

FEDERAL REPUBLIC OF NIGERIA

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

**POWER SECTOR RECOVERY PROGRAM
(PSRP)**

FINAL REPORT

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

FEBRUARY 2018

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
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
FMWPH	Federal Ministry of Works, Power and Housing
GACN	Gas Aggregation Company of Nigeria
GDP	Gross Domestic Product
GenGos	Generation Companies
GON	Government of Nigeria
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
PforR	Performance for Results
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 Performance-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 enhance power sector financial viability and governance. The PforR promotes the sustainable performance of the power sector by supporting results in three key areas: reliability of electricity supply is improved; financial sustainability is reached; and governance and efficiency 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 One billion.
2. The Environmental and Social Management System Assessment (ESSA) for the Nigeria Power Sector Recovery PforR (hereafter, the Program) examines the Federal Government's existing environmental and social management systems that are the legal, regulatory, and institutional framework guiding the Program, defines measures to strengthen the system, and integrates these measures 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.
3. 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 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.

4. 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.

ES 2 ESSA Methodology

5. 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 and civil society stakeholders. The findings, conclusions and opinions expressed in the ESSA document are those of the Bank.

ES 3 STRATEGIC CONTEXT

Country Context

6. The 2015 elections marked, for the first time in Nigeria's history, a peaceful democratic transfer of power between two political parties, in a fast-deteriorating macroeconomic environment. The Buhari administration took office in a context of three major global economic transitions: the slowdown and rebalancing of the Chinese economy; lower commodity prices, especially sharply declining oil prices; and tightening financial conditions, with subsequent risk aversion of international investors. These external shocks have all had a significant impact on the Nigerian economy.
7. GDP growth fell from 6.3 percent in 2014 to 2.7 percent in 2015, and to negative 1.6 percent in 2016, marking Nigeria's first full-year of recession in 25 years. In 2016, global oil prices reached a 13-year low and oil production was severely constrained by vandalism and militant attacks in the Niger Delta, resulting in a significant contraction of oil Gross Domestic Product (GDP).
8. The Government launched the National Economic Recovery and Growth Plan (ERGP) for the period 2017-2020 in March 2017. The ERGP sets 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. The priority areas of action under the ERGP are: stabilizing the macroeconomic environment; achieving agriculture and food security; ensuring energy sufficiency in power and petroleum products; improving transportation infrastructure; and driving industrialization through focus on small and medium scale enterