disbursement-linked indicators (DLIs). The DLIs include intermediate outcomes and implementation performance/institutional change indicators that build incrementally over the life of the project.

management for planning and implementing the Program activities for consistency with the applicable Core Principles

- Identification of procedural and policy gaps with Bank Policy and Directive for Program-for-Results Financing as well as performance constraints in carrying out environmental and social management processes
- Development of a set of viable actions to strengthen the systems and improve environmental and social performance outcomes of the Program.

48 The PforR provides multifaceted support to implement policy, regulatory, governance and social accountability measures of the PSRP. The ESSA analysis has been considered on two levels: (i) the system as written in laws, regulation, procedures and applied in practice; and (ii) the capacity of Program institutions to effectively implement the system.

**Table 2.1: Applicability of Core Environmental and Social Principles (CP) to Nigeria Power Sector Recovery Program
Disbursement Linked Indicators (DLIs)**

DLI	CP1 Environment	CP2 Natural Habitats	CP3 Public & Worker Safety	CP4 Land Acquisition	CP5 Vulnerable groups	CP6 Social Conflict
<p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review Under this DLI, NERC will carry out minor reviews and issuance of MYTOs for eleven DISCOs consistent with the Financing Plan; BPE will issue a notice clarifying the expiration date of the allowance parameters in the Performance Agreements; NERC will carryout extraordinary review redefining allowances on CapEx, OpEx, ATC&C losses based on the approved PIPs and issue MYTOs for the period 2021-25 for each DISCO and for TCN</p>	Not Applicable as there are no physical works supported by the Program.	<p>Not Applicable as there are no physical works supported by the Program.</p> <p>Activities under this DLI will not change the existing ESIA processes that assess impacts on natural habitats.</p>	Not Applicable as there are no physical works supported by the Program	Not Applicable as there are no physical works supported by the Program.	Applicable. The activities under this DLI may lead to increase in tariff for customers and, without mitigation measure, this will increase poverty and exclusion of vulnerable groups who cannot afford the revised electricity tariff.	Applicable. Conflicts may arise due to increase in tariffs as citizens may react against the increase. There could be street demonstrations and other actions to resist payment of new tariffs.
<p>Global DLI2: A credible and fiscally sustainable Financing Plan is approved and executed to fully fund the tariff shortfalls of the sector Under this DLI, the FGN will approve the power sector Financing Plan covering the use of funds and source of funds to clear historical and new tariff shortfalls for 2020-2027, which is consistent with the effective MYTO. This DLI will also involve the funding of the new tariff shortfalls incurred from Q1 2020 through Q3 2022 from</p>	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program	Not Applicable as there are no physical works supported by the Program.	Applicable. The activities under this DLI may lead to increase in tariff for customers and, without mitigation measure, this will increase poverty and exclusion of vulnerable groups who cannot afford the revised electricity tariff.	Applicable. Conflicts may arise due to increase in tariffs as citizens may react against the increase. There could be street demonstrations and other actions to resist payment of new tariffs.

DLI	CP1 Environment	CP2 Natural Habitats	CP3 Public & Worker Safety	CP4 Land Acquisition	CP5 Vulnerable groups	CP6 Social Conflict
sustainable sources of funds (not CBN PAF).						
<p>DLI1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced</p> <p>This DLI will involve the approval of PIP for 2020-24 for each DISCO; and monitoring and enforcement DISCOs' achievement of outputs in the PIPs consistent with NERC's regulations</p>	Not applicable as there are no physical works supported by the Program.	Not applicable as there are no physical works supported by the Program.	This may not be applicable as there are no physical works supported by the Program, however, the PIP that will be monitored may involve activities that impact public and worker safety.	Not Applicable as there are no physical works supported by the Program.	Not Applicable	Not Applicable
<p>DLI 2: Business continuity arrangements are implemented for DISCOs</p> <p>Under this DLI, BPE will establish lists of qualified experts who would assume the transitory management of DISCO(s) whose licenses are subject to NERC intervention. Also, management of operations of DISCOs that have license interventions by NERS will be handed over to transitory management teams appointed by BPE and approved by NERC</p>	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program	Not Applicable as there are no physical works supported by the Program.	Not Applicable	Not Applicable
<p>DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and FGN policy for protecting the poor</p>	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program.	Not Applicable as there are no physical works supported by the Program	Not Applicable as there are no physical works supported by the Program.	This is applicable and the adjusted tariffs may negatively affect vulnerable people	There could be conflict between DISCOS and end users as a result of

DLI	CP1 Environment	CP2 Natural Habitats	CP3 Public & Worker Safety	CP4 Land Acquisition	CP5 Vulnerable groups	CP6 Social Conflict
<p>This DLI will involve issuance of order by NERC for adjusting end user tariffs in 2020, 2021, 2022 and 2023 and capping the bill for unmetered customers in 2020 in line with FGN approved financing plan and FGN policy for protecting the poor.</p>					<p>especially women and the poor either directly through increased electricity bill or indirectly through increases in cost of services that apply electricity.</p>	<p>adjustments in tariffs.</p>
<p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p> <p>Under this DLI, NERC will approve DISCOs minimum remittance thresholds to TCN and NBET; NERC will approve mechanism to ensure that DISCOs do not accumulate payables for new tariff shortfalls from 2020 onwards; MFBNP will approve a mechanism to remove historical tariff shortfalls and associated interest from DISCOs' books; NERC will enforce minimum payment by DISCOs to NBET and TCN</p>	<p>Not Applicable as there are no physical works supported by the Program.</p>	<p>Not Applicable as there are no physical works supported by the Program.</p>	<p>Effect on public worker safety is not envisaged given that there are no physical works supported by the Program; however, enforcement of payment discipline may require activities that affect public and worker safety.</p>	<p>Not Applicable as there are no physical works supported by the Program.</p>	<p>This is applicable as DISCOs may shift the pressure/burden to consumers and the vulnerable ones will be negatively affected.</p>	<p>There could be conflict if DISCOs do not meet the minimum remittance thresholds and continue to accumulate non-tariff shortfalls.</p>
<p>DLI 5: Financial and operational transparency of DISCOs is improved</p> <p>Under this DLI, the financial and operational transparency of DISCOs will be ensured as NERC will be publishing on its website or links to DISCOs' websites IFRS audited</p>	<p>Not applicable</p>	<p>Not applicable</p>	<p>Not applicable</p>	<p>Not applicable</p>	<p>Not applicable</p>	<p>Not applicable</p>

DLI	CP1 Environment	CP2 Natural Habitats	CP3 Public & Worker Safety	CP4 Land Acquisition	CP5 Vulnerable groups	CP6 Social Conflict
financial statements of DISCOs and key operational and financial data for the year.						

SECTION II: STRATEGIC CONTEXT

2.1 Country Context

- 49 The country held national elections in 2019, for the sixth consecutive time since its return to democracy in 1999. The incumbent president won the presidential elections and was sworn in for a second term on May 29, 2019. The current administration campaigned on three fundamental tenants- accelerating economic growth, fighting corruption and improving security - with the ultimate objective to lift 100 million people out of poverty in 10 years.
- 50 In 2019, Nigeria recovered from the 2016 recession, sustaining an estimated 2 percent growth rate in 2018-2019. The collapse of global oil prices during 2014–16, combined with lower domestic oil production, led to a sudden slowdown in economic activity. Nigeria’s annual real GDP growth rate, which averaged 7 percent from 2000 to 2014, fell to 2.7 percent in 2015 and to -1.6 percent in 2016. Growth slowly rebounded in 2017, levelling about 2 percent in 2018-2019. Growth is primarily driven by the services sector (50 percent of the economy) primarily telecoms, with positive contributions from agriculture, which, however, remains affected by ongoing conflicts and is weather-dependent. Non-oil industry growth is slow, constrained by lack of private sector credit growth, high cost of financing, weak domestic demand, and insufficient/unreliable power supply¹⁴. Policy and regulatory uncertainty are impeding domestic and foreign investment. In the absence of structural reforms, economic growth has been expected to hover just above 2 percent over the medium-term, but highly vulnerable to oil sector shocks.
- 51 With population growth (estimated at 2.6 percent) outpacing economic growth in a context of weak job creation, per capita incomes are falling. Today, an estimated 85 million Nigerians (40 percent of the population) live below the poverty line. In 2018, Nigeria’s unemployment rate was already high by regional standards at 11 percent, having risen from 5 percent in 2015.¹⁵
- 52 Even before the COVID-19 shock, low revenues, rising debt service and large public subsidies limited the fiscal space for productive investments in infrastructure and human capital. At 8 percent of GDP in 2018-2019, Nigeria’s general government revenues were very low by the standards of comparable countries. Consequently, general government expenditures were very small relative to the size of the economy (12 percent of GDP, about half the level expected for its level of development), and unable to meet the needs of its growing population. Oil revenues were volatile and reduced by sizeable deductions (including for the unbudgeted petrol subsidy), while growth in non-oil revenues (about 4 percent of GDP) was constrained by slow tax policy and administration reforms. Public debt was relatively modest as a share of GDP (20-25 percent) but had been rising due to sustained fiscal deficits. With low revenues and high domestic interest rates, the Federal Government of Nigeria (FGN) was spending a significant share of its revenues to service its debt (since 2016, the FGN spends an estimated 60 percent of its revenues to pay interests on its debt).

¹⁴ World Bank Enterprise Surveys, World Bank Doing Business, Central Bank of Nigeria ‘January 2020 business expectations survey report’

¹⁵ Unemployment rates quoted follow the International Labor Organization’s definition, applied to NBS data. Using Nigeria’s national definition of unemployment, the unemployment rate was 23 percent in 2018.

Unproductive, regressive subsidies (main ones being fuel and power) further limited fiscal space for productive investments in infrastructure and human capital. The annual power sector tariff shortfalls requiring FGN funding reached NGN 524 billion (US\$1,720 million) in 2019, equivalent to 0.4 percent of GDP and 11 percent of FGN revenues.

- 53 The economic impact of COVID-19 will further reduce Nigeria’ fiscal envelope. With the oil price outlook of US\$30/barrel, government oil revenues are projected to fall by over 70 percent and reduce general government revenue towards ~5 percent of GDP. This sudden drop in revenue comes just when fiscal resources are urgently needed to contain the COVID-19 outbreak and stimulate the economy. In response to the oil shock and the COVID-19 health risks, the federal government has prepared an Amended 2020 Budget to reassess funding and reprioritize expenditures. While the exigencies of the COVID-19 crisis will require higher borrowing, public debt is sustainable in a variety of shock scenarios, though in the short-term falling government revenues challenge liquidity indicators (interest payment to revenue ratio is likely to rise), which are expected to improve over the medium term as the government resumes its revenue-mobilization reforms.

Table 2.1: Selected Economic Indicators, 2015-2021

	2015	2016	2017	2018	2019e	2020f	2021f
Real GDP growth, at constant market prices (percent)	2.7	-1.6	0.8	1.9	2.2	-3.2	1.7
Agriculture (percent)	3.7	4.1	3.4	2.1	2.4	2.4	2.8
Industry (including oil) (percent)	-2.2	-8.9	2.1	1.9	2.3	-10.1	2.4
Oil Industry (Oil GDP)	0.1	-5.0	0.6	2.4	4.6	-10.6	2.8
Non-oil Industry	-5.4	-14.4	4.7	1.1	0.9	-9.7	2.1
Services (percent)	4.8	-0.8	-0.9	1.8	2.2	-2.9	0.9
Inflation (Consumer Price Index, 12-month average) (percent)	9.0	15.7	16.5	12.1	11.4	13.8	12.4
Current account balance (% of GDP)	-3.2	0.7	2.8	1.3	-3.8	-3.5	-0.6
Goods & services exports (% GDP)	10.1	9.5	13.5	17.1	15.6	7.6	9.8
Goods & services imports (% GDP)	14.8	11.6	13.6	18.0	22.5	12.9	12.8
Fiscal balance (consolidated government, percent of GDP)	-3.2	-3.8	-4.0	-4.2	-4.4	-5.5	-4.9
Government Revenue	7.5	5.9	6.7	8.1	8.4	5.3	6.0
Government Expenditure	10.7	9.7	10.7	12.3	12.8	10.8	10.9
Debt (general government, percent of GDP)	14.2	17.3	19.1	20.9	23.7	30.0	32.4

Source: NBS, CBN and World Bank staff projections

- 54 The Government of Nigeria at both the federal and state-levels are preparing comprehensive programs in response to the COVID-19 related shocks. These include measures to contain the outbreak, prepare for a more severe outbreak, and economic stimulus packages that protect the lives and livelihoods of the poor from the impact of the economic recession and disruption. Based on requests from the Government, the Bank is preparing a multi-pronged

package of support to finance public health activities, provide immediate fiscal relief to Federal Government and States, and support States to mitigate economic impact and recover.

- 55 Power sector recovery is critical for the FGN’s response to the COVID-19 outbreak. The sector recovery efforts focused on ensuring regulatory and policy predictability providing incentives for efficiency in operations while enforcing payment discipline across the supply chain are critical for maintaining the “lights on” through continued generation of electricity. At the same time, the efforts to reduce the sizable public expenditures for tariff shortfalls i.e. subsidies to the sector, will create critical fiscal space for the FGN to finance a pro-poor economic stimulus package to protect the poor and vulnerable from the crisis and to support the economy to recover.
- 56 During the recovery period, improving power sector performance will be central to unlocking economic growth, particularly in the non-oil sectors of manufacturing and services. The annual economic losses caused by Nigeria’s unreliable power supply have been estimated at NGN 10.1 trillion or about 2 percent of GDP¹⁶. Nigeria ranks 131st with respect to the overall ease of doing business in the World Bank’s Doing Business 2020, with getting access to electricity ranked as one of the major constraints. With respect to getting electricity, Nigeria ranks 171st globally, out of the 190 countries surveyed, and 33rd among 46 Sub-Saharan Africa countries.
- 57 Ensuring access to reliable electricity supply is important for poverty alleviation. With 47 percent of the population (97 million people) lacking access to grid electricity, Nigeria has the largest access deficit in Sub-Saharan Africa and the second-largest in the world, after India. For the bottom 40 percent, access to grid electricity is lower at about 31 percent nationwide. The average annual per capita electricity consumption of Nigeria is 147 kWh, which is a fifth of the average low middle-income country consumption. Of the households connected to grid electricity, most experience blackouts daily, as well as frequent voltage fluctuations. As a result, 40 percent of households with access to electricity use generators and many rely on other non-grid sources such as solar home systems, solar lantern/lighting systems, rechargeable batteries, etc. Low income-households resort to candles and flashlights for lighting and firewood for cooking, which are inefficient and potentially harmful to their health and the environment. Insufficient energy impacts all Nigerians, however, the burden of ensuring access to energy (through using or collecting traditional fuels) often falls predominantly on women.

2.2 Sectoral and Institutional Context

- 58 Nigeria’s power sector is unbundled and largely privately-owned. Following the passage of the Electric Power Sector Reform Act (2005), the sector was unbundled into six generation companies (GENCOs), eleven distribution companies (DISCOs) and the Transmission Company of Nigeria (TCN). The privatization of the DISCOs and GENCOs was completed in 2013. Three of the five thermal GENCOs (that use natural gas as fuel) were sold in their entirety to new owners, while three hydropower plants were concessioned to private operators. TCN has remained a fully Government-owned monopoly. In the current stage of

¹⁶ Power Sector recovery Plan, Federal Government of Nigeria (2017).

market development, known as the Transitional Market, the Government-owned Nigerian Bulk Electricity Trading Company (NBET) fulfills the role of bulk trader, buying electricity from GENCOs (including Independent Power Producers-IPPs) under Power Purchase Agreements (PPAs) and reselling it to DISCOs under Vesting Contracts.

- 59 The transition from a publicly-owned to largely privately-owned power market, which began in 2013, did not bring the expected outcomes and the sector is under severe stress. The causes for the stress are interlinked and the result of sector’s key stakeholders - Government ministries and agencies, Nigeria Electricity Regulatory Commission (NERC), and the private sector falling short of their expected contributions for achieving sector turnaround. As a result, there is lack of trust between key stakeholders and among the general public with respect to power sector improvement (Figure 2.1). A credible reform process would require an integrated approach of resolving regulatory and policy failures, establishing a credible and fiscally sustainable financing plan by the FGN to ensure full funding for tariff shortfalls, implementation of comprehensive performance improvement plans (PIPs) by DISCOs with approved capital expenditure and clearly specified business continuity arrangements for dealing with DISCOs that would fail.

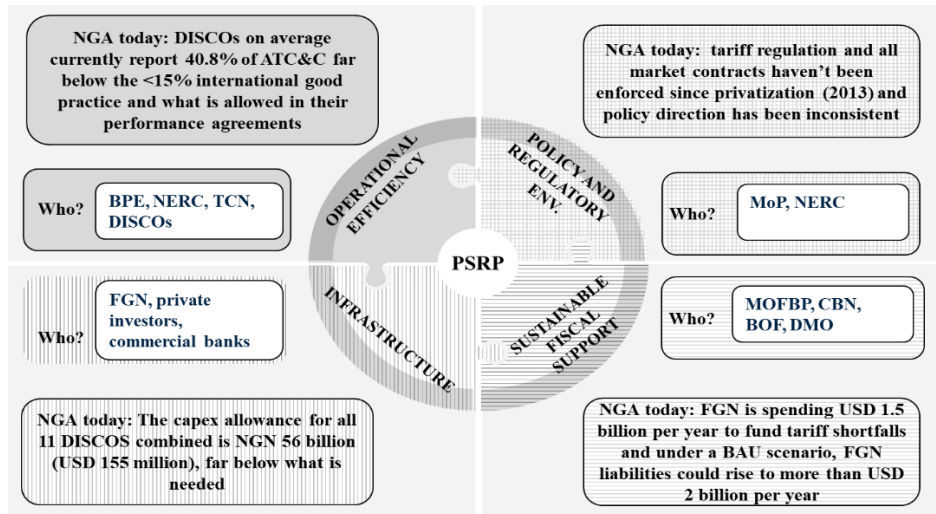


Figure 2.1: Key Challenges of Power Sector

- 60 Tariff policy has limited the implementation of the regulatory and contractual framework of the power sector that, in turn, have hindered the sector’s sustainable operation. The tariff policy (the Multi-Year Tariff Order or MYTO) was at times delayed, often due to external factors (e.g. litigation), resulting in the deterioration of the financial situation of sector companies (especially DISCOs) and in the inability to enforce contractual obligations on majority privately-owned GENCOs and DISCOs since privatization in 2013. It has also created lack of clarity on the end-date of loss reduction and capital and operational expenditure targets in the Performance Agreements of DISCOs, which are input parameters used in the MYTO.
- 61 The power sector, in particular distribution, is operationally inefficient with high losses. The sector’s aggregate technical commercial and collection (ATC&C) losses are extremely high,

with DISCOs reporting on average 41 percent in 2019, versus 26 percent allowed in NERC’s MYTO (allowed losses are based on the targets in DISCOs’ Performance Agreements). The high losses coupled with lack of payment discipline by DISCOs (and weak enforcement of payment discipline by NBET and NERC) result in DISCOs’ low remittances to NBET (about 29 percent for 2018 invoices of NBET that are not adjusted for tariff shortfalls).

- 62 Occasional delays with the implementation of MYTO and limited regulatory enforcement have prevented the much-needed investments in infrastructure. DISCOs’ poor financial viability has severely constrained their access to commercial financing. Without access to financing, DISCOs have not progressed with essential investments in metering and rehabilitation of distribution networks, resulting in continued poor service delivery. Moreover, the annual capital investments allowed in current MYTO for eleven DISCOs combined is NGN 56 billion (US\$156 million), far below what is needed for improving operational performance of DISCOs.
- 63 Power sector shortfalls are rising and are fiscally unsustainable. From 2015 to 2019, the tariff shortfalls – the difference between allowed tariffs and cost-reflective tariffs, which the FGN is responsible for funding, increased significantly as allowed tariffs stayed flat while the cost reflective tariff increased due to FX depreciation and inflation. In 2019, with tariffs at only 56 percent of cost-reflective levels, the annual tariff shortfall is estimated at NGN 524 billion (US\$1,718 million). Tariff shortfalls between 2017-2019 totaled NGN 1,249 billion (US\$4,095 million) (Table 2.2). This situation is not fiscally sustainable and takes away resources for human and physical capital investment – in 2019 the FGN budget was only NGN 428 billion (US\$1,403 million) for Health and NGN 650 billion (US\$2,131 million) for Education.

Table 2.2: Cost-reflective tariff, average allowed tariff and annual tariff shortfalls

	2017	2018	2019	2020	2021	2022	2023	Total 2017-23
	Historical Years			Projected Inaction Scenario				
Tariff shortfalls NGN bn	322	403	524	606	768	822	887	4,332
Tariff shortfalls USD bn	1.1	1.3	1.7	1.7	1.9	2.1	2.2	12.0
Tariff shortfalls % of GDP	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	
Cost-reflective tariff NGN	47.5	50.4	54.5	56.3	58.5	58.8	59.5	
Average allowed tariff NGN	30.8	30.7	30.7	30.7	30.7	30.7	30.7	

Note: Conversion of tariff shortfalls to USD uses the FX rate in the effective MYTO: 305 for 2017-2019, 360 for 2020, for 2021-2023 the current NAFEX rate of 396 is assumed to be used.

- 64 To ensure GENCOs and gas suppliers received sufficient payments to continue generating electricity, the FGN has borrowed from the CBN a total of NGN 1,301 billion (US\$3,614 million) since 2017. The original Payment Assurance Facility (PAF) was unconditional and used by NBET to supplement the remittances of DISCOs and ensure at least 80 percent payment to GENCOs. The PAF expansion (approved by the FGN in May 2019) is conditional and underpinned by an Accountability Framework. The disbursement conditions of the Accountability Framework are based on the Power Sector Recovery Program (PSRP) approved by the FGN in March 2017. As the funding under the PAF expansion is expected

to be fully used by mid-2020, the FGN will need alternative, more sustainable sources for financing tariff shortfalls that are on budget and fiscally affordable.

65 The significant fiscal resources spent on funding tariff shortfalls disproportionately benefit the (relatively) rich. While access to grid electricity of the poorest 40 percent, ranked by per capita household expenditures, is 37 percent, 69 percent of the richest 60 percent reported access to the grid. Living in more affluent neighborhoods, the top 60 percent also experienced fewer outages, and spent almost twice as much as the bottom 40 percent. As a result, the fiscal expenditure on tariff shortfalls largely benefits the rich. 80 percent of the fiscal expenditure on tariff shortfalls benefits the richest 40 percent of the population, while only 7 percent benefits the bottom 40 percent, and less than 2 percent benefits the poorest 20 percent (Figure 2.2).



Figure 2.2: Grid connection and distribution of current tariff shortfall funding among residential customers

Source: NBS Survey Data

2.3 Poverty and Electricity Access

66 Nigeria has around 12 million electricity customers¹⁷ (NERC projection). The number of customers per DISCO varies widely. The true number of customers is not accurately known, however. DISCOs’ own figures for their tariff revision submissions totaled 8.5 million customers, of which, 7 million are residential, while the latest household survey estimates that around 22 million households have access to grid electricity. The wide variation could be due to illegal connections or multiple household connections (multiple households registered as one customer).

67 Electricity customers fall into four categories, residential, commercial, industrial, and public. Residential customers in Nigeria account for about 62% of electricity consumed (net of losses). About 21% of electricity is consumed by commercial customers, and industrial customers account for about 11%. The relatively small share of electricity consumed by industrial customers (in South Africa, by comparison, this proportion is about 60% (IEA statistics)) may be related to the prevalence of own-generation by industrial businesses.

¹⁷ In this context ‘customers’ are defined as those (households and businesses) who have an account with a DISCO. In the residential sector (customers on tariffs R1, R2, R3 and R4) this equates to households. ‘Consumers’ are individuals who use electricity, whether or not it is supplied directly by the DISCO and paid for.

68 Among households, electricity access is still limited in Nigeria. According to the latest household survey, 53% of the population (56% of households) reported connecting to the public/community electricity system. With about 90 million people lacking access to grid electricity, Nigeria has the largest access deficit in Sub-Saharan Africa and the second largest in the world, after India. However, there is a large variation across regions (see Figure 2.3), with connectivity is higher in the South and in urban areas. Up to 86% of the urban population had access while only 36% of the rural population did. Similarly, the connection rate ranges from 26% in the North East to 78% in the South-West zone. This can be compared with the incidence of absolute poverty in each zone, shown in Figure 2.4.

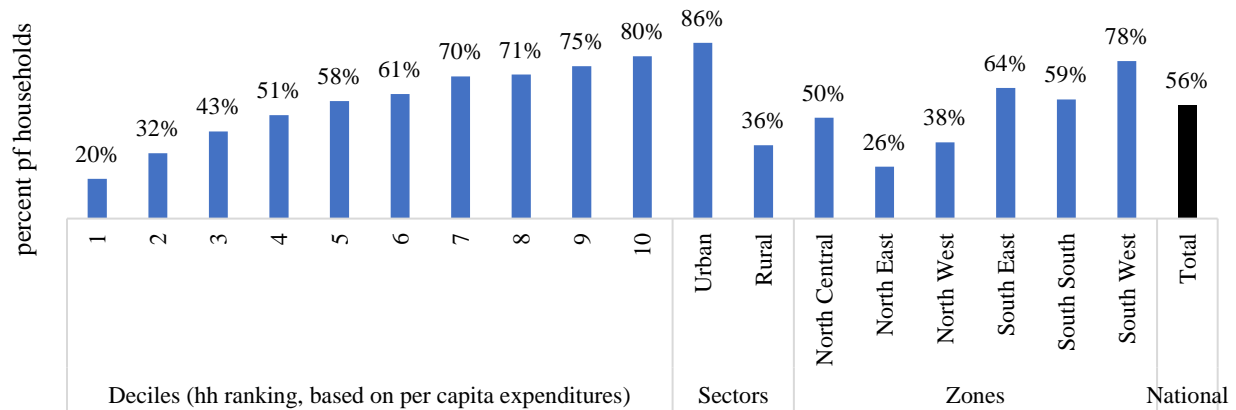


Figure 2.3: Connection to the public/community electricity system by region and quintile, 2018-19

Source: NBS Survey Data

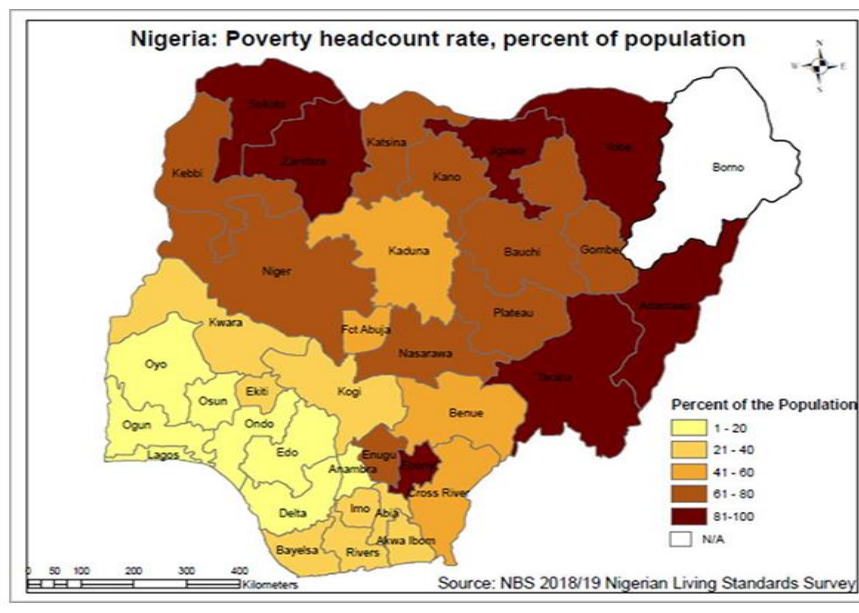


Figure 2.4: Incidence of absolute poverty by state 2019 (% population)

Source: NBS (2020) 2019 poverty and inequality in Nigeria.

- 69 The government’s target is to achieve 75% electrification by 2025, which would require doubling the number of households with connections by that date. To achieve universal access to electricity by 2030, Nigeria would need to connect between 500,000 to 800,000 households per year. Both grid extension and off-grid solutions will be needed to provide quality services to the unserved and underserved households and businesses in a timely manner.
- 70 Generally, electricity access and consumption are correlated with income levels. While 77% of the richest quintile, ranked by total household expenditure per capita had electricity, only 26% of the poorest quintile did. Of the population without access to electricity, only 18.2% lived in electrified communities. This rate is even lower among the poor. Of the many people in the bottom quintile without direct access, only 12.1% lived in electrified villages/neighborhood, which makes the effort to expand access to the poor all the more difficult.
- 71 In addition to low access, unreliable electricity is also a major issue. About two-thirds of households connected to the grid reported having 9 or more outages in the 7-day period (a median duration of interruption equals 8-9 hours) (Figure 2.5). Rural areas were particularly hit by black-outs, where number of interruptions in supply were almost double of that in urban areas. More affluent households can afford to use generators to compensate for the lack of consistent supply of grid electricity while poorer households resort to candles and flashlights for lighting and firewood for cooking, which are inefficient and potentially harmful sources of energy. Many households report low quality of supply as the reason of not connecting to the grid.

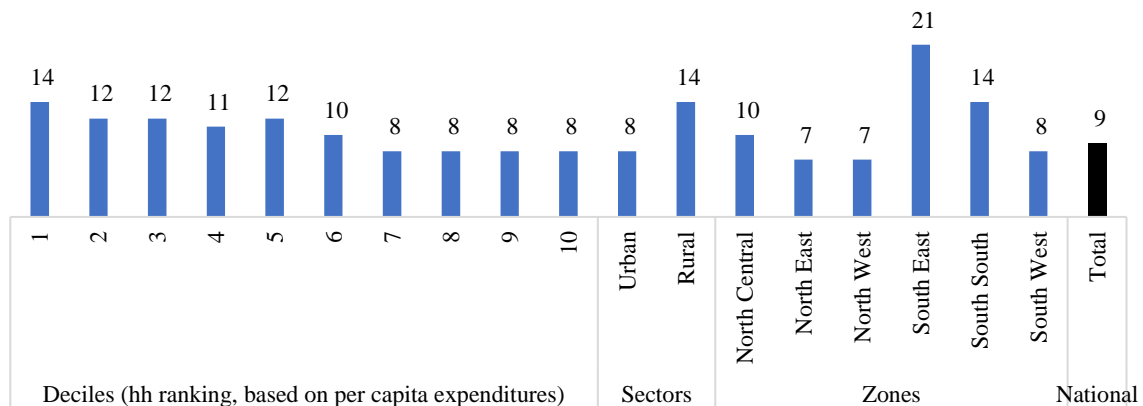


Figure 2.5: Median number of outages in the last 7 days

Source: NBS Survey Data

- 72 People who lack access to electricity are disadvantaged in a number of ways. The absence of electricity limits their opportunities to improve their productivity and earn higher incomes. For example, the substantial amount of time that women in Nigeria spend processing staple foods (grains and cassava) could be reduced dramatically through the use of electrically powered machinery. It limits their education, denying them opportunities to read during hours of darkness and constraining the quality of educational facilities and

services. Only 35% of Nigeria’s primary schools have access to electricity. Lack of electricity prevents people from accessing good-quality health services, and around 30% of health facilities in Nigeria have no electricity. Electric lighting would also improve people’s health, by eliminating the household air pollution and burns from accidents that are associated with kerosene lighting and generators.

- 73 Without electricity, opportunities to obtain information, knowledge and entertainment from the radio or television are more limited, and the absence of street lighting reduces people’s sense of personal security. Lack of electricity also disadvantages people by requiring them to spend a higher proportion of their income on less-efficient lighting and communications than can be provided by electricity. Indeed, many poor households pay more for their energy than people on higher incomes.
- 74 Cost, technical issues, and reliability are the main reasons for lack of access. The unreliability of service was a reason for 15.7%, and for 10.5%, the dwelling was not appropriate for connection. As part of the unreliability of service, the long waiting period played an important role. In fact, among the households who recently applied for electricity connection, 56.7% had to wait more than 5 weeks to have a technician come to connect their house. Among the unconnected households who reported the reason, 70.7% claimed that connection or wiring fee was unaffordable. In addition to the official fee, side payment is also an issue. Among the households who applied for electricity connection, 54.8% had to pay an unofficial fee.
- 75 Similarly, the use of electricity varies greatly across regions and income. Overall, 72% of households who were connected to the grid reported some spending on electricity in the last month. Among those who purchased electricity, the amount of consumption is not large. An average household paid for an equivalent of 67 kWh a month on average, with rural households even less (around 51 kWh on average) while urban households slightly more (74 kWh on average) (Figure 2.6). Among the few households in the poorest quintile who consumed electricity, 93% consumed 50 kWh or less, and 20% used between 50 and 100 kWh. Among the top quintile with electricity connection, 57% consumed more than 50 kWh (Figure 2.7).

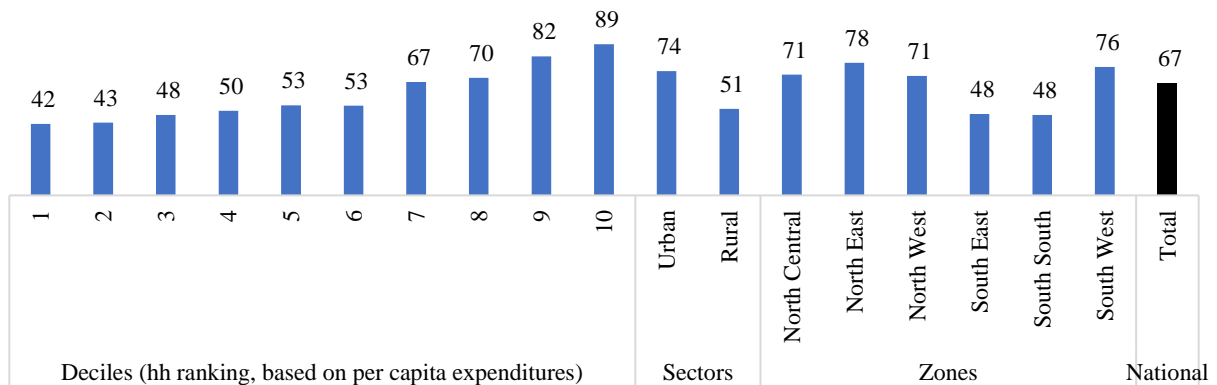


Figure 2.6: Monthly electricity usage by region and quintile, 2018-19

Source: NBS Survey Data

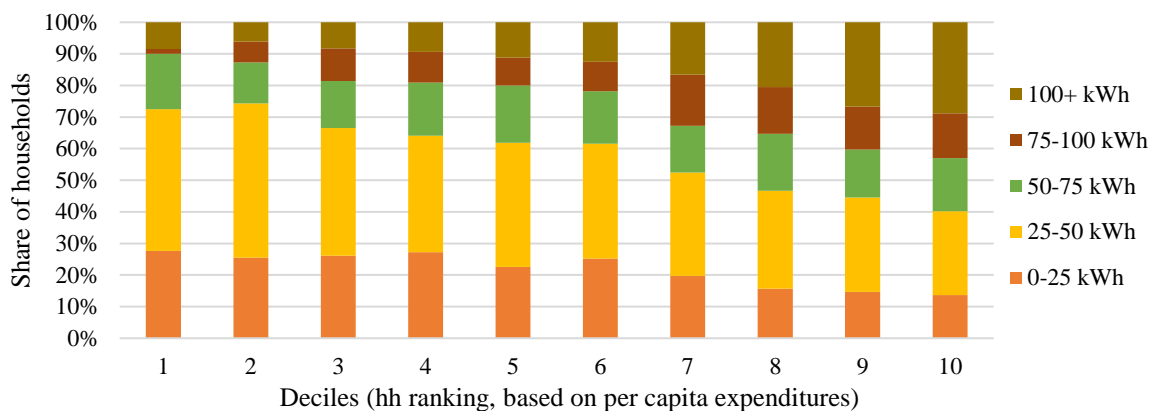


Figure 2.7: Distribution of households by amount of electricity paid, 2018-19

Source: NBS Survey Data

76 The high proportion of Nigeria’s electricity consumed by the residential sector is likely to include the consumption of electricity by home-based enterprises. Household survey data shows that on average about 61% of household income is from non-farm activities (43.5% in rural areas and 87.8% in urban areas). In rural areas, 29.5% of household income is from non-farm enterprises (39.7% for female-headed households) (World Bank, 2014a). There are approximately 37 million micro-enterprises in Nigeria, but only 1.5 million are registered (SMEDAN, 2013). Women operate over 43% of Nigeria’s micro-enterprises, and about 23% of small and medium enterprises.¹⁸

2.4 Tariffs

77 In 2008, NERC introduced a Multi-Year Tariff Order (MYTO) as the framework for determining the industry pricing structure. In 2012, with the unbundling of the Power Holding Company of Nigeria (PHCN) and establishment of successor companies, including eleven DISCOs, NERC issued the second MYTO to establish the schedule of tariffs between June 2012 and May 2017. This was also when NERC abandoned uniform tariffs for the country and introduced different tariffs for each DISCO. However, actual evolution of some macroeconomic and technical parameters in the period following MYTO 2, such as amounts of energy available for supply to customers and starting values of losses and collection rates, was different from what was envisaged in the tariff determination. In January 2015, NERC announced a minor revision of MYTO (MYTO 2.1) to near cost-reflective levels. However, the high loss allocation under the January 2015 MYTO caused a public backlash, resulting in an order in March 2015 (MYTO 2.1, Amended) eliminating pass-through of collection losses. Following further reviews and consultation with the DISCOs and other stakeholders, NERC, in December 2015, announced a further revision of the tariff (MYTO 2015, effective in February 2016), reinstating the collection losses. The revision kept the lifeline tariff (applicable to all households consuming no more than 50 kWh per month) constant at 4

¹⁸ The 2014 World Bank Enterprise Survey for Nigeria found that women were the top managers in about 14% of all enterprises. The proportion was slightly higher amongst small enterprises (16%), and much lower amongst medium and large-scale enterprises (5.6% and 6.2%, respectively). The proportion was also higher in service sector enterprises (15.1%), compared with manufacturing (11.8%). Note that the definition of small enterprise is different from SMEDAN’s.

NGN/kWh, but adjusted upward tariffs for all other customer classes.¹⁹ For most customer classes and DISCOs, the tariffs increased by up to 60% between 2015 and 2016, but the increase has varied between DISCO.²⁰ The unweighted average R2 tariff is now around Naira 27.6.

- 78 Regulations introduced by NERC prevent DISCOs from charging a fee to connect new customers. Although this removes an opportunity to seek additional, informal transaction costs from new customers to facilitate their connection, it places a higher burden on prospective customers. Applicants for a new connection must now themselves purchase the materials required and provide them to the DISCO, as well as pay for the necessary inspections and certificates.
- 79 Before connecting to the grid, a new customer must cover the costs of a meter, the connection to the grid itself and internal wiring and fittings. The World Bank's 2016 Doing Business Survey estimates the total financial cost of a new connection for a warehouse at US\$ 10,627 (Naira 2,136,250). Although the Doing Business Survey indicates that the process for a business to obtain an electricity can take months, the 2014 World Bank Enterprise Survey found the average time to obtain a commercial connection, after application, was 9.4 days. For large-scale enterprises, the time was longer, 19.4 days.
- 80 Most new connections are for residential customers, and for them the cost of the required materials and equipment will be lower than for business connections. The actual costs will vary with the distance from grid, and between states. Ohiare (2015) estimated the average cost of a rural connection to range from US\$ 991 in Edo state to US\$ 1,501 in Abuja. But these costs do not include the costs of internal wiring and meters. In Senegal, internal wiring ranged from US\$ 90 to US\$ 276, depending on the service level (Golumbeanu & Barnes, 2013).
- 81 The total outlay for a new connection could therefore be between US\$ 1,000 and US\$ 2,000. This suggests that the cost of a connection to the electricity supply is higher than the average household's monthly income.²¹ This is high when compared with the levels of connection charges in other countries (Africa Progress Panel, 2015). The cost of connecting to the grid is more of a barrier to accessing electricity than the tariff.

2.5 Social issues

- 82 **Gender:** While female-headed households are more likely to be connected to the grid (61 percent) compared to male-headed households (55 percent),²² female-headed households tend to consume less electricity, probably because their households are smaller. The burden

¹⁹ The MYTO framework classifies residential customers into four classes with different tariff levels based on the type of connection. Further details on the classification of residential customers in the household survey are presented in Annex A.

²⁰ In 2016, six of the eleven DISCOs introduced different tariffs for residential customers with single phase or three phase connections.

²¹ GDP (market prices) per capita was US\$ 3,203 in 2014 (World Development Indicators). Assuming 4 persons per household, average household income is estimated at around US\$ 12,000 a year, or US\$ 1,000 a month.

²² More than two thirds (79.4%) of households in Nigeria are male headed, but they are, on average, slightly poorer than female-headed households.

of ensuring access to energy (through electricity or traditional fuels) often primarily falls on women, and they also bear the health impacts of unclean cooking.

- 83 The OECD's Social Institutions and Gender Index (SIGI) measures discrimination against women and girls in social institutions. By this measure, discrimination against women in Nigeria's social institutions is very high, with significant gender gaps in education, economic empowerment and political participation. Discriminatory laws and customary practices, which differ between states within Nigeria, are barriers to greater gender equality. Nigeria ranks 118 out of 134 countries in the Human Development Report's Gender Equality Index.
- 84 Gender norms in Nigeria relating to women's labour force participation, individual control over income, and participation in household decision-making contribute to a lack in equality of opportunity in the contributions women make to development and the benefits they receive from it (British Council, 2012). Traditional gender roles, shaped by these norms, mean that women are largely responsible for securing and managing household energy (for cooking, heating, laundry, and lighting), and for energy for home-based production and micro-enterprises.
- 85 About 15% of Nigerian households are de jure headed by women (British Council, 2012). A household survey in 2012/13 found 16.2% of households to be headed by women.²³ The proportion of female heads of household was higher in urban areas (18.2%) than in rural areas (14.7%). Female headed households tend to have more members of the over 50 age group, more uneducated adults and more formerly married household members, than male headed households (Oginni et al., 2013). Women head about 10% of the households below the poverty line, nationally, but are 25% less likely to be asset poor than male headed households.
- 86 The proportion of households that is headed by women varies significantly between states. In some states (e.g. Kano, Sokoto, Zamfara and Bauchi), fewer than 2% of households are female-headed, while in others almost a third of households are (e.g. Imo, Osun, Enugu, and Bayelsa). In the northern states, the proportion of households headed by women is much lower than in the South, shown graphically in 2.8.

²³ LSMS-Integrated Surveys on Agriculture General Household Survey 2012/13

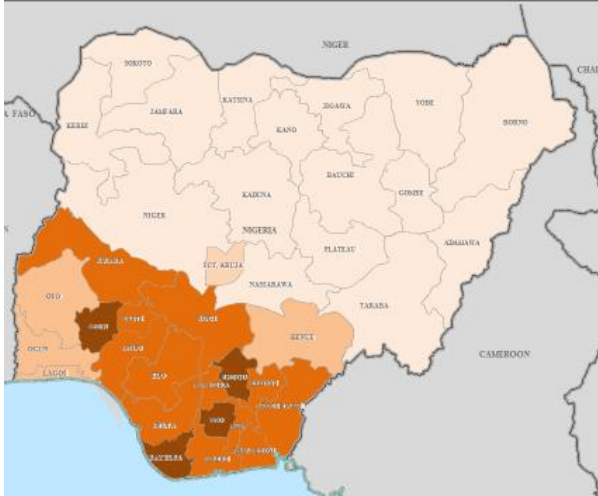


Figure 2.8: Proportion of households with a female head, by state

Source: NBS

- 87 Women in Nigeria are particularly disadvantaged in terms of education. Although 45% of adult women have secondary education, more than a third (38%) have had no formal education at all, compared with 21% for men. More than half of women living in rural areas have had no formal education, compared with 16% of urban women. Women’s exposure to mass media is limited – almost two-thirds of women (65%) do not watch television at least once a week, and 61% do not listen to the radio.
- 88 Women in Nigeria are also disadvantaged in terms of earnings. Those who are employed are more likely to earn cash, while men are more likely to be paid in cash and kind. The majority of employed women earn less than their husbands. About 70% of women who are earning cash make independent decisions about how to spend their earnings, but for 10% of them these decisions are made solely by their husband. Only 38% of women participate in decisions about major household purchases, which might include decisions about electricity and electrical appliances.
- 89 Women and men, girls and boys, have different energy needs and may have different priorities in relation to access and use of electricity services. They also have different access to information and control of household income and expenditure, which can affect the adoption and use of different electrical goods. Differences in access to and ownership of financial assets, access to education and information, and mobility can also affect access to electricity. Women and men are therefore likely to be impacted differently by changes in the availability and supply of electricity.
- 90 Household energy access can improve the efficiency and productivity of micro-enterprises, 43% of which are run by women in Nigeria. Household energy access has been positively correlated with enhanced economic empowerment of girls and women, through increasing employment and time dedicated to productive activity. In some places, access to electricity has facilitated women’s entry into the labour force outside the home. Women's economic

empowerment is, in turn, positively correlated with other development outcomes, such as economic growth, health and education.

- 91 The inequality faced by women is recognized by government policy. The National Gender Policy focuses on women's empowerment and the mainstreaming of gender in economic development. Within the Federal Ministry of Power, a gender focal point in the Sustainable Development, Climate Change, Gender and Human Rights Unit, has the role to ensure compliance with the national gender policy.
- 92 **Conflict:** There has been persistence and indeed an increase of ethno-regional, ethno-religious and religious conflicts in Nigeria since the return to democratic rule in May 1999. The expectations that the end of military rule would reduce arbitrariness, allay fears of ethnic and religious persecution, and consequently reduce political tension and conflict has not happened yet. On the contrary, violent conflicts have been growing in intensity and their spread has been widening. As the level of violence grows, the locations of its manifestations are becoming more provincial. The consequence is that political, ethnic and religious tolerance has been declining dramatically. These violent conflicts have seriously affected inter-communal relations and created a climate in which all sorts of triggers could easily lead to a major conflagration.

SECTION III: PROGRAM DESCRIPTION

3.1 Government Program

- 93 The FGN recognizes the critical role of the power sector in Nigeria’s economic development. “Ensuring energy sufficiency” is one of the key priorities of the national ERGP for 2017-2020. The PSRP originally approved by FEC in 2017 aims to: a) restore the sector’s financial viability; b) improve power supply reliability to meet growing demand; c) strengthen the sector’s institutional framework and increase transparency; d) implement clear policies that promote and encourage investor confidence in the sector; and e) establish a contract-based electricity market.
- 94 The PSRP seeks to de-risk the power sector for private investment through a comprehensive package of financial, operational, governance, and policy interventions (Figure 3.1). The PSRP embraces the role of the Government and public funding in meeting the revenue requirement of the privatized power sector until end-user tariffs are adjusted in parallel with improvements in service delivery and sector efficiency. To that end, the financial interventions of the PSRP aim to fully fund h2015-2019 historical tariff shortfalls and new tariff shortfalls (till the sector reaches financial self-sustainability), so that sector companies receive their required revenue. The PSRP’s operational/technical interventions aim to ensure that DISCO performance and electricity supply improve. Strengthening sector governance and transparency, enforcement of contracts, and the communication of reforms are the major priorities of the PSRP’s governance interventions. Policy interventions aim to implement policies to encourage private sector investments, increase electricity access and manage costs by ensuring that new generation capacity is procured competitively on the basis of a Least Cost Development Plan (LCDP).

Group 1: Financial interventions to fully fund historical and future sector deficits	Group 2: Operational/technical interventions	Group 3: Governance interventions	Group 4: Policy interventions
<ul style="list-style-type: none"> • Establish sustainable and appropriate electricity tariffs. • Dimension and commit to full-fund projected sector deficits due to future tariff shortfall until 2021. • Clear historical deficits due to tariff shortfall as part of the Financing Plan. • Secure financing sources and enforce payment discipline throughout the supply chain. • Clear historical MDA debts and automate future payments. 	<ul style="list-style-type: none"> • Ensure a minimum of 4,500 MW of generation capacity is available daily. • Support improved DISCO performance to encourage private sector investment. • Guarantee adequate gas supply for power generation. 	<ul style="list-style-type: none"> • Restore sector governance. • Improve sector transparency. • Make contracts effective. • Clearly communicate PSRP reforms. • Establish PSRP Implementation Monitoring Team. 	<ul style="list-style-type: none"> • Implement fiscal and monetary policies. • Increase electricity access. • Promote least cost generation entry and ensure competitive procurement of power.

Figure 3.1: PSRP Interventions

- 95 The FGN has decided to focus on critical actions of the PSRP for 2020-22 with high level oversight to ensure coordination and alignment. The implementation progress of the PSRP has been mixed to date as certain important actions have been incompletely implemented or delayed. Notably, the revenue requirement of sector companies was not adjusted consistently based on MYTO minor reviews (automatic adjustments were not consistently implemented) and the first PSRP Financing Plan was not executed as planned²⁴. Given the implementation progress and complexity of the PSRP, the FGN decided to pursue the critical actions of the PSRP (“Critical PSRP”) in the next three years (2020-22) to ensure a phased and more focused effort. The Critical PSRP focuses on the distribution segment of the power sector, which is the largest constraint to the sector’s sustainable operation. It covers four integrated areas necessary for the sector’s turnaround: (i) policy and regulatory environment; (ii) fiscal and financial sustainability; (iii) operational efficiency; and (iv) network infrastructure. The critical PSRP implementation is overseen by the Office of the President. Such high-level leadership and oversight ensure concerted effort of key ministries and agencies, including the MFBNP, Federal Ministry of Power (FMOP), CBN; NERC, NBET, BPE, and TCN.
- 96 The FGN has made substantial progress in implementing the Critical PSRP. NERC has implemented several critical measures providing regulatory clarity to DISCOs while enforcing their license obligations. Key measures undertaken so far by NERC include: (i) issuance of the Guidelines for DISCOs’ preparation of PIPs and preparation and submission of PIPs by ten DISCOs; (ii) explicit recognition and removal of tariff shortfalls from payment obligations of DISCOs through “minimum remittance thresholds” order; (iii) enforcement of DISCOs’ license obligations, in particular their payment obligations, resulting in DISCOs making full payments since July 2019²⁵; (iv) launching of the MYTO extraordinary tariff review to incorporate PIPs and reset new performance parameters for DISCO; (v) together with BPE establishing business continuity arrangements for DISCOs in case of NERC’s license intervention; and (vi) issuing of an order to cap the volume of electricity that DISCOs can bill to unmetered customers.
- 97 A multi-agency committee under the leadership of the MFBNP prepared an updated/2020 PSRP Financing Plan, which was approved by the FGN on April 2, 2020. The 2020 PSRP Financing Plan quantifies the FGN funding required by the sector for 2020-2027 (use of funds) to cover historical and new tariff shortfalls, including the repayment of the CBN PAF, and identifies the sources of funds. The Financing Plan uses credible and realistic macro and sectoral assumptions, consistent with the 2020 MYTO. As part of the PSRP Financing Plan, the FGN approved a total funding envelope of NGN380 billion (US\$1.056 billion) for covering new tariff shortfalls in 2020. The FGN and NERC have also approved a set of measures to mitigate the impact of any tariff adjustments on the poor households, which are

²⁴ The first PSRP Financing Plan prepared in November 2017 was included in the MTEF/FSP 2018-20 and 2018 FGN Budget. However, the source of funds did not materialize beyond the CBN Payment Assurance Facility (PAF) as the World Bank PSRP PforR was put on hold. The use of funds deviated significantly as planned as source of funds were lower leading to new arrears accruing as new 2017-2019 sector shortfalls were not fully funded.

²⁵ In October 2019, NERC gave notice of its intention to cancel licenses of 8 DISCOs, which had failed to meet the minimum remittance payment order issued in July 2019. According to NERC, as of January 2020, all DISCOs have paid up and complied with the order.

feasible to implement and do not increase revenue uncertainty for DISCOs (discussed in Poverty and Social Impact Assessment).

3.2 Program Development Objective/s (PDO) and Key Results

98 The Program’s development objectives (PDO) are to improve the reliability of electricity supply, achieve financial and fiscal sustainability and enhance power sector accountability. Consistent with the PSRP, the PforR seeks to achieve these development objectives by helping the power sector establish a track record of sustainable performance, thus unlocking private financing for the sector.

99 The PforR supports results in three areas: (i) reliability of electricity supply is improved; (ii) financial and fiscal sustainability is reached; and (iii) accountability is enhanced. The following outcome indicators will be used to measure achievement of the PDO:

- PDO Indicator 1: Annual electricity supplied to the distribution grid is increased²⁶;
- PDO Indicator 2: Annual tariff shortfalls decline, and new tariff shortfalls are funded from non CBN sources once the PAF is depleted; and
- PDO Indicator 3: Public awareness about ongoing reforms and performance in the power sector increases.

3.3 PforR Program Scope

100 The PforR component will support implementation of the Critical PSRP that the FGN has prioritized for implementation in 2020-2022. Figure 3.2 presents the program boundary.

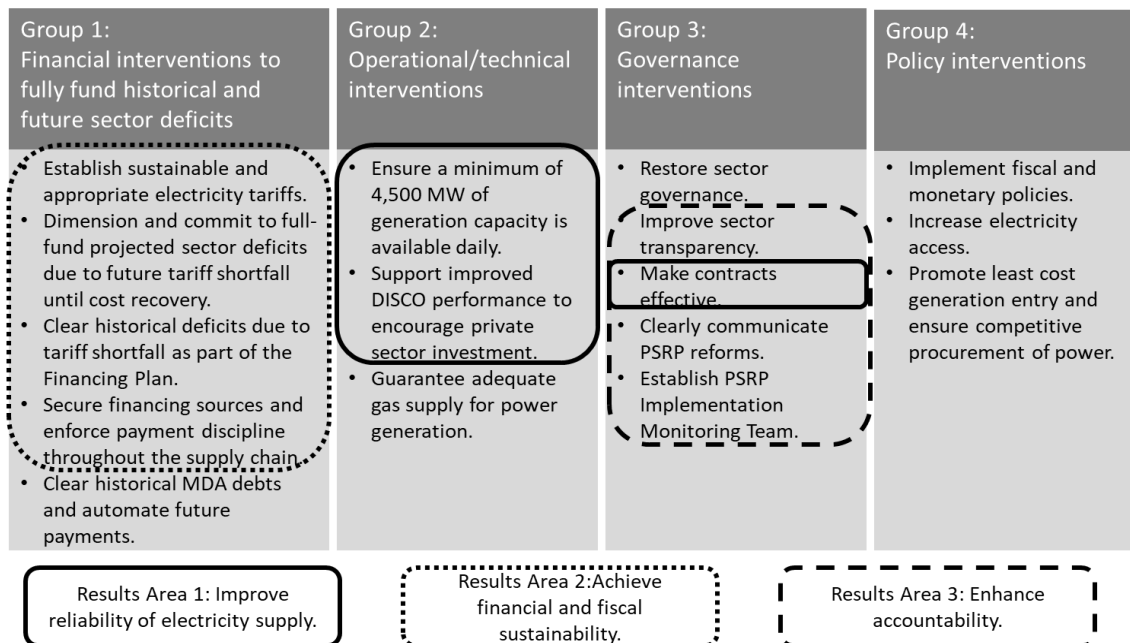


Figure 3.2: Program Boundaries

²⁶ Electricity production and distribution is in line with environmental and social sustainability requirements of the World Bank.

- 101 Underlying the PforR design are the sector “Reset” and the receipt of full revenue requirement by the power sector companies through the Financing Plan. These two measures are essential for de-risking private financing by transitioning the sector to a contract-based market; establishing greater transparency and accountability; and improving sector’s service delivery and operational efficiency.
- 102 The Reset is a key milestone of the critical PSRP and will define new conditions for the sector companies based on the current situation of the sector. Even in well-functioning power sectors, a Reset is part of the process of determining the power sector revenue requirement at the end of a multi-year tariff period. It is particularly important in the context of Nigerian power sector, as the sector situation has significantly evolved since the privatization of DISCOs. As a result, the targets set in the existing Performance Agreements²⁷ and the parameters of the NERC’s current MYTO, which sets the revenue requirements of DISCOs and TCN, are not reflective of the actual sector situation. The PforR, therefore, is designed around the Reset process, which includes three distinct phases – before the MYTO extraordinary review, MYTO extraordinary review (which will set revenue requirement of DISCOs and TCN for a new multi-year tariff period), and implementation of the new MYTO – with associated interventions to gradually bring the sector to a sustainable state characterized by improved service delivery, larger financial self-sustainability, enforcement of contracts and regulations, and transparency. NERC has initiated the process of Reset by mandating DISCOs to prepare PIPs and initiating the MYTO extraordinary review, which is expected to complete by December 31, 2020, and the new MYTO will be effective for 2021-2025.
- 103 To ensure that the Reset is implemented effectively, it is necessary to de-link the power sector conditions of the past from the conditions of the future. The ending of allowance parameters for ATC&C losses, capital and operational expenditures in DISCOs’ legacy Performance Agreements are critical for this. These parameters were set to expire in December 2019 but extended to December 2021 by declaring two years as mutual non-performance. The FGN has committed not to extend the parameters in these Agreements further. NERC, as part of MYTO extraordinary review, will define new performance parameters for DISCOs from January 2022. Therefore, although the new MYTO will be effective beginning 2021, the allowances for operating expenditure, capital expenditure and losses for DISCOs will be adjusted only for 2022-2025. In addition to allowing the sector to have a fresh start, the Reset is important for delineating institutional responsibilities between NERC and BPE. Once the parameters in the Performance Agreements expire, NERC would be responsible for performance monitoring and enforcement of DISCOs on the basis of approved PIPs and new performance parameters.
- 104 The receipt of revenue requirements by power sector companies is essential to breaking the vicious cycle of poor sector financial performance, which prevents the enforcement of contractual and regulatory obligations and results in poor service delivery. The sector is projected to reach self-sustainability by 2022, when a number of PSRP measures –

²⁷ The Performance Agreements, which define baseline and target performance parameters, were signed between the Bureau of Public Enterprises (BPE) and the owners of DISCOs after the privatization.

operational efficiency improvement, enforcement of payment discipline and tariff adjustment – are expected to lead to the convergence of the sector’s revenue requirement and tariff revenue (allowed tariffs times volume of energy delivered). In the interim (2020-22), the Government has committed to fund the difference between the revenue requirement and tariff revenue i.e. the tariff shortfalls. This will allow sector companies to meet their contractual obligations and will build trust and confidence in the sector, including among private investors and financiers. To that end, the Government has developed a Financing Plan for 2020-27 to cover the new tariff shortfalls of the sector and to clear the historical tariff shortfalls.

- 105 The three Results Areas of the PforR support measures to ensure an effective Reset, receipt of revenue requirement by sector companies, and the enforcement of contracts and regulations on that basis. In addition, the PforR results support measures (clearly separated from the Reset) to address legacies of the past.

Results Area 1: Improve reliability of electricity supply

- 106 The PforR includes a set of measures to ensure that at least 4,500 MWh/hour of electricity is supplied to the distribution grid from 2022²⁸. This is the minimum level of supply necessary for grid stability and for the reduction of system outages. The experience of the Nigerian power sector indicates that this level of supply ensures more reliable service delivery and significantly improves customers’ payments of electricity bills. As a result, DISCOs’ collections against electricity bills increase at this level. This level of power supply requires no new investment in infrastructure and is expected to be achieved through enforcement of existing contracts and regulations.
- 107 The PforR helps address the constraints in the distribution segment. This will be achieved through well-defined and detailed PIPs prepared by DISCOs and approved and enforced by NERC. The priority measures in the PIPs will include the incorporation of Management Information Systems (MIS) to support efficient, transparent and accountable execution of operations in all business areas of DISCOs’; phased deployment of consumption meters in accordance with the concept of “market segmentation”; and measures to enhance billing and collection arrangements. NERC will include the funding requirements of the PIPs in determining the revenue requirement of DISCOs at the time of the MYTO extraordinary review, while exercising tight regulatory oversight over the implementation of PIPs by DISCOs.
- 108 The PforR will also support establishing business continuity arrangements in DISCOs to ensure uninterrupted service. Given the weak operational and financial situation of many DISCOs and, most importantly, weaknesses in their governance and management, several of DISCOs may continue not complying with their license and contractual obligations, particularly their obligation to pay and to implement PIPs, and may be therefore subjected to NERC’s license intervention. While this process may eventually result in a positive outcome of reorganizing and restructuring DISCOs and ensuring they have competent

²⁸ As DISCOs implement PIPs, which incorporate management information systems (among other elements), it will become possible to measure electricity supply reliability through end-consumer level indicators of duration and frequency of outages.

management, in the short-term, NERC and BPE need to ensure that transitory management team(s) will be appointed immediately after the exit of DISCO(s) management to assume operational management of DISCOs and ensure continuity of electricity supply to customers.

Results Area 2: Achieve financial and fiscal sustainability

- 109 The financial sustainability of sector companies is critical to enforcing their contractual and regulatory obligations and improving service delivery. It is also the basis for strengthening the balance sheets and financial standing of sector companies, especially DISCOs, to enhance their ability to attract private financing.
- 110 The PforR supports the establishment, regular updating and execution of the PSRP Financing Plan which aims to ensure tariff shortfalls are fully funded through sources of funding other than the CBN once the existing PAF is depleted and that there is a path to cost recovery to reduce the fiscal burden of the sector significantly over the short-to-medium-term.
- 111 The PforR also supports tariff reviews, accompanied by measures to protect the poor, and enforcement of payment discipline to support the implementation of the PSRP Financing Plan. Specifically, the PforR supports the implementation of end-user electricity tariff reviews and measures to protect the poor consistent with the PSRP Financing Plan. It also supports removal of new and historical tariff shortfalls from DISCOs payment obligations and books. Finally, it supports full and timely payments of DISCOs to NBET and to TCN, which is critical for strengthening payment discipline and reducing non-tariff shortfalls, which could undermine the financial health of the overall power sector, even though these are not FGN's responsibilities.

Results Area 3: Enhance accountability

- 112 Strengthening sector accountability and transparency are the foundations for the successful implementation of the PSRP and its sustainability. Over time, strengthened accountability should translate to increased operational efficiency, including the reduction of technical, commercial and collection losses.
- 113 The PforR supports measures to improve the financial and operational transparency of DISCOs. Specifically, the Program involves timely publication of the IFRS audited financial statements of DISCOs. It also involves NERC's publication of key operational and financial performance data of the sector on a quarterly basis, including data on electricity supply hours. These measures will improve the credibility of the sector, as well as the investment environment.

Excluded activities

- 114 The PforR does not support any investment-related activities and rather aims to improve service delivery by strengthening power sector financial viability and accountability. The PforR expenditure framework is the Financing Plan of the FGN and does not include high-value contracts. The specific PSRP interventions which have been excluded from this

Program include fiscal and monetary incentives (e.g. tax holidays, duty waivers); as well as investments in increased electricity access (electrification) and the rehabilitation of transmission and distribution infrastructure. Complementary World Bank IPF operations under preparation support investments in electrification and the alleviation of transmission and distribution network constraints.

Partnership Arrangement

- 115 Development partners have been consulted regarding Program design. Donor activities in the power sector are coordinated through Development Partner Power Sector Working Group. Development partners meet regularly to exchange information regarding their various activities in the sector and to discuss pertinent issues of power sector policy with the Government. The World Bank has coordinated with development partners throughout the Program design and preparation and plans to continue doing so during its implementation. The Bank has also consulted with the IMF regarding the macroeconomic and fiscal linkages of the PSRP, including the exchange rate policy, the CBN PAF, and the overall fiscal and debt implications of the Financing Plan.
- 116 Development partner programs address several components of the PSRP and are complementary to WBG support. DFID provides extensive technical assistance (TA) and currently supports NERC with strategy and communication of regulatory reforms as well as co-funds the forensic audit of DISCOs. USAID provides technical assistance and transaction support through Power Africa with a focus on distribution and off-grid access. Power Africa currently provides TA to NERC, MFBNP and the Office of the President for PSRP coordination and M&E. The Agence Francaise de Developpement (AFD) supports investments in transmission infrastructure, and training and capacity building for privatized DISCOs to help access financing. AFD/EU's support to DISCOs has been crucial in their preparation of PIPs and other strategic planning. The African Development Bank (AfDB) supports the strengthening of transmission infrastructure and off-grid energy access in close coordination with the World Bank. It is poised to provide parallel financing for distribution PIP investments along with the Bank as part of the next stage of PSRP implementation. The Japan International Cooperation Agency (JICA) supports transmission investments and rehabilitation of hydropower plants. A number of other development partners are supporting electrification initiatives, where the World Bank engagement supports establishment of enabling policy and regulatory framework critical for all development partner supported activities.

Disbursement Linked Indicators

- 117 The disbursements under the proposed PforR will be governed by a set of seven Disbursement Linked Indicators (DLIs), consisting of two Global DLIs and five standard DLIs (Table 3.1). The DLIs articulate the actions necessary recover the sector and set it on the path to financial and operational sustainability. The two DLIs which are most critical to the success of the Program – ensuring that DISCOs and TCN's revenue requirement is set through consistent implementation of semi-annual MYTO minor reviews and MYTO extraordinary review; and establishing and executing a credible, fiscally affordable and sustainable PSRP Financing Plan to fully cover tariff shortfalls – have been designated as

Global DLIs; disbursements of the five standard DLIs can only be completed upon verification that both of the Global DLIs have been achieved. The two Global DLIs, therefore, trigger not only the disbursement of the funding allocated to them (accounting for 42 percent of the total allocation) but also disbursement against other DLIs achieved in parallel. This framework provides incentives to ensure that the key development objectives of the PDOs are achieved.

- 118 The DLIs are structured around the three key results areas and serve as milestones in achieving the development objectives of the Program. The DLIs are also selected based on the feasibility of monitoring and verifying their achievement and are phased according to the three distinct periods of Reset- pre MYTO extraordinary review, MYTO extraordinary review and post-MYTO extraordinary review.

Global DLIs

- 119 The two Global DLIs are the DLIs which are most critical to the success of the PSRP and the long-term stability of the Nigerian power sector. Specifically:

- **Global DLI 1** involves setting the revenue requirement of DISCOs and TCN through consistent implementation of semi-annual MYTO minor reviews (automatic adjustments of revenue requirement to reflect changes in key parameters including energy sent out and exchange rate) before and after the MYTO extraordinary review and implementation of the MYTO extraordinary review for DISCOs and TCN. MYTO extraordinary review will be carried out in 2020 and will cover the period of 2021-25; it will redefine allowances for ATC&C, operating expenditure and capital expenditure of DISCOs based on the approved PIPs from January 2022 when the Performance Agreements of DISCOs end²⁹.
- **Global DLI 2** requires that a Financing Plan for 2020-27 is in place and executed to fully cover the new and historical tariff shortfalls. The Financing Plan will need to be updated regularly to reflect changes in key parameters, including energy sent out and the ER, to be consistent with the effective MYTO, and to remain fiscally affordable and sustainable. The Financing Plan will be updated annually and issued by the MFBNP. The Financing Plan will also need to be annually executed with at least 80 percent of new tariff shortfalls being settled through sources of financing other than the CBN once the existing PAF is depleted.

The disbursements of the five regular DLIs for each of the years 2020-22 are contingent upon the achievement of the conditions articulated for Global DLIs 1 and 2 in each year.

Results Area 1: Improve reliability of electricity supply

- 120 DLIs 1 and 2 aim to resolve key regulatory gaps to ensure that minimum baseline power generation of 4,500 MWh/hour is distributed daily from 2022 onwards. Specifically:

- **DLI 1 (*Implementation of approved Performance Improvement Plans for DISCOs is enforced*)** supports tighter regulatory oversight over DISCOs through PIPs, so that distribution

²⁹ For 2021, the revenue requirement of DISCOs will be set based on the performance parameters of the existing Performance Agreements.

constraints are removed, and operational performance improves. The first disbursement (prior result) will be triggered upon NERC's approval of DISCOs' PIPs. Post approval, disbursements will be triggered each year upon verification that NERC monitors and enforces achievement of outputs in DISCOs' PIPs.

- **DLI 2 (*Business continuity arrangements are implemented for DISCOs*)** supports establishment of business continuity arrangements in the event of one or more DISCOs' license intervention by NERC due to DISCOs' non-adherence to their license obligations. The first disbursement will be triggered upon establishment of qualified lists of experts who would assume transitory management of DISCOs' operations in the event of license intervention. The second disbursement will be triggered upon implementation of the business continuity arrangements during an entire year, i.e. appointment of transitory management teams to assume operational management of DISCOs that have NERC's license intervention.

Results Area 2: Achieve financial and fiscal sustainability

121 In addition to Global DLIs 1 and 2, DLIs 3 and 4 aim to restore the financial and fiscal sustainability of the sector. Specifically:

- **DLI 3 (End-user electricity tariffs are adjusted consistent with the PSRP Financing Plan and FGN policy for protecting the poor)** pertains to end-user electricity tariff adjustments in a socially sustainable manner. The first disbursement will be triggered upon approval of tariff review in 2020 consistent with the FGN approved 2020 PSRP Financing Plan and implementation of mitigation measures for the poor. The mitigation measures will involve maintaining an affordable lifeline tariff (keeping the tariff for the first residential consumption block unchanged) and enacting an order to cap the estimated billing for unmetered residential customers (which represent poorer households connected to the grid). The capping of estimated bills will be a short-term mitigation measure for tariff adjustments till the full roll-out of metering through the implementation of PIPs. The subsequent disbursements will be triggered upon approval of the tariff adjustments and measures to protect the poor consistent with FGN approved updates of the PSRP Financing Plan.

- **DLI 4 (Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls)** supports strengthening of DISCOs' books by explicitly recognizing that tariff shortfalls (both new and historical) are not their obligation; and, on that basis, enforcing DISCOs' payment obligations to NBET and TCN. The first disbursement will be triggered upon removal of new tariff shortfalls from the payment obligations of DISCOs and approval of a mechanism to remove historical tariff shortfalls from DISCOs' books. The subsequent disbursements will be triggered upon verification that a minimum level of NBET's and TCN's aggregate annual invoices to DISCOs are settled, or upon verification that NBET and TCN have activated DISCOs' payment guarantees and/or NERC has taken actions consistent with its regulations following DISCOs' non-payment or partial payment.

Results Area 3: Strengthen accountability

122 DLI 5 supports measures to strengthen transparency and accountability of the sector. Specifically:

- **DLI 5** (*Financial and operational transparency of DISCOs is improved*) supports the strengthening of the financial and operational transparency of the distribution segment through publication of key information. In each year of the Program, it will be triggered upon publication of the IFRS audited financial statements of DISCOs and quarterly publication of key operational and financial data of the power sector.

Table 3.3: Results Chain of the PforR

PDO: Improve the reliability of electricity supply, achieve financial and fiscal sustainability and enhance power sector accountability		
Results Area 1: Reliability of supply	Results Area 2: Financial and fiscal sustainability	Results Area 3: Accountability
Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review		
Global DLI 2: A credible and fiscally sustainable Financing Plan is approved and executed to fully fund the tariff shortfalls of the sector		
DLI 1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced DLI 2: Business continuity arrangements are implemented for DISCOs	DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and FGN policy for protecting the poor DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls	DLI 5: Financial and operational transparency of DISCOs is improved

SECTION IV: POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS OF THE PROGRAM FOR RESULTS

- 123 Given the DLIs, the environmental risks of PforR is expected to be minimal/negligible. The environmental benefits relate more to the climate co-benefits that result from efficient pricing of electricity, reduction of technical and non-technical losses due to implementation of performance improvement plans. The PforR is expected to have some potential social benefits and risks. The social benefits are linked to all three results areas, and are expected to include increased trust between citizens and the Government, improved household welfare, and contribution to the World Bank’s twin objectives of reducing poverty and boosting shared prosperity, supporting the drive to ending extreme poverty and promoting shared prosperity in Nigeria and across the States of the Federation. The section also includes the Poverty and Social Impact Analysis (PSIA) of the main welfare impact for households related to planned tariff adjustments. The summary of potential environmental risks and benefits, and social risks and benefits is presented in Table 4.1.

Table 4.1: Summary of environmental risks and benefits, and social risks of PSRP PforR

DLI	Environmental Benefits	Environmental Risks	Social Benefits	Social Risks
<p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review.</p>	<ul style="list-style-type: none"> Climate co-benefits as a result of improved/efficient electricity pricing. It is expected that it will contribute to the reduction in carbon emissions due to anticipated demand response. This is considered part of the Multilateral Development Banks’ (MDB) list of eligible mitigation activities under Category 9.1 “Efficient pricing of fuels and electricity (efficient end-user tariff).” <p>Efficient pricing system will lead to optimal use of electricity by households and businesses. This will lead to reduced pollution due to reduction in the use of fossil fuels in powering generators by households and businesses.</p>	<p>Negligible</p>	<ul style="list-style-type: none"> There could be improved electricity supply (for households and businesses) as DISCOs receive full revenue requirements based on effective MYTO that reflects the current condition of the sector. Improved electricity supply will enhance the performance of most sectors, reduce cost of doing business and thus enhance economic growth and poverty reduction. 	<ul style="list-style-type: none"> Review of MYTO may lead to increase in tariff for customers and this may result in increased poverty especially of vulnerable and poor people although there will be no tariff increase for R1 (metered residential) households and a reduction in electricity bills for unmetered households thanks to the capping order by NERC. There could be increase in the cost of basic services that require electricity and cost of doing business due to increased tariff that may result from MYTO reviews. This will in turn lead to reduced economic growth and poverty if not well managed.
<p>Global DLI2: A credible and fiscally sustainable Financing Plan is approved and executed to fully fund the tariff shortfalls of the sector</p>	<p>Execution of a sustainable financial will lead to efficient pricing and the reduction of technical and non-technical losses. Thus this DLI will contribute to two eligible mitigation activities: (i) Category 9.1 “Efficient pricing of fuels and electricity”; and (ii) Category 3.3 “Improvement in utility-scale energy</p>	<p>Negligible</p>	<p>This will facilitate economic growth and poverty reduction as the funds saved from funding of tariff shortfalls by CBN will be channeled to other productive and social sectors for example, education, health, agriculture, infrastructure, SME’s etc.</p>	<p>The activities under this DLI may lead to increase in tariff for customers and this will increase poverty and exclusion of vulnerable groups.</p>

DLI	Environmental Benefits	Environmental Risks	Social Benefits	Social Risks
	efficiency through efficient energy use, and loss reduction.”			
DLI1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced.	This could generate climate co-benefits due to reduction in technical and non-technical losses in distribution as this DLI is aligned with the MDB list of eligible mitigation activities under Category 3.3 “Improvement in utility-scale energy efficiency through efficient energy use, and loss reduction.”	Negligible	Improvement in operational performance of electricity companies will lead to improved electricity supply with its co-benefits – enhanced economic growth, poverty reduction etc.	Negligible
DLI 2: Business continuity arrangements are implemented for DISCOs	Negligible	Negligible	Efficient delivery of services is not disrupted due to changes in management thus, regular electricity supply is assured. This will in turn sustain economic growth and poverty reduction.	Negligible
DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and measures for protecting the poor	This DLI is linked to Global DLIs 1 and 2 and also contributes to climate mitigation through efficient pricing of electricity.	Negligible	Financial sustainability will guarantee improved electricity supply to households and businesses, improved performance of different economic sectors, enhanced economic growth and poverty reduction.	The adjusted tariffs may negatively affect vulnerable people especially women and the poor people either directly through increased electricity bill or indirectly through increases in cost of services that apply electricity. There could be conflict between DISCOS and end consumers as a result of adjustments in tariffs.
DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls	By removing historical and new tariff shortfalls from DISCOs’ books, the DLI supports strengthening of financial position of DISCOs so that they can	Negligible	Improved electricity supply to households and businesses, improved performance of different economic sectors,	DISCOS may shift the pressure/burden to consumers and the vulnerable ones will be negatively affected.

DLI	Environmental Benefits	Environmental Risks	Social Benefits	Social Risks
	<p>attract the necessary investments to reduce the ATC&C losses committed in the PIPs. In addition, enforcement of DISCOs’ payment discipline is part of the enforcement mechanism of the PIPs to reduce ATC&C losses. The PIPs determine the ATC&C loss allowances of MYTO as well as the revenue requirement to achieve them. DISCOs are then required to transmit the rest of their revenue to NBET, so they would incur financial losses if they do not meet the ATC&C allowances. Thus, the DLI is aligned with the MDB list of eligible mitigation activities under Category 3.3 “Improvement in utility-scale energy efficiency through efficient energy use, and loss reduction.”</p>		<p>available finance for government to support other sectors and funding of tariff shortfall will cease, enhanced economic growth and poverty reduction.</p>	<p>There could be conflict if DISCOs do not meet the minimum remittance thresholds and continue to accumulate non-tariff shortfalls.</p>
<p>DLI 5: Financial and operational transparency of DISCOs is improved</p>	<p>Negligible</p>	<p>Negligible</p>	<p>Improved financial and operational transparency will enhance trust from citizens and will trigger support from the public and thus ensure regular payment of electricity bills and hence regular electricity supply.</p>	<p>Negligible</p>

4.1 Potential Environmental Benefits and Risks

124 The potential environmental benefits and risks of the Program is expected to be minimal and negligible as the program does not involve new constructions although there could be potential environmental benefits due to climate co-benefits due to reduction carbon emission as a result of effective electricity pricing.

Potential Environmental Benefits

125 Review of MYTO and implementation of performance improvement plans which will lead to efficient electricity pricing and reduction of technical and non-technical losses in electricity distribution. This will, in turn, generate some climate co-benefits due to reduction in carbon emission. Efficient pricing and performance improvement that will be achieved by the implementation of the DLIs, could also lead to reduced pollution due to efficient energy distribution and reduction in the use of fossil fuels for powering generators by households and businesses. This will also result in reduction in deforestation from the use of fuel wood, charcoal at household level.

126 Table 4.2 shows average hourly fossil fuel emission levels for petrol, diesel and gas generators and Nigeria ambient air quality standards. It reflects the amount of pollution that will be avoided with stable electricity in Nigeria.

Table 4.2: Average hourly fossil fuel emission levels for petrol, diesel and gas generators and Nigeria ambient air quality standards

Pollutant	Petrol	Diesel	Natural Gas	Nigerian Ambient Air Quality Standard*
CO (ppm)	1262.3	1670.0	212.11	10.0
NO (ppm)	1.55	2.45	0.56	0.04 – 0.06
SO ₂ (ppm)	1.97	3.56	0.00	0.01
Particulates (µg/m ³)	140.22	207.56	11.99	250.00

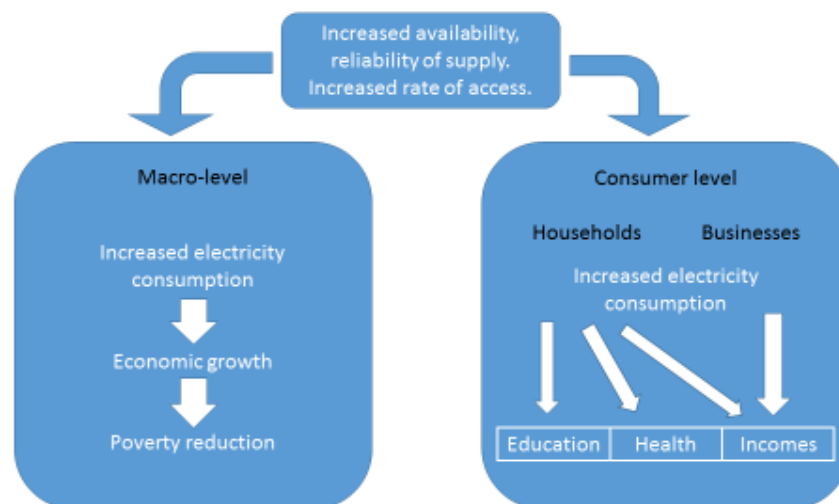
*Federal Environmental Protection Agency Nigeria (1991)³⁰

Potential Environmental Risks

127 Overall, the potential adverse environmental impacts of the Program are expected to be consistent with the provisions of PforR operations as it does not support construction of new infrastructure. The PforR therefore excludes activities which could have significantly adverse environmental and social impacts that are large-scale, irreversible, sensitive, diverse, cumulative or precedent-setting (defined as Category A by the World Bank). As a result, the PforR is not expected to impact the Core Principles 1 and 2 outlined in Bank Policy and Directive for Program-for-Results Financing, respectively dealing with Environmental Sustainability and Natural Habitats and Physical Cultural Resources in an unprecedented manner.

4.2 Potential Social Benefits and Risks

- 128 Assessing the potential social risks and benefits of the PSRP is an iterative and nuanced process and requires an understanding of the recent history of energy consumption and delivery in Nigeria. There are several drivers and factors that have had an effect and impact on energy consumption, most notably governance, political welfare, and consumer perceptions and stakeholder relationships with the DISCOs. Thus, the following section of the social effects of the program speaks to some of the effects of the program as well as the direct historical and potential social impacts of power sector reform in Nigeria.
- 129 Improving the reliability of electricity supplies and enhancing power sector financial viability and accountability, by ensuring the receipt of full revenue requirement by the power sector companies and recovery of tariff shortfalls from reliable sources, will enable an increase in electricity supply and consumption. Also, government resources often used to fund tariff shortfall will also be available for investment in other sectors, for example, education, health and agriculture. This, in turn, will contribute to economic production and poverty reduction. As shown in Figure 4.1, these will be achieved through macro-level, or economy-wide, effects and through effects at the consumer level.



Source: adapted from Pueyo et al. (2013).

Figure 4.1: Impact pathways of electricity consumption

Households

- 130 For residential consumers, numerically the largest category of customer and the category that consumes most electricity, improved reliability will increase the number of hours that electricity is actually available. This can have two effects:
- It will increase opportunities for children to study and opportunities for productive and reproductive work during the hours of darkness.
 - Given the high proportion of households that earn income from non-farm enterprises, lengthening the working day can contribute to higher earnings.

- 131 For women, however, lengthening the working day could also increase the time spent on domestic tasks, including child care and cooking, although cooking uses other energy sources.
- 132 Opportunities for leisure can also be increased with more reliable grid electricity, making the purchase of radios and televisions more worthwhile. Because men listen to the radio and watch television more frequently than women, they will benefit more from the opportunity electricity provides to use these electrical appliances.
- 133 The second effect of improved reliability is a reduction in expenditure on kerosene, batteries and, for better off households, diesel generators. The benefits of reduced expenditure on alternative energy sources may offset the higher cost of electricity, but continuing unreliability of both the service and the billing system will make it difficult for consumers to appreciate the potential and to realise any benefit. There is little incentive for consumers to pay their bills when the service is unreliable and billing continues to be based on estimates.

Businesses

- 134 Electricity is reported to be a major constraint by businesses. Around 27% of enterprises identify electricity as the main obstacle to doing business, which is more than twice the SSA average. On average, firms experienced 32.8 outages a month in 2014, the typical outage being 8 hours long (World Bank, 2014a). The incidence of outages was higher for large and medium firms (44.9 and 39.4 times a month, respectively). Small firms that did experience outages estimated that they caused losses equivalent to 16% sales. For medium and large firms, losses due to outages were estimated to be about 12% and 24% of sales.
- 135 For business consumers, improved reliability of power will reduce losses due to outages, and reduce expenditure on alternative sources of energy. Productivity improvements may be felt, which can lead to higher employment, and opportunities to increase productivity by investing in electric machinery and equipment may be opened.

Gender implications

- 136 In principle, differences in the proportions of male- and female-headed households with access to electricity, or differences in the consumption of electricity, could be measured. The PSIA, for example disaggregates electricity access and consumption by male and female-headed households.³¹
- 137 The very small proportion of female-headed households in northern Nigeria, where the incidence of poverty is higher and access to electricity lower, suggests that analysis at the level of the household would not be very informative about differences in impact between women and men. It is decision-making within the household that will determine whether women and men benefit equally or from an improved electricity supply (Danielson, 2012)³².

³¹ The data sets from household surveys could be analysed further to reveal differences in access to electricity or expenditure on electricity between female and male headed households. The data sets currently available could provide a baseline for assessing the impact of the privatisation of electricity distribution.

³² Danielsen, K. (2012) *Gender equality, women's rights and access to energy services*, Ministry of Foreign Affairs of Denmark.

- 138 Unfortunately, for most countries, including Nigeria, empirical evidence about decisions about electricity consumption and how its use varies between household members is unavailable. As noted above, men are the principal decision-makers within Nigerian households. Women's responsibilities for reproductive work can limit their opportunities for productive activities, and thus their ability to influence decision-making in the household, including decisions to invest in an electricity connection or to purchase electrical appliances.
- 139 Assessing the differential impacts of power sector reforms on female and male electricity consumers is, consequently, fairly speculative. Given the focus of Nigeria's Gender Policy on women's empowerment, it is useful to consider the impacts of the consumption of increased and more reliable supplies of electricity on gender equality. These impacts will be felt through the effects on women's welfare, women's economic empowerment and women's political empowerment (Winther, 2016)³³. The Draft Energy Policy (2013) seeks to address this shortcoming, stating that Nigeria will 'disaggregate energy use, supply, and impacts by gender in energy project design and implementation.' The implementation of this policy will include the development of 'reliable gender responsive statistical data' and 'monitoring and evaluating the impacts of rural energy projects on poverty alleviation and gender.
- 140 With respect to women's welfare, increased availability and reliability of electricity can be expected to increase educational opportunities for women and girls, by enabling lighting in the home and allowing educational facilities to use electrical equipment. When electricity replaces kerosene for lighting, either because outages are reduced or households connect to the grid for the first time, household air pollution and the risk of accidents causing burns or poisoning is reduced.³⁴ The quality of health care, for maternal services, for example, would be improved. Reliable lighting also increases women's sense of security.
- 141 Access to electricity, or more reliable electricity, could increase the time available for women to earn their own income, by enabling productive work during hours of darkness. For women in wealthier households, electricity and electric appliances (e.g. refrigerators, irons, washing machines) could improve their productivity in reproductive work. The potential savings on expenditure for kerosene or diesel for generators, could allow additional expenditure on other goods and services, including health care or education. A potential negative impact is the risk that women would lose their role within the household as the provider of fuel and manager of expenditure on energy.
- 142 Improved availability and reliability of electricity can contribute to women's political empowerment, by enabling opportunities to access modern information and communications technologies. Women's involvement in organizations of electricity consumers could also contribute to their political empowerment.

³³ Tanja Winther (2016) Getting the right gender indicators: observations, challenges and strategies, presentation at GECCO/ENERGIA webinar, 21 April 2016.

³⁴ Household air pollution from cooking fuels would not be affected, because very few households would use electricity for cooking.

Affordability

- 143 In the current context of large unmet demand, highly unreliable supply, substantial non-payment of electricity bills, and a lack of information about consumers, it is difficult to assess the effect of possible tariff adjustments on total electricity consumption and on the consumption of individual or groups of consumers. A priori, consumer responses to the 45% increase in tariffs in February 2016 might have been felt through reduced consumption, higher levels of non-payment of bills. The interviewees in a 2016 study commissioned by the Bank (which at the time of commissioning might have been too soon to be reflected in any of the available data), reported that the 2016 increase is leading to changes in consumption behaviour. Some customers are consciously managing their energy use, for example, by switching lights off during the day, while others, particularly women, are increasingly unwilling to pay for electricity.
- 144 In many countries, the impact of tariff increases on electricity consumption is estimated using price elasticity coefficients. The literature on the price elasticity of demand for electricity in Nigeria is limited and inconclusive. Babatunde and Shuaibu (2011) found that an increase in residential electricity price does not lead to a significant reduction in demand, and in the long run electricity is price inelastic (i.e. an increase in the price of electricity does not result in a proportionate decrease in demand). Similarly, Anyiro et al. (2013) concluded that the demand for electricity is price inelastic. Audu et al. (2013), however, suggest that electricity demand is price elastic.
- 145 Expenditure on electricity tends to increase in total and as a proportion of total household expenditure as incomes rise. This suggests that the price elasticity of demand is likely to vary between households according to income. There is a lack of evidence from Nigeria to demonstrate this, however. Anyiro et al. (2013) found a difference between urban and rural households, with rural households showing a greater reduction in demand when prices increase. This could suggest that households with lower incomes reduce consumption proportionately more when tariffs are increased.
- 146 The literature on the elasticity of demand for electricity indicates that the prices of substitute sources of energy also determine consumers' responses to tariff increases. In the absence of data about changes in actual consumption, the affordability of the tariff increases can therefore be assessed in relation to people's willingness to pay for the alternatives to grid electricity and their overall expenditure on electricity or lighting.
- 147 The coverage of lifeline tariff is limited. Per the MYTO 2015 classification, only 2% of residential customers are in the R1 category that is eligible for the lifeline tariff at 4 Naira per kWh. Since the lifeline tariff is defined by the volume of electricity consumed rather than income level, not all households benefiting from the lifeline tariff are poor. According to the consumption in 2016, for example, 64.4% of households in the R1 category are non-poor. The majority of the poor with access to electricity still fall into the R2 category, which has a much higher tariff (15.2 Naira/kWh in 2015 and 24.4 Naira/kWh in 2016 on average)³⁵.

³⁵ December 4, 2017: World Bank Nigeria: The Poverty and Distributional Impact of Raising Electricity Prices to Cost Recovery

- 148 Low income households connected to a reliable grid electricity supply could make a financial saving in their expenditure on lighting. The approximately US\$1.00 a month cost of the lifeline tariff is a quarter of the estimated average cost of kerosene lighting. Unfortunately, data on energy expenditure by income decile are unavailable, so it is not possible to be confident how much poor households spend on lighting and whether they could cover the R1 tariff from savings of expenditure on kerosene, batteries and candles.
- 149 The subsidy to R1 customers is covered by cross-subsidization within the tariff structure of each DISCO. Further data and analysis could establish whether phasing out subsidized tariffs would be feasible, allowing subsidies to be focused on the connection cost barrier.

Governance and Accountability

- 150 The principal actors in the distribution stage of the electricity value chain are the distribution companies and the consumers. 4.2 provides a summary mapping of the stakeholders in electricity distribution in Nigeria, showing that the only point of interaction between consumers and actors across the complete electricity value chain is with the DISCOs. Although the supply of electricity to consumers by DISCOs is often affected by performance elsewhere in the value chain (e.g. in generation when supplies of gas are interrupted), consumers’ communication with value chain is primarily through the DISCOs. NERC, which is outside the value chain but sets its rules of operation, also communicates with consumers from time to time. This section, therefore, focuses on the engagement between consumers and the DISCOs, taking into account the role of NERC.

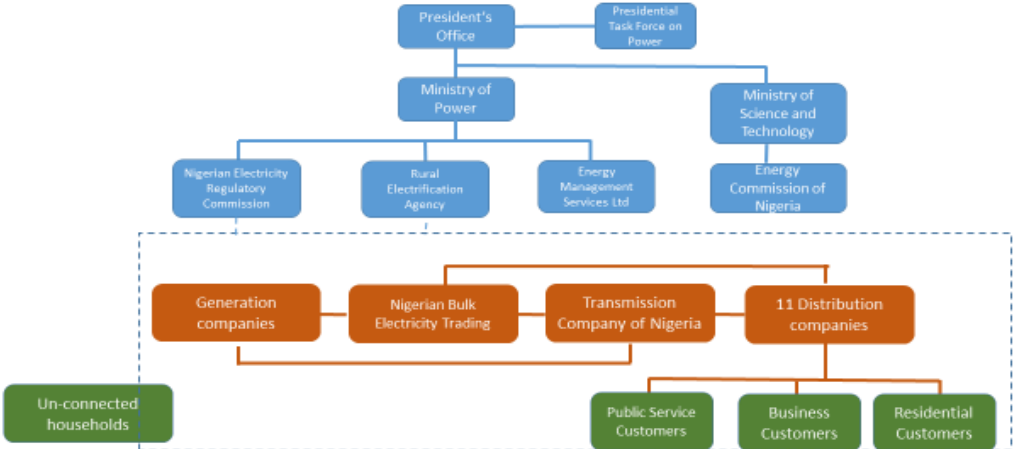


Figure 4.2: Simplified mapping of stakeholders in electricity distribution in Nigeria

- 151 In assessing the accountability relationship between DISCOs and their consumers it is useful to consider the four principles of good governance applied by the Electricity Governance Initiative (Dixit et al., 2007). These principles, which relate to the political economy context outlined above are:

- *Transparency and access to information* (the comprehensiveness, timeliness, availability, comprehensibility of information; and whether efforts are made to provide information to all groups);
- *Participation* (space for participation in relevant forums, the use of appropriate or sufficient

mechanisms to invite participation, the inclusiveness and openness of such processes, and the extent to which the gathered input is considered);

- *Accountability and redress mechanisms* (clarity about the role of various institutions in sector decision making; monitoring of sector operations and processes; the basis for basic decisions is clear or justified; and legal systems are in place to uphold public interests);
- *Capacity* (includes the capacity of government and official institutions to act autonomously and independently, the availability of resources (both human and financial) to provide access, and the capacity of civil society (particularly NGOs and the media) to analyze the issues and participate effectively).

152 These principles can be considered in relation to the main purposes of consumer engagement with the DISCOs: billing and payments, repairs and complaints, tariff revision consultations, and disconnections.

Potential Social Conflict

153 As discussed in paragraph 92, Nigeria has experienced social conflict expressed in several ways at both local and national levels. Although this program is not expected to cause any violence or conflict, dissatisfaction with previous tariff reforms has led to some high-profile court cases and localized demonstrations throughout the country. Given the fragility of some parts of Nigeria and the frustration of energy customers about the poor service of the DISCOs, social conflict should be considered as a contextual risk of the project if the PSRP fails to deliver the intended reforms. In addition, conflicts may result from the listing and appointment of transitory management for the DISCOs due to vested interests.

Past unrest about tariff reforms

154 The NERC 2015 bi-annual tariff review received some ‘backlash’ from electricity users, which included:

- The Manufacturers’ Association of Nigeria (MAN) filed a court case against the DISCOs. The court resolved the case by annulling the NERC tariff. The ruling added to the complexity of the electricity market and contributed to the tariff shortfall in the market. The tariff shortfall is accrued debt to the market caused by insufficient remittances from the DISCOs to the sector. NERC has appealed the case and it is currently with The Supreme Court.
- An individual named Toluwani Adebisi sued NERC in a court against a “planned” increase in tariff prices in July 2017. NERC has appealed this case at the court of appeal.
- Anecdotal evidence suggests that, although there is an injunction which prevents NERC from implementing the reviewed tariff, consumers are refusing to pay anything and, in some cases, paying only what they wish to pay to the DISCOs, citing the court case as the reason for non- or reduced payment. The DISCOs are reacting in different ways. One way is to cut these non-paying customers off. However, this contributes to inefficiency in the sector.

155 The potential social risks, impacts and benefits of the PSRP are complex as the issues of power generation, regulation, supply and consumption have multiple effects on the lives of Nigeria’s consumers as has been shown in this section. The government and agency systems

are solid and both the government and NERC have shown a strategic commitment to improve the present situation. The potential risk and weakness lies in the delivery of the program and the ability to establish sufficient social capital, including trust, with consumers so that they support the program and do not undermine it by non-cooperation (e.g. non-payment, illegal connections, vandalism, etc.).

4.3 Poverty and Social Impact Analysis

Scope

- 156 This analysis assesses the welfare impact of a potential tariff increase consistent with the tariff shortfall ceiling set in 2020 PSRP Financing Plan. The assumed increase is in nominal terms so when taking price inflation into account, the real cumulative tariff change would be moderately lower. The increase will differ across service areas, DISCOs and tariff classes.³⁶ The first tariff class (R1) will be kept at 4 Naira/kWh as the lifeline tariff for households consuming less than 50kWh per month.
- 157 This analysis is based on the latest household survey. Since the household survey does not provide information about households' electricity customer class, this analysis uses the actual electricity expenditure of households to determine if a household is eligible for the lifeline tariff. If the expenditure of the previous month, reported by the household, is less than 200 Naira, or equivalent to 50 kWh at 4 Naira/kWh, the household is assigned to class R1. The rest of the households are assigned to class R2. This is also aligned with NERC data since very few households (0.1-0.2%) are in the R3 and R4 classes.
- 158 This analysis compares household expenditure with (simulated) and without (baseline) electricity tariff increase. Electricity tariff increases affect household welfare through two channels: direct and indirect. The direct effect results from reduction in households' other (non-electricity) expenditures associated with higher expenditure required to maintain the given level of electricity consumption. The indirect effect relates to the impact of electricity tariff changes on the prices of other items purchased by the household, hence the consumption of those items. The impact analysis is focused on the evaluation of the direct effects.³⁷ In the absence of the input-output table for Nigeria the assessment of the indirect effect cannot be simulated.

Distribution of tariff shortfalls

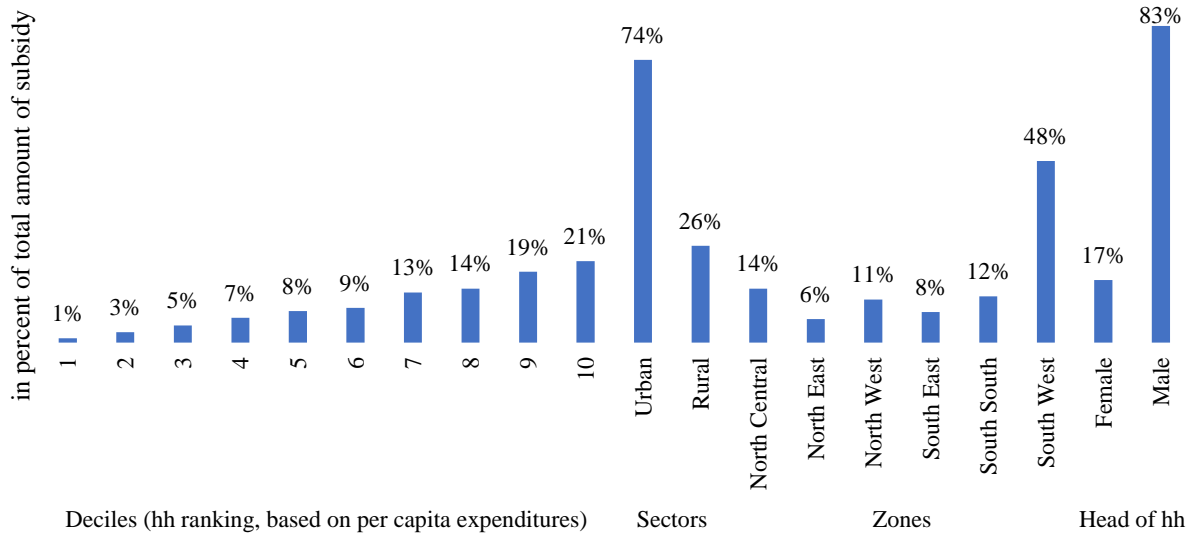
- 159 Given the variation in electricity access and use, the distribution of electricity tariff shortfall is regressive. Based on the recent estimates across all DISCOs, the cost recovery level of tariffs is more than twice the current residential tariffs (2019). This shows 40 percent of the fiscal spending on tariff shortfalls (the difference between cost recovery and current tariffs) benefitted the top quintile while only 4 percent went to the poorest quintile. Across regions,

³⁶ Residential customers are categorized by four classes based on the type of connection. The first class (R1) includes those with low usage (consumption of 50kWh or less per month) and is the only class eligible for lifeline tariff. The second class (R2) contains the majority of residential customers and includes households that are on a low voltage single phase or three phase connection. The third class (R3) includes households with low voltage maximum demand where power is metered at 400V. The final class (R4) includes households with high voltage maximum demand where power is metered at 11kV or 33kV.

³⁷ The direct effect indicates the difference between the expenditure with the new price and corresponding quantity from the expenditure with the original price and quantity.

most of the tariff shortfall benefit concentrated in the South West zone (Figure 4.3). This reflects the pattern of electricity spending, whereby affluent households and areas spent more and thus benefited disproportionately more.

Figure 4.3: Distribution of tariff shortfalls



Distributional impact of electricity price adjustment

160 The Government and NERC envisage measures to protect poor households for potential tariff increases in 2020. For metered households, tariff adjustments, if happening in 2020, will not apply to the first (R1) residential class (those consuming less than 50 kWh/month), which will remain at 4 Naira/kWh (Table 4.3). Due to lack of metering, R1 tariff benefits few households; according to the administrative data of NERC only 2.7 percent of metered residential customers fall into the R1 class. In the household survey, a similar percentage of households reported paying less than 200 Naira/month (equivalent to 50 kWh/month at 4 Naira/kWh). The rest of households have to pay the R2 tariff which is 7-8 times higher even though many pay for less than 50 kWh/month (according to the household survey). The rollout of metering that NERC is planning as part of the PIPs is critical for allowing larger share of poorer households benefit from the affordable R1 tariff. In addition, R2 class is very broad and an effort to review the classification of R2 customers could allow better protection of poorer households through tariff design. NERC is planning to review the tariff structure as part of the MYTO extraordinary review to be completed by December 31, 2020. For unmetered households, NERC is preparing an order to establish a cap on the volume of electricity that DISCOs can bill the unmetered households. Though on average the bill will be capped at 100 kWh, this will vary by service area: poor areas will have lower caps than more affluent areas. Since the average bill for unmetered customers is around 189 kWh/month, NERC estimates that the capping will, on average, reduce the volume of energy billed by half while also making the bills more predictable and less variable. This measure aims at preventing unmetered households from being overcharged.

161 As a result of the mitigation measures, tariff adjustments may reduce the real income of only households who are connected to the grid and metered; these households are estimated to account for 24.8 percent of total households. For each metered household, the exact

magnitude of direct welfare impact depends on its (i) share of electricity expenditures in the total household budget, and (ii) price elasticity of demand for electricity. In the case of Nigeria, electricity consumption has been estimated to be inelastic, since access is limited to better-off households and spending is a relatively small share of household expenditures. This analysis therefore assumes zero elasticity, that is, households do not reduce their electricity spending when electricity tariffs increase, and provides an upper bound of impact estimate. Based on the spending reported in the household survey, the estimated reduction in household expenditures of metered households that pay for electricity is around 1.3 percent. This implies an increase in electricity bills of NGN 1143/month on average. The impact is slightly higher among female-headed households (1.5 percent) than among male-headed households (1.3 percent). This reflects the effect of interaction between regions with higher access (thus more affected by electricity tariffs) in the South and higher share of female-households, also in the South (Figure 4.4). This impact is simulated on the reported spending of households since actual consumption is not measured in the household survey. According to NERC’s records, payment (spending) is consistently lower than billing, which is also lower than consumption due to non-technical losses (unaccounted consumption). For metered households under the R1 tariff, which account for 1.5 percent of all households, the electricity bills will remain unchanged.

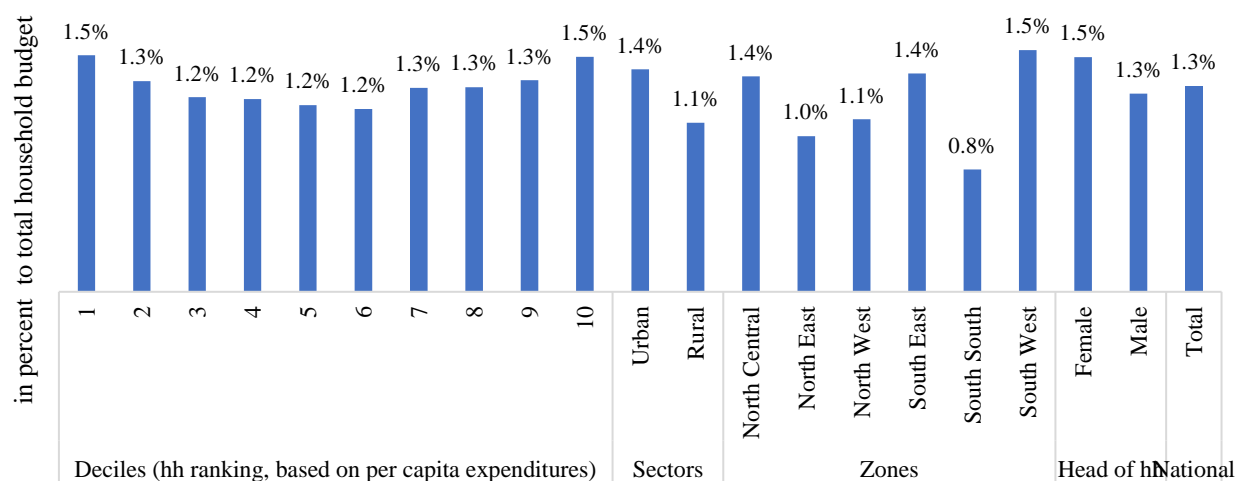


Figure 4.4: Reduction in welfare as share of household budget for metered households paying for electricity

162 Direct impact is similar for rich and poor metered households but the absolute increase in electricity bills is smaller for poorer households since they spend less on electricity in absolute terms. On average, bottom 40 percent metered households experience an increase in electricity bills of NGN 730/month, compared with NGN 1,215/month for the top 60 percent households. It should be noted, however, that this impact only affects 13 percent of the bottom 40 percent, which are those who are metered under R2 tariff. Electricity remains relatively affordable (below 5 percent of household expenditures) (Figure 4.5).

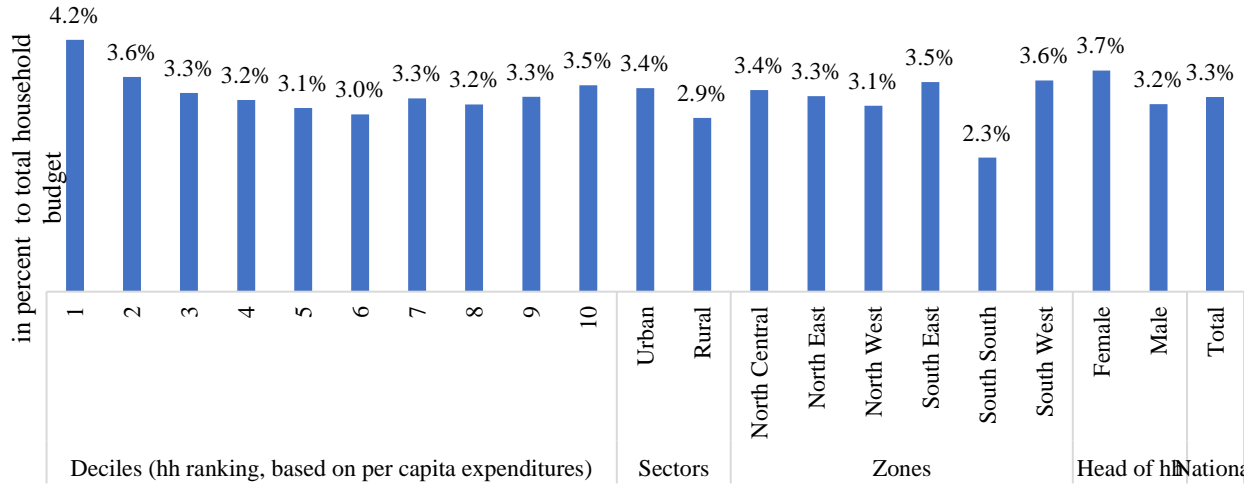


Figure 4.5: Share of electricity spending in total household expenditures after tariff increase for metered households

163 For unmetered households, the electricity bills will reduce by around NGN 800 per month on average. As per NERC’s estimate, around 53 percent of residential customers are unmetered, many of whom are likely poorer households. The bills of these households were estimated by DISCOs by roughly dividing the amount of unaccounted electricity among unmetered households, which meant that the bills did not reflect actual consumption and were often much higher than those for metered households. This month-to-month variability in electricity billing, the inability to hold DISCOs accountable for the seeming arbitrariness of the bills, and the lack of grid alternatives (other than expensive generators) put unmetered households in a financially risky situation. While the average bill for metered households was around 65 kWh/month, it was around 189 kWh/month for unmetered households. Households would either pay these bills, contest them, or try to “negotiate” a lower amount with the bill collectors. As a result, collection rate was around 80 percent among metered households (equivalent to 58 kWh/month), but only 37 percent among unmetered households (equivalent to 70 kWh/month).

164 It is likely that the capping of bills for unmetered customers will benefit the poor more than the rich. Although the household survey does not differentiate between metered and unmetered households, it is known that many poor households are unmetered. This analysis assumes three scenarios of the rate of metering among households across the different deciles based on their total household expenditures per capita. Under the first scenario, poor and rich households are assumed to have the same metering rate (47 percent), which is an upper bound on the share of metered households among the poor. Under the second scenario, poor and rich households are assumed to have the same metering rate as their connection rate (lower among the poor). Under the third scenario, it is assumed that all metered households are concentrated among the top 60 percent, which is not unlikely since metered households tend to be more affluent. The results are summarized in Table 4.3.

Table 4.3: Summary of proposed tariff design and their impact on billing

Share (%) of Total Households:

Household segments			Scenario 1: Share of metered households is uniform across income groups		Scenario 2: Share of metered households is proportional to connection rate		Scenario 3: Share of metered households is concentrated in the top 60	
	NOT connected to grid	R1 customer	Unmetered	Metered	Unmetered	Metered	Unmetered	Metered
Entire	43.9%	1.5%	29.8%	24.8%	29.8%	24.8%	29.8%	24.8%
Bottom 40%	25.5%	1.5%	7.7%	5.3%	10.5%	2.6%	13.1%	0.0%
Top 60%	18.5%	0.0%	22.0%	19.5%	19.3%	22.2%	16.7%	24.8%
Poorest 10%	8.0%	0.4%	1.0%	0.5%	1.6%	0.0%	1.6%	0.0%
2nd	6.8%	0.4%	1.7%	1.1%	2.4%	0.4%	2.8%	0.0%
3rd	5.7%	0.4%	2.3%	1.6%	2.9%	1.0%	3.9%	0.0%
4th	4.9%	0.4%	2.7%	2.0%	3.1%	1.6%	4.7%	0.0%
5th	4.2%	0.0%	3.1%	2.7%	3.3%	2.5%	2.9%	2.9%
6th	3.9%	0.0%	3.3%	2.9%	3.3%	2.8%	2.9%	3.2%
7th	3.0%	0.0%	3.7%	3.3%	3.3%	3.7%	2.8%	4.2%
8th	2.9%	0.0%	3.8%	3.3%	3.3%	3.8%	2.8%	4.3%
9th	2.5%	0.0%	4.0%	3.5%	3.3%	4.2%	2.7%	4.8%
Richest 10%	2.0%	0.0%	4.2%	3.7%	3.2%	4.8%	2.5%	5.5%
PROJECTED INCREASE IN ELECTRICITY BILL (NGN PER MONTH)								
Entire	N.A.	0	-803	1,143	-803	1,143	-803	1,143
Bottom 40%	N.A.	0	-803	730	-803	730	-803	730
Top 60%	N.A.	0	-803	1,215	-803	1,215	-803	1,215
Poorest 10%	N.A.	0	-803	631	-803	631	-803	631
2nd	N.A.	0	-803	697	-803	697	-803	697
3rd	N.A.	0	-803	754	-803	754	-803	754
4th	N.A.	0	-803	839	-803	839	-803	839
5th	N.A.	0	-803	888	-803	888	-803	888
6th	N.A.	0	-803	920	-803	920	-803	920
7th	N.A.	0	-803	1,131	-803	1,131	-803	1,131
8th	N.A.	0	-803	1,242	-803	1,242	-803	1,242
9th	N.A.	0	-803	1,471	-803	1,471	-803	1,471
Richest 10%	N.A.	0	-803	1,639	-803	1,639	-803	1,639

165 Fiscal savings from subsidy reform are large and could be used to mitigate the negative direct impact or improve service delivery to the poor more broadly. The tariff adjustment, if happening in 2020, is expected to reduce the tariff shortfall from 606 billion Naira to 320 billion Naira, saving 286 billion Naira. If targeted properly, a fraction of this amount could be used to mitigate the adverse direct welfare effects of tariff increase for poor households and improve the equity of subsidy reform. The FGN's new cash transfer program could be used for this purpose. However, another and possibly better use of funds would be to expand primary health and education services to the poor and develop basic physical infrastructure. Nigeria's socioeconomic indicators are low due to the lack of adequate spending in areas that benefit the poor.

166 In addition, there are multiple positive effects of reliable electricity supply, which is not captured by this analysis. The rationale for the tariff increase is to improve the financial sustainability of the electricity sector and thus, the supply of electricity to the population. As reliability of electricity supply increases, that is, fewer blackouts, there would be social and economic benefits accruing to households. Real income would rise since the switch to the grid from more expensive diesel-powered generators for electricity needs by business and residential sectors could bring about additional savings and cost reduction. However, quantifying such effects in a robust way requires additional information that is currently

lacking. Similarly, benefits of better electricity supply may reduce the burden of household chores that are often the responsibility of female members of the households, thus freeing time for women and girls. Again, assessing the positive gender impact is beyond the scope of this PSIA, but noteworthy.

SECTION V: OVERVIEW OF RELEVANT GOVERNMENT ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS

5.1 Description of policy and legal framework

167 The FGN has a number of policies, instruments and laws which support environmental and social management and environmental and social impact assessment processes. There are a number of sectoral policies which provide directives to integrate environmental and social considerations in the decision-making process to avoid or minimize impacts associated with program implementation. This section summarizes the policy, regulatory, institutional and legal frameworks for environmental management Nigeria. The World Bank safeguard polices and international environmental agreements and conventions were also presented.

5.1.1 Environmental Policy and Regulatory Framework

168 This sub-section describes the FGN's environmental management systems in relation to the core principles incorporated into the Bank Policy Program for Results Financing: (i) general principles of environmental and social impact assessment and management; (ii) mitigation of adverse impacts on natural habitats and physical cultural resources; and, (iii) protection of public health worker safety.

169 **National Policy on the Environment 2016:** The goal of the National Policy on the Environment is to 'ensure environmental protection and the conservation of natural resources for sustainable development'. The strategic objective of the National Policy on the Environment is to coordinate environmental protection and natural resources conservation for sustainable development. This goal is meant to be achieved by the following strategic objectives:

- securing a quality of environment adequate for good health and wellbeing;
- promoting sustainable use of natural resources and the restoration and maintenance of the biological diversity of ecosystems;
- promoting an understanding of the essential linkages between the environment, social and economic development issues;
- encouraging individual and community participation in environmental improvement initiatives;
- raising public awareness and engendering a national culture of environmental preservation; and
- building partnership among all stakeholders, including government at all levels, international institutions and governments, non-governmental agencies and communities on environmental matters.

170 **The Federal Ministry of Environment (FME_{env})** has taken over the functions of FEPA in administering and enforcing environmental laws in Nigeria. Other responsibilities of the ministry include:

- Monitoring and enforcing environmental protection measures;
- Enforcing international laws, conventions, protocols and treaties on the environment

- Prescribing standards for and making regulations on air quality, water quality, pollution and effluent limitations, atmosphere and ozone protection, control of hazardous substances; and
- Promoting cooperation with similar bodies in other countries and international agencies connected with environmental protection.

171 **Environmental Impact Assessment Act (EIA) NO. 86 of 1992:** The Act, which is a direct response to the outcome of the United Nations Conference on Environment and Development (UNCED) in Rio in 1992, outlines the goals and objective of an EIA, the minimum content of an EIA and a list of activities that are not permitted to go ahead until FEPA, now Federal Ministry of Environment has been consulted and has given its approval. The main aim of the Act is to ensure environmentally sound and sustainable development projects. The Act makes it mandatory for an EIA to be carried out for certain types of projects comprising various industrial, mining and petroleum activities. It categorized projects to indicate the level of analysis required. Category 1 projects indicates an expectation of significant environmental impacts and need to undertake a full EIA with a comprehensive report. These are project in environmentally sensitive areas, for example, coral reefs, mangrove swamps, tropical rainforests, areas with erosion soils, natural conservation areas etc. Category 2 indicates that a proposal may have impacts of a lesser magnitude that can be more readily mitigated. Here, some level of analysis is necessary depending on the type of impacts. This involves projects in agriculture and rural development, industry and infrastructure etc. Category 3 indicates that no adverse impacts are expected and that no EIA is needed, for example, nutrition programmes, education programmes etc. The EIA procedural guideline in Nigeria involves project proposal, initial environmental examination, screening, scoping, EIA study, review, decision making, monitoring and audit. Table 2.1 summarizes the other existing regulations applicable to environmental protection while Table 2.2 presents a list of proposed legislations.

172 **Nigerian Environmental Management Act:** This act was drafted following the amalgamation of the Federal Environmental Protection Agency into the FMEnv but was never ratified. It repeals the 1988 Federal Environmental Protection Agency Decree N0.58 (amended N0.59 and N0.14) and establishes the FEPA as part of the Ministry with the Minister of Environment having primary responsibility for its implementation. It does not repeal any other environmentally related legislation. As well as the general environmental provisions, which include environmental sanitation and occupational health, it specifies the powers of authorized officers, penalties and fines. The Act gives the Minister the authority to grant environmental permits for prescribed activities which includes sand mining but not any other mining activities.

173 **National Environmental Standards and Regulations Enforcement Agency (NESREA) (Establishment Act, 2007):** The main aim of this act is to establish the National Environmental Standards and Regulations Enforcement Agency (NESREA). The agency has responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines. Its key role is to enforce compliance with

laws, guidelines, policies and standards on environmental matters including provisions of international agreements, protocols, conventions and treaties on the environment, namely climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wild life, pollution, sanitation and such other environmental agreements as may from time to time come into force; enforce compliance with policies, standards, legislation and guidelines on water quality, environmental health and sanitation, including pollution abatement, among others.

174 **The Environmental Guidelines and Standards for Regulating the Oil and Gas Industry in Nigeria (EGASPIN):** The EGASPIN as designed has systematically and painstakingly covered all aspects of the upstream and downstream sectors of the O&G industry in Nigeria. The purpose of the EGASPIN is to ensure that Petroleum Industry Operators do not degrade the environment in the course of their operations. The content flow and setting starts with the activities in the Exploration Phase, through Appraisal and Development Phases to Production and Abandonment Phases (covering also, terminal operations, hydrocarbon processing plants, oil and gas transportation and marketing).

175 To enhance environmental protection in Nigeria, some statutory provisions have been put in place: Table summarizes the existing regulations applicable to environmental protection.

Table 5.1: Existing National Environmental Protection Regulations

S/N	Regulations	Year	Provisions
1	Workmen Compensation Act	1987	Occupational health and safety
2	Harmful Wastes (Special Criminal Provisions etc.) Decree No. 42	1988	Provides the legal framework for the effective control of the disposal of toxic and hazardous waste into any environment within the confines of Nigeria
3	National Environnemental Protection (Effluent Limitation) Régulation	1991	The regulation makes it mandatory for industrial facilities to install anti-pollution equipment, makes provision for effluent treatment and prescribes a maximum limit of effluent parameters allowed.
4	National Environmental Protection (Pollution and Abatement in Industries in Facilities Producing Waste) Regulations	1991	Imposes restrictions on the release of toxic substances and stipulates requirements for monitoring of pollution. It also makes it mandatory for existing industries and facilities to conduct periodic environmental audits.
5	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations.	1991	Regulates the collections, treatment and disposal of solid and hazardous wastes from municipal and industrial sources.
6	National Guideline and Standard for Environmental Pollution Control	1991	The regulations provide guidelines for management of pollution control measures.
7	Environmental Impact Assessment Act (Decree No. 86).	1992	The decree makes it mandatory for an EIA to be carried out prior to any industrial project development
8	Urban and Regional Planning Decree No 88	1992	Planned development of urban areas (to include and manage waste sites)
9	Environmental Sanitation Edicts, Laws and Enforcement Agencies		General environmental health and sanitation. Enforcing necessary laws
12	National Environmental (Soil Erosion and Flood Control) Regulations (S. I. No. 12 of 2011)	2011	The overall objective of this regulation is to regulate all earth-disturbing activities, practices or developments for

S/N	Regulations	Year	Provisions
			non-agricultural, commercial, industrial and residential purposes.

Other provisions are:

- Environmental Impact Assessment Procedural Guidelines 1995; Guidelines and Standards for Environmental Pollution Control in Nigeria 1991;
- Environmental Impact Assessment (Amendments) Act 1999;
- National Guidelines and Standards for Water Quality 1999
- National Guidelines on Environmental Management Systems (EMS) 1999
- National Guidelines on Environmental Audit in Nigeria 1999

System Assessment and Evaluation

The national EIA systems are comprehensive but are considered to have the following gaps:

- There is no requirement for consulting with local communities or vulnerable people
- There is weak coverage of social issues
- The capacity of the ministry to monitor and enforce ESIA requirements is weak.
- There are no project grievance mechanisms
- There is weak capacity in delivering a robust ESIA process at the State level
- Compliance supervision of EIAs is very weak.
- Weak monitoring and evaluation of environmental and social systems
- Challenges in implementation of the existing legal/regulatory provisions due to poor capacity and lack of awareness

5.1.2 Social Policy and Regulatory Framework

176 The Program Results Areas 1 and 3 whose overall objective is to ‘Improve Reliability of Supply and Enhance Accountability’, including through public consultations, are the result areas most closely allied to the social issues and implications of the program as it covers social accountability, stakeholder and citizen engagement. Thus, this overview of the Government’s systems and practices focuses on those initiatives and systems that the government has introduced to address issues of accountability, social protection and gender sensitive regulations in its delivery and governance of energy.

Gender Equity

177 Good governance and stakeholder engagement requires gender equity in management of governance mechanisms which includes data gathering. Energy policy specialists rarely pay attention to gender issues and therefore do not consider gender issues in policy making. According to the Nigeria Energy Policy of 2013 - Energy planning in reality is gender-blind; it fails to recognize that the women’s practical productive and strategic energy needs are different from those of men, so inadvertently discriminates usually against them. Integrating energy projects into other types of development programmes can help to shift the focus from technology-driven interventions to more integrated initiatives that take into account a community’s social and economic development needs. In that context, it is likely that concerns about women’s need might seem more understandable. Promoting increased

participation of women in energy decision making at all levels in another way to ensure that women concerns are taken into account.

178 **The National Energy Policy:** The FGN recognizes that women and men are impacted differently by power sector reform and improved service delivery. The draft revised National Energy Policy of 2013 pays specific attention to gender-differentiation in energy needs and use, impacts of energy use, resource ownership and participation in the energy sector. A Gender Focal Point has been established in the FMOP, within the Sustainable Development, Climate Change, Gender and Human Rights Unit, which seeks to ensure compliance with the National Gender Policy (2006). The latter focuses on women's empowerment and a commitment to gender mainstreaming as a development approach. In addition, the FMBNP has partnered with the Rural Women Energy Security initiative, as improved access and energy services have the potential to promote gender equality by creating jobs and business opportunities for women.

179 Chapter eleven of The Revised National Energy Policy of 2013 states the following in relation to gender:

- The nation shall encourage and ensure gender mainstreaming in energy issues, infrastructure programs and projects.
- The nation shall disaggregate energy use, supply, and impacts by gender in energy project design and implementation.

Objectives

- To create awareness on gender issues in the energy sector.
- To provide better basis for incorporating gender in energy project design and implementation at the micro- and macro-policy levels.

Short-Term Strategies

- Promoting integrated approaches and various solutions that recognize the importance of wood energy and cooking for poor women and its health implications.
- Ensuring equal access to electricity for water pumping, agricultural processing, security, work productivity, and health in the framework of sectoral development initiatives.
- Providing equal access to credit facilities, extension support services, and training in energy and electricity supplies for women's domestic tasks as well as their micro-enterprise activities are met.
- Developing a reliable gender responsive statistical data.
- Incorporating gender concerns into energy and rural development policies and programs.
- Monitoring and evaluating the impacts of rural energy projects on poverty alleviation and gender equity
- Conducting gender audits of national energy and other related policies.
- Establishing gender units in all MDAs in the energy sector.
- Ensuring gender sensitive capacity building programs in the energy sector.

180 **The Sustainable Development Climate Change, Gender and Human Rights Unit:** The sustainable Development/Climate Change, gender and Human rights Unit (SD/CC Unit) was established on the 6th May 2013 with approval of the Head of Service. Its objectives are to:

- Improve service delivery throughout the power sector through the integration of social

dimensions of power sector reforms with the core technical aspects of generation, distribution and transmission of power as well as the production of energy efficient products and equipment³⁸.

- Assess proposals and make recommendations for the training of staff in the areas of sustainable development of power, renewable sources of energy, gender matters, respect for human rights in the power sector and climate change issues;
- Promote the use of energy efficient gadgets and gender friendly household equipment through public campaigns and advocacy with promoters and developers;
- Develop strategies to raise awareness of the relationship between clean and green energy policies on the hand and prosperity of the nation on the other hand

181 The unit also works in collaboration with other Departments in the promotion of investment and research by the government, private sector and development partners so as to promote renewable energy as well as the affirmation of women as equal partners in the development of the power sector.

182 **The Power Sector Reform Act (2005)** has a number of sections that are focused on the protection of consumers and the transparent dissemination of information. The Act mandates the Commission to ensure that electricity Operators recover costs on prudent investment and provide quality service to customers.

- To ensure quality service delivery, it is pertinent that electricity customers know their rights. Specific measures to protect consumers are:
- Customer Service Standards
- Customer Complaints Handling Standards and Procedures
- Codes of Practice to assist special needs customers (disabled, elderly or severely ill)
- Procedures for assisting customers with difficulty in paying bills
- Procedures for applying for electricity service
- Procedures for disconnecting non-paying customers
- Information to consumers and the manner of dissemination
- Standards for compensation to consumers who do not enjoy regular power supply.
- Standards on connection, safety, reliability of supply, technical codes and manuals.

5.2 Grievance Redress Mechanisms of NERC

183 The NERC has a number of mechanisms and consumer-oriented goals to institutionalize grievance redress mechanisms, communication and social accountability. They include:

- Establishment of functional Customer Complaints Units (CCUs) in all the Business Units as a minimum.
- Provision of conducive environment for customers lodging complaints.
- Training of front line customer service personnel of CCUs.
- Provision of Customer Relationship Management (CRM) systems including customer complaints call centers.

³⁸Annual Report of the sustainable development /climate change, gender and human rights unit. (No date)

- Establishment of functional Customer Complaints Forum offices
- Compliance to monthly reporting requirements as stipulated in the Regulation.

5.3 Description of institutional framework

184 The main institutions with key responsibilities for environmental and social management are as follows:

Environment Sector

185 In the environment sector, the key institution is the FMEnv. The ministry in accordance with its mandatory functions will ensure that the project implementation conforms to the Environmental (Impact) Assessment Act 1992. Within FMEnv, there is an Environmental Impact Assessment Division, headed by a Director, to take all responsibility for EIA related issues and within the EIA division in FMEnv is the Impact Mitigation Monitoring (IMM) branch, with special responsibility for monitoring the implementation of Environmental Management Plans (EMP) contained in approved EIAs.

186 Other federal agencies relevant to the project include the National Emergency Management Agency, National Environmental Standards and Regulations Enforcement Agency (NESREA), Federal Ministry of Water Resources (FMWR) and its agencies, such as River Basin development Authorities (RBDAs), National Water Resources Institute (NWRI), Nigeria Integrated Water Resources Management Commission (NIWRMC), the Nigeria Hydrological Services Agency (NIHSA) and the Department of Petroleum resources (DPR) which is responsible for environmental issues in the oil and gas sector. The states have their own ministries of environment that can be contacted on specific issues relating to the state of operation.

Power Sector

187 In the power sector, the key agencies/institutions and their roles are summarized in the Table 5.2 below.

Table 5.2: Power sector institutions and their roles

No	Agency/Institution	Description of Role
1	Nigeria Electricity Regulatory Commission (NERC)	The agency is responsible for the economic regulation of the power sector. Two of their key regulatory functions are as follows: Licensing: NERC issues license for on and off grid generation of power as well as distribution of electricity to end users. In terms of tariff, NERC manages price regulation.
2	Federal Ministry of Works, Power and Housing	Formulating broad policies for the development of power sector. Also, coordinates activities within the power sector.
3	Transmission Company of Nigeria	An entity, incorporated by government in 2005 and issued license in July 20106, is responsible for the transmission of electricity from power plants to distribution companies, eligible customers and for export. The licensed activities include electricity transmission, system operation and electricity trading. TCN is responsible for evacuating electric power generated by the electricity generating companies (GenCos) and wheeling it to distribution companies (DisCos). It

No	Agency/Institution	Description of Role
		provides the vital transmission infrastructure between the GenCos and the DisCos feeder sub-stations.
4	Nigerian Bulk Electricity Trading PLC (NBET)	Government entity responsible for purchasing electricity from generation companies under long term power purchase agreements and selling it to distribution companies.
5	Generating Companies (GenCos)	The GenCos are one part of the three divisions of the Nigeria power sector value chain. They are in charge of the actual generation of electricity in Nigeria. They are tasked with transforming hydro or gas power into electrical power. There are over 20 electricity generating companies in Nigeria today. However, the top six GenCos providing the country with electricity are Egbin Power Limited, Transcorp Power, Shiroro, Kainji/Jebba, Sapele and Geregu.
6	Distribution Companies in Nigeria (DISCOs)	The distribution companies are responsible for power distribution in Nigeria. They provide the connection between customers and the electricity grid. They are responsible for stepping down electricity from the high voltage of 132KV at the transmission level, to the lower voltage levels of 33kV/11Kv?0.415KV depending on the category of customer. They are also responsible for marketing and sale of electricity to customers. There are eleven DisCos in Nigeria each covering a given number of states.
7	Gas Aggregation Company of Nigeria (GACN)	The GACN is responsible for managing the implementation of the domestic gas supply obligation. It also acts as intermediary between gas suppliers and purchases in the domestic market.
8	Nigerian Gas Company Limited (NGC)	This is one of the subsidiaries of the Nigerian National Petroleum Corporation. It is responsible for the transportation of natural gas through its pipeline network.
9	National Power Training Institute of Nigeria	Provider of training for power sector personnel and coordinating training activities in the sector.

Source: Adapted, with modification, from Saifuddin, N et al. (2016)³⁹

³⁹ Saifuddin, N., Bello, S., Fatihah, S., and Vigna, K.R. (2016) Improving electricity supply in Nigeria: Potential for renewable energy from biomass. International Journal of Applied Engineering Research, 11, 14 (2016); pp 8322-8339.

SECTION VI: SYSTEMS ASSESSMENT AND IDENTIFICATION OF GAPS

188 This section provides an assessment of the extent to which the applicable systems are Consistent with the core principles and key planning elements expressed in the P4R Guidance Document. It also provides a review of aspects where gaps exist between the two. The assessment was done using the following criteria:

- Strengths of the system, or where it functions effectively and efficiently and is consistent with Bank Policy and Directive for Program-for-Results Financing;
- Inconsistencies (Weaknesses) and gaps between the principles espoused in Bank Policy and Directive for Program-for-Results Financing and capacity constraints
- Actions (opportunities) to strengthen the existing system.
- Risks (Threats) to the proposed actions designed to strengthen the system

189 Information from this analysis – and identification of gaps and opportunities/actions – were used to inform the Program for Action.

6.1 Summary of Systems Assessment

Core Principle 1: General Principle of Environmental and Social Management

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to (a) promote environmental and social sustainability in Program design; (b) avoid, minimize or mitigate against adverse impacts; and (c) promote informed decision-making relating to a program’s environmental and social effects.

Bank Directive for Program-for-Results Financing: Program procedures will:

- Operate within an adequate legal and regulatory framework to guide environmental and social impact assessments at the program level.
- Incorporate recognized elements of environmental and social assessment good practice, including:
 - early screening of potential effects;
 - consideration of strategic, technical, and site alternatives (including the “no action” alternative);
 - explicit assessment of potential induced, cumulative, and trans-boundary impacts;
 - identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized;
 - clear articulation of institutional responsibilities and resources to support implementation of plans; and
 - responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and responsive grievance redress measures.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<ul style="list-style-type: none"> • Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary/major review • 	<ul style="list-style-type: none"> • ESIA regulatory framework aligns well with the Core Principle. • Specifically: 	<ul style="list-style-type: none"> • There is no requirement within ESIA processes for consulting with local communities 	<ul style="list-style-type: none"> • A robust public consultation strategy (currently envisaged as part of the MYTO extraordinary review) is required to improve citizen

	<ul style="list-style-type: none"> • National policies, regulation and other legislation for environmental management are well defined. Also institutional systems identifying environment procedures and legislation to be followed in the country is well defined. States have their own environment department or directorate, who can be contacted for permits or any clarifications if necessary. • The national EIA system (EIA Act No. 86 of 1992) provides a comprehensive legal and regulatory framework for environmental and social impact assessment that is broadly consistent with the Core Principle 1 of the Bank 	<p>or vulnerable people</p> <ul style="list-style-type: none"> • There is weak coverage of social issues in EIA legislation • The capacity of the federal ministry of environment to monitor and enforce ESIA requirements is weak • There is weak capacity in delivering a robust ESIA process at the State level • Weak monitoring and evaluation of environmental and social systems • . • . 	<p>engagement in the EIA process.</p> <ul style="list-style-type: none"> • EIA processes to incorporate socio-economic assessments • Strengthening the implementation of environmental and social monitoring/auditing systems: • Establish a tracking system to monitor environmental and social risks, performance, consultations, etc. • The FMEnv to reinforce its mandate of monitoring activities. • Technical staff responsible for environmental and social management must monitor and supervise E&S compliance at least once per quarter, environmental and social management audits every two years. • Strengthening of environmental management capacity: Training in environmental and social management/sessions for budgeting for environmental and social mitigation measures for technical staff in
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	<p>Policy and Directive. FMEnv and FMOWPH are aware of ensuring compliance with EIA procedures.</p> <ul style="list-style-type: none"> • Good grievance mechanisms by NERC call centres established for customer complaints, readily available website with instructions of how to make a complaint 		FMEnv
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Core Principle 2: Natural Habitats and Physical Cultural Resources

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.

Bank Directive for Program-for-Results Financing: As relevant, the program to be supported:

- Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.
- Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.
- Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects.

Applicability: Not applicable

It is not expected that the PforR will have adverse impact on natural habitats and physical cultural resources since it does not directly involve new or upgrading of infrastructure. Thus core principle two is not applicable.

Core Principle 3: Public and Worker Safety

Bank Policy for Program-for-Results Financing: Environmental and social management procedures and processes are designed to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or promoted under the program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Bank Directive for Program-for-Results Financing:

- Promotes community, individual, and worker safety through the safe design, construction, operation, and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections, or remedial works incorporated as needed.
- Promotes use of recognized good practice in the production, management, storage, transport, and disposal of hazardous materials generated through program construction or operations; and promotes use of integrated pest management practices to manage or reduce pests or disease vectors; and provides training for workers involved in the production, procurement, storage, transport, use, and disposal of hazardous chemicals in accordance with international guidelines and conventions.
- Includes measures to avoid, minimize, or mitigate community, individual, and worker risks when program activities are located within areas prone to natural hazards such as floods, hurricanes, earthquakes, or other severe weather or climate events.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<p>The following DLIs have implications for public and worker’s safety:</p> <p>DLI1: Implementation of approved Performance Improvement Plans (PIPs) of DISCOs is enforced</p> <p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p>	<ul style="list-style-type: none"> • The legal/regulatory system of the country includes provisions for protecting people and environment. 	<p>The national EIA system does not comprehensively encompass aspects of public and worker safety</p> <p>Lack of awareness of relevant authorities’ staff to appreciate the need to ensure occupational health and safety.</p>	<ul style="list-style-type: none"> • The FMEnv should work towards improving the EIA system to incorporate important aspects lacking in the system, for example, issues relating to public and workers’ safety and broader ESHS. Meanwhile, they should ensure that EIA reports submitted for review cover social issues especially relating to public and worker safety. • FMEnv and Federal Ministry of Labour should collaborate and build the capacity of the leaders in the different institutions in the sector in order for them to become knowledgeable on issues relating to occupational health and hazard and how to deal prevent and deal with

			it.
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Core Principle 4: Land Acquisition

<p>Bank Policy for Program-for-Results Financing: Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.</p>
<p>Bank Directive for Program-for-Results Financing: As relevant, the program to be supported:</p> <ul style="list-style-type: none"> ▪ Avoids or minimizes land acquisition and related adverse impacts; ▪ Identifies and addresses economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people who may lack full legal rights to assets or resources they use or occupy; ▪ Provides compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid prior to taking of land or restricting access; ▪ Provides supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment); and ▪ Restores or replaces public infrastructure and community services that may be adversely affected.
<p>Applicability: Not applicable It is not expected that the PforR areas will involve land acquisition. Thus, core principle 4 is not applicable.</p>

Core Principle 5: Social Considerations - Indigenous Peoples and Vulnerable Groups

<p>Bank Policy for Program-for-Results Financing: Due consideration is given to cultural appropriateness of, and equitable access to, program benefits giving special attention to rights and interests of Indigenous Peoples and to the needs or concerns of vulnerable groups.</p>								
<p>Bank Directive for Program-for-Results Financing:</p> <ul style="list-style-type: none"> • Undertakes free, prior, and informed consultations if Indigenous Peoples are potentially affected (positively or negatively) to determine whether there is broad community support for the program. • Ensures that Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples. • Gives attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups. If necessary, special measures are taken to promote equitable access to program benefits. 								
<p>Note: There are no groups in Nigeria that meet the World Bank's criteria for Indigenous Peoples. Thus, this section has adapted Core Principle 4 to look at the systems that address the needs of vulnerable people, including people with disabilities. Given that PSRP may entail tariff adjustments the Federal Government would need to ensure that low income and low use consumers and consumers with disabilities, who can be defined as vulnerable in this context, are not inadvertently negatively impacted by the reforms.</p>								
<table border="1"> <thead> <tr> <th>Applicability</th> <th>Systems Assessment</th> <th>Gaps</th> <th>Suggestions to Fill Gaps</th> </tr> </thead> <tbody> <tr> <td>The following DLIs have implications for indigenous peoples and vulnerable groups.</td> <td> <ul style="list-style-type: none"> • Part VI - Consumer Protection and Licensee </td> <td> <ul style="list-style-type: none"> • Poor uptake by NERC of the Power Consumer Assistance Fund and </td> <td> <ul style="list-style-type: none"> • Ensuring that any future tariff adjustments are accompanied </td> </tr> </tbody> </table>	Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps	The following DLIs have implications for indigenous peoples and vulnerable groups.	<ul style="list-style-type: none"> • Part VI - Consumer Protection and Licensee 	<ul style="list-style-type: none"> • Poor uptake by NERC of the Power Consumer Assistance Fund and 	<ul style="list-style-type: none"> • Ensuring that any future tariff adjustments are accompanied
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<p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary/major review.</p> <p>Global DLI2: A credible and fiscally sustainable Financing Plan is prepared and executed to fully fund the tariff shortfalls of the sector</p> <p>DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and FGN policy for protecting the poor</p> <p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p> <ul style="list-style-type: none"> • 	<p>Performance Standards - of The Electric Power Sector Reform Act (2005) stipulates that there will be special codes of practice for the provision of assistance to special needs customers such as the people with disabilities, the elderly or severely ill. Additionally, the Act describes procedures for dealing with and assisting customers who have difficulty in paying bills.</p> <ul style="list-style-type: none"> • Part VIII – The Power Consumer Assistance Fund – of The Electric Power Sector Reform Act (2005) - requires NERC to set up and administer a fund which 	<p>other agencies in accordance with the Power Sector Reform Act</p> <ul style="list-style-type: none"> • Poor knowledge/understanding of how to operationalise the fund and to monitor progress • Lack of data on consumers’ vulnerability profile (e.g. income levels, access to electricity, etc. 	<p>with protection consumers in the lowest income bracket⁴⁰ (especially women and vulnerable persons). They should ensure, through the tariff structure, that a basic level of consumption remains affordable. The consumers should be made to become aware of these mitigation measures.</p> <ul style="list-style-type: none"> • NERC should collect data on customer vulnerability profile.
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⁴⁰ Through the set-up of the Power Consumer Assistance Fund

	will, among others, be used to subsidize underprivileged power consumers.	
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Core Principle 6: Social Conflict

Bank Policy for Program-for-Results Financing: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

Bank Directive for Program-for-Results Financing: Considers conflict risks, including distributional equity and cultural sensitivities.

Applicability	Systems Assessment	Gaps	Suggestions to Fill Gaps
<p>The following DLIs have implications for Social Conflicts:</p> <p>Global DLI 1: NERC completes semi-annual MYTO minor reviews and an extraordinary review.</p> <p>Global DLI2: A credible and fiscally sustainable Financing Plan is prepared and executed to fully fund the tariff shortfalls of the sector</p> <p>DLI 3: End-user electricity tariffs are adjusted consistent with the Financing Plan and FGN policy for protecting the poor</p> <p>DLI 4: Payment discipline is enforced on DISCOs to reduce non-tariff shortfalls</p>	<ul style="list-style-type: none"> • Nigeria Federal and State presence is strong throughout the country with well-trained police and security forces who maintain the rule of law. • There are Federal and state level agencies and ministries with mandates to address conflict. • States which are more conflict prone receive proportionately more resources to tackle conflict 	<p>Weakness of grievance redress system especially in terms of robust consumer engagement and feedback mechanism and lack of transparency of tariff reform.</p>	<ul style="list-style-type: none"> • Strengthened stakeholder engagement and grievance redress mechanisms and increased transparency to provide information and communication avenues for complaints and their resolutions.

SECTION VII: CONCLUSIONS AND RECOMMENDATIONS

190 This section recommends measures that will be taken to strengthen system performance in line with the gaps and risks identified in the system assessment section to ensure that the Program interventions are aligned with the Core Principles of Bank Policy for Program-for-Results financing. The identified key areas are elucidated below. These actions may be further refined and adjusted during the consultation process and the implementation of the Program.

7.1 Environmental Summary and Recommendations

191 Although Nigeria has a well-defined environmental system that is close to the core principle on environmental assessment, some gap still remains. For example, the EIA process in Nigeria does not cover the social aspects as it should. Often impacted communities and vulnerable groups are not consulted during the EIA process and when even when they are consulted at the beginning, they are not carried along during the review and approval process thus, their concerns may not be reflected in EIA document. Besides, the monitoring of EIA implementation is weak as there is no tracking system to monitor environmental and social risks, performance.

192 **Recommendation:** There a need to, in the long-run, to modify some aspects of the EIA system to ensure that social assessments are fully covered and that impacted communities are carried along from the beginning until the end of the review process. Currently, there is a need to effectively monitor the EIA process. In this regard, government should create a tracking system to monitor environmental and social risks performance of DISCOS and other companies in the electricity sector.

193 **Recommendation:** There is need to formulate guidelines and manuals focused on the implementation of the Program. These include guidelines and manuals to (1) mainstream stakeholder engagement process, such as sensitization of electricity consumers on the MYTO reviews and implementation so that the consumers will be aware of the processes in order to reduce conflicts that may arise due to increased tariffs following the reviews; (2) manage environmental, health and safety risks associated the implementation of the performance improvement plans of DISCOS; (3) educate the electricity workers and their managers on health and safety issues relating to electricity and the required practices and measures to prevent and manage risks associated with electricity.

194 **Recommendation:** Capacity building of key sector institutions: the analysis conducted under ESSA has revealed that weak enforcement and implementation capacity is a major concern. The ability of the relevant institutions to implement and enforce the existent laws, regulations and guidelines is rather weak and would require further strengthening. Poor implementation of the strengthened environmental and social management guidelines and manuals as discussed above is a possible risk. These risks should be mitigated through a combination of capacity building of key sector institutions (FMOP, NERC, NEBT, NGC, GACN, TCN, GenCos, DisCos, etc.) and monitoring and implementation support by the Bank. Considering that these institutions have differentiated tasks and responsibilities that range from policy formulation (FMOP) to nation-wide coordination and monitoring (NERC)

to actual transmission, generation and distribution of electricity, more detailed capacity building programs should be developed during the implementation process of the Program.

- 195 **Recommendation:** There is need to enhance the monitoring of the performance of the companies in the electricity sector especially distribution companies to ensure that they consider environmental issues in their operations. The monitoring will ensure that each company in the sector has environmental guidelines and safety procedures, and that they are displayed publicly for the workers and visitors to abide with. Also, regulatory oversight should be strengthened by the responsible government institutions especially NERC, NESREA and FMEnv to ensure that the rules and guidelines are followed.

7.2 Social Summary and Recommendations

- 196 The objective of the PforR is to improve the reliability of electricity supply and enhance power sector financial viability and accountability. The objective is consistent with one of the key aims of the PSRP which is to improve the reliability of electricity to existing consumers and the quality of the service they receive from the DISCOs. The PforR has two global DLIs and five standard DLIs for assessing the success of the program. The assessment of the social systems towards achieving the DLIs shows some gaps that need to be filled. Based on the assessment some recommendations were made.
- 197 **Recommendation:** NERC should ensure that tariff adjustments are accompanied with mitigation measures (including through the tariff structure by ensuring that a basic level of consumption remains affordable). The awareness of consumers about these mitigation measures should also be raised through extensive stakeholders' engagement.
- 198 **Recommendation:** Strengthened stakeholder engagement and grievance redress mechanisms and increased transparency to provide information and communication avenues for complaints and their resolutions.
- 199 **Recommendation:** NERC should provide a guidelines regarding appointment of transition management to ensure a transparent process of selecting new leaders for the companies specially to ensure that women are not discriminated against. To make provision for inclusion of women in the listing and appointment of transitory management- a specific percentage could be allocated to women.
- 200 The ESSA Analysis presented has identified strengths, gaps and opportunities in the Government's environmental and social management system for effectively addressing the environmental and social risks associated with the Program and aligning with the Core Principles of Bank Policy for Program-for-Results Financing. These gaps and opportunities have been translated into a viable strategy to strengthen and monitor environmental and social management capacity and performance of the Federal Government and incorporated into the Program's overall Action Plan. The Program's Action Plan, presented below, covers environmental and social actions linked to the ESSA, and will be part of the credit agreement. These Actions are subject to further refinement during the negotiation process or during implementation

SECTION VIII: PROGRAM ACTION PLAN (PAP)

201 The Table below indicates the breakdown of actions to be included in the Program Action Plan (PAP) with indicative timeline, responsibility for implementation and indicators for measuring the completion of such actions.

Program Action Plan for Environmental and Social Management

	Action Description	Due Date	Responsible Party	Completion Measurement
1	Create framework under MYTO reviews and PSRP Financing Plan updates to ensure that tariff adjustments are accompanied with mitigation measures	During PSRP Financing Plan updates	PSRP Policy and Oversight Committee, PSRP Finance Technical Committee and NERC	MYTOs includes mitigation measures consistent with the PSRP Financing Plans
2	Build on current system and institutionalize guidelines to strengthen stakeholder and citizen engagement and grievance redress mechanism. Develop clear targets and monitoring criteria for NERC's customer complaints system.	Six months after the Program effectiveness	PSRP Secretariat and NERC	Developed/updated guidelines for stakeholder engagement, number of stakeholder meetings, workshops and town hall meetings held etc.
3	Engage suitable Environmental and Social Risk Management Specialists by the PSRP Secretariat in a manner that will be satisfactory to the Bank.	Six months after the Program Effectiveness	PSRP Secretariat	PSRP Secretariat engaging qualified Environment and Social Risk Management Specialists
4	Evaluate and report on the Environmental and Social Risk Management Actions of the Program	Commence 12 months after Program effectiveness	PSRP Secretariat	Quarterly, Bi-Annual and Annual Progress Reports
5	Formulate guidelines and manuals for mainstreaming stakeholder engagement process, and environmental, health and safety issues into the implementation of the Program	Twelve months after the Program effectiveness	NERC, FMOP, EAD, NESREA	Completed guidelines in booklet form disseminated to stakeholders training provided, and the guidelines operationalized.
6	Conduct annual monitoring of progress on environmental and social issues, especially regarding the compliance of the Program activities with the environmental standards and regulations	Within 12 months of end of each FY	NERC, FMOP, and PSRP Secretariat	Completed report with recommendations about E&S issues, including the progress of the implementation of actions indicated in this table. Follow-up measures to the recommendations taken in the following FY.

SECTION IX: STAKEHOLDER CONSULTATIONS

- 202 Formal and informal stakeholder consultations have been an integral part of the ESSA process during the project preparation phase. For the preparation of the ESSA, Bank specialists undertook a series of meetings and engagements with various stakeholders including federal agencies, development funding partners, and technical experts aimed at information-gathering and risk analysis. What follows are the key issues that emerged from the formal consultations with federal government representatives, electricity distribution and generating companies and a large representation of NGO and CSO organizations. A list of attendees for the consultation meeting can be found in Annex 1.
- 203 A virtual Public Consultation for the Environmental and Social Systems Assessment (ESSA) for the proposed Nigeria Power Sector Recovery (PSR) Program for Results (PforR) was held on May 7, 2020.

Summary of Discussions

- 204 **Overview of the Program for Results:** The proposed Power Sector Recovery PforR contains comprehensive regulatory, financial, operational and governance measures to improve the power sector financial viability and enhance service delivery. These measures include: the implementation of the multi-year tariff order (MYTO), including and extraordinary review in 2020 and semi-annual minor reviews to update the revenue requirements for sector companies; the enforcement of a PSRP Financing Plan to address the tariff shortfalls of the power sector; the approval and enforcement of Performance Improvement Plans (PIPs) by distribution companies (DISCOs); the establishment of business continuity plans for DISCOs with license interventions; the adjustments of electricity tariffs toward cost recovery, with mitigation measures to protect the poor; and the publication of sector financial and operational data to enhance transparency and accountability. The PforR will disburse funds upon demonstration of progress in the achievements of these measures. The expected outcome includes electricity supply and reliability improved, financial self-sustainability achieved, fully contract based market put in place and AT&T losses reduced substantially.
- 205 **Tariff adjustments and mitigation measures for the poor:** The Government has been directing fiscal resources to keep the electricity running but those resources have primarily benefited the wealthy. Moreover, because of the overall scarcity of public funds, as a result, public expenditures on primary health care, basic education, rural roads and other public goods that benefit the poor and represent investments in Nigeria's children (and its future) have suffered. The point of this operation is to help turn around the power sector and set it on a fiscally sustainable path, and this is particularly urgent at a time when the government needs all the fiscal resources it can marshal to help protect lives and livelihoods. Of course, the priority of the Government ought to be and has been to ensure that the poor and low-income are not hurt by this, and, in fact, what NERC is proposing should cap the impact on the poorest customers. But keep in mind that two thirds of the poorest 40 percent do not have access to grid electricity.
- 206 **ESSA summary** The ESSA examines the extent to which the FGN's existing environmental and social management systems operates within, an adequate legal and regulatory

framework and incorporate recognized elements of good practice to guide environmental and social impact assessments, mitigation, management and monitoring at the PforR Program level. The ESSA was undertaken to ensure consistency with six core principles outlined in paragraph 8 of the World Bank Policy for Program-for-Results. The six core principles are environment, natural habitats and cultural resources, public and worker safety, land acquisition, vulnerable groups and social conflict.

- 207 The result of system assessment and recommendations made to improve the system in order to ensure that the objectives of the critical PRSP was met was presented to the stakeholders. After the presentation, the stakeholders and other representatives all expressed appreciation for the project and in the questions and answer session that followed sought clarification of some issues.

ESSA of the PforR Questions and Answers

Organization	Question/Comment	Response
Jos Electricity Distribution Company	One of the objectives of the PSRP is to make DISCOs more financially buoyant, but many customers have not been paying their bills over the last two months, having been misinformed by social media that the FGN will pay for it. How can this program help DISCOs to close the gap, i.e. the shortfall of revenue that was supposed to be collected from the last two months?	Ensuring payment discipline by customers is one of the actions in the PIPs, which this operation aims to support, but direct support to DISCOs is beyond the scope of this Program. It will be covered by a complementary World Bank's project, currently under preparation.
NBET	An additional social benefit of DLI 1 is improvement in the cost of production and doing business, hence contributing to economic growth. DLI 2 mentions discrimination of women as a potential risk, but such discrimination does not seem to be prevalent in this area. Another social benefit of DLI 4 is freeing up Government resources for other very important sectors like health, education, agriculture, infrastructure, etc. Program Action Plan: Since the Federal Ministry of Power has split from the Federal Ministry of Works and Housing, which agency is being referred to?	DLI 1: Thank you for the observation. This will be added. DLI 2: The assessment points out any potential risk, regardless of their likelihood. It is important to ensure that the process of appointing a transitory management team is carried out properly to avoid any discrimination and negative impact on women. DLI 4: Agreed. This will be included in the ESSA. Program Action Plan: The agency is the Federal Ministry of Power. The name and acronym will be adjusted.
Private individual	There is bad perception by most Nigerians regarding billing from DISCOs and there is a discrepancy between consumption and bills. How will the Program address that, and will there be a solution to get pre-paid meters?	Billing and metering are some of the actions in the PIPs. While this Program focuses on approving PIPs, ensuring their funding requirement is included in DISCOs' revenues and enforcing the PIPs, the support for the PIP implementation will be covered by a complementary World Bank's project, currently under preparation.
Ikeja Distribution Company	DISCOs' health and safety units have limited manpower and resources. How does this Program support health and safety implementation?	The support for DISCOs will be covered by a complementary World Bank's project, currently under preparation.
Private Individual	What measures have been put in place by the Government to protect poor people from energy tariff increase?	As mentioned in the presentation, there are tariff measures, which include no increase for the energy-poor consumers in R1 tariff and a cap on the estimated bill for unmetered customers (many of whom are poor), complemented by pro-poor spending from the savings generated by tariff increase, which will help protect the most vulnerable.
Transcorp Power Limited	One of the objectives of this stakeholder consultation is to provide project-affected parties with accessible and inclusive means to raise	Grievance redress mechanism is a key part of the ESSA recommendations. In addition, one of the

Organization	Question/Comment	Response
	<p>issues and grievances and allow borrowers to respond to and manage such grievances. How does this presentation/program address this objective?</p> <p>This project is going to require a lot of data gathering and analysis, is the project going to avail stakeholders of ongoing data to allow for transparency?</p>	<p>recommendations in the ESSA is that consultations will need to be maintained and customer service program strengthened over the course of the operation. Collection and publication of data will also need to be done.</p> <p>In order to improve transparency in the sector, a development objective of the PforR, NERC and DISCOs will be publishing key financial and operational data on a regular basis.</p>
Niger Delta Power Holding Co	DISCOs need to strengthen their stakeholders' engagement and enlightenment processes to gain the trust of the consumers and have positive outcomes regarding metering and collection. In addition, the COVID-19 pandemic presents an example of the need for a well-defined Environment and Social Health Safety framework in the DISCOs' operations.	DISCOs stakeholder engagement, especially with their consumers, is indeed critical and will be facilitated and enabled with the implementation of PIPs. In addition, the proposed operation supports transparency measures through periodic publication of financial and operational data of DISCO performance.
badan Distribution Company	With the large number of vulnerable people, some tagged under the lifeline R1 tariff (paying Naira 4/kWh, do we still expect cross-subsidy to solve this problem instead of subsidy from the government through this program?? The cross subsidy is already being contested by the Industrial & Commercial segment who expects to pay higher rates. Also, how do we solve the issue of indigenous people who do not pay for energy delivery even when they enjoy 20-24hr supply.	<p>The issue of cross subsidy is subject to the Government's policy.</p> <p>The issue of non-payment is addressed through the PIPs and the support for the PIP implementation will be covered by a complementary World Bank's project, currently under preparation.</p>
Association of Power Generation Companies	<p>Question 1: Is the 4,500MW referenced a minimum MW to be paid for or maximum? Also, is the payment for energy only or energy and capacity?</p> <p>Question 2: In the course of the presentation, the World Bank's willingness to disburse through NBET the sum of N700bn USD was referenced which will commence as soon as the N600bn is over to backstop the N600bn. This is a welcomed development by GenCos but the way this is to be done is not welcomed. There may be DLIs, or KPIs. If you look through the CPs, they are to be met by DisCos instead of GenCos. In our view, this is an issue considering the weak and poor enforcement and monitoring culture in the sector.</p> <p>Question 3: Does the World Bank have a clear guideline/ mechanism for enforcement of the DLIs, if Yes? Which agency and how efficient.</p>	<p>1) 4,500 MW is the minimum.</p> <p>2) We note that the current CBN PAF financing of N600bn also is conditional to incentivize sector's performance improvement. The World Bank financing is also results-based (it is a Program for Results) and can only disburse if the agreed results are achieved.</p> <p>3) The World Bank has clear guidelines on the monitoring and verification of DLIs, which will be done by an independent agency and is enshrined in the Financing Agreement.</p>

Organization	Question/Comment	Response
	<p>Question 4: The second presenter spoke of the desire to bring about payment discipline. Again we ask, by which agencies?</p> <p>Question 5: On the DisCos PIP, GenCos believe there is a misalignment in the achievement of the PIP. It is not enough to get data from the NBET. GenCos can speak for themselves.</p> <p>Question 6: The last presentation made reference to the 45% payment. Given the paucity of data in the NESI, how did you arrive at the fact that only 45% of grid customers are paying customers? Does this entail estimated billing?</p>	<p>4) This means payment discipline across the sector; from consumers to DISCOs, from DISCOs to NBET, and NBET to GENCOs.</p> <p>5) PIPs are prepared by DISCOs who would be held accountable by NERC for their implementation. It would be NERC's job to ensure that PIPs are consistent with transmission network capacity and constraints and any constraints on generation and gas supply.</p> <p>6) This is based on Statistics Office data and the household surveys that the Office conducts.</p>
Private Individual	<p>Has an in-country system been envisaged to manage complaints that might emerge from power consumers?</p> <p>For stakeholder engagement, do we know how consumer advocacy groups would be affected by activities to be funded under this PforR?</p>	<p>A complaint system is envisaged, and the recommendation is included in the ESSA program action plan.</p> <p>Consumer advocacy groups will be consulted throughout the implementation of the PforR through the envisaged public consultations.</p>
BEDC Electricity PLC	<p>With regards to the power sector value chain, starting from GAS to Generation to TCN to DISCO to customer. there is a large gap in every stage of the value chain. Power system stability is one of the major issues, with a gap between peak and off peaks. Will the program address this? Secondly, commercially power theft is a big problem, will the program address this?</p>	<p>This Program focuses on the distribution segment of the sector value chain.</p> <p>Regarding theft and regulations – specific regulations would be welcomed and shared with the regulator.</p>
North South Power	<p>Please note that the Ministry of Labour is responsible for worker safety.</p> <p>Are there post monitoring activities envisaged for the ESSA?</p>	<p>The comment regarding the Ministry of Labour is noted and will be reflected in the ESSA.</p> <p>Active monitoring was recommended in the ESSA.</p>
Private individual	<p>The loss of life because of transport network is an important problem. Will the PSRP help address this?</p>	<p>Investment in the transmission network is beyond the scope of this operation, but recovering the sector financial viability will help provide means to invest in network improvement, plus a separate World Bank operation supports strengthening of the transmission network.</p>

ANNEX 1: ATTENDANCE AT THE VIRTUAL CONSULTATION ON THE ESSA OF THE PFORR HELD ON THURSDAY MAY 7, 2020

Participants from the World Bank

S/No	Name	Position
1	Ani Balabanyan	Lead Energy Specialist – Task Team Leader
2	Yue Man Lee	Senior Economist – co-Task Team Leader
3	Pedro Antmann	Lead Energy Specialist
4	Nataliya Kulichenko	Lead Energy Specialist
5	Muhammad Abba Wakil	Energy Specialist
6	Jaeyoung Jin	Senior Energy Specialist
7	Tu Chi Nguyen	Energy Economist
8	Steven Clarke	Young Professional
9	Amos Abu	Senior Environmental Specialist
10	Michael Gboyega Ilesanmi	Senior Social Development Specialist
11	Mansir Nasir	Senior External Affairs Officer
12	Joy Iganya Agene	Natural Resources Management Specialist
13	Sarah Farnuwa Tangalu	Team Assistant
14	Nnaemeka Chukwuone	Environmental and Social Development Consultant
15	Oluwatomilola Busayo Olowokure	Social Development Consultant
16	Abe Christopher Olusola	Social Development Consultant

Institutions represented by at least one participant

S/No	Organizations
1	Abuja Electricity Distribution Company
2	Association of Power Generation Companies Nigeria
3	BEDC Electricity PLC
4	Credo Advisory
5	Enugu Electricity Distribution Company
6	Envisocial Foundation
7	Geregu Power PLC
8	G-Eurafic
9	Ibadan Electricity Distribution Company
10	Ikeja Electricity Distribution Company
11	Jos Electricity Distribution Company
12	Kaduna Electricity Distribution Company
13	Kano Electricity Distribution Company
14	Mainstream Energy Solutions Ltd
15	Nigeria Bulk Electricity Trading Plc (NBET)
16	Nigeria Delta Power Holding Company
17	North South Power
18	Port Harcourt Electricity Distribution Company

19	Transcorp Power Limited
20	Foundation for Justice and Social Development
21	Nigeria Network of NGOs
22	Initiative for Food Environment and Health Society (IFEHS)

Note: Several participants attended in their individual capacity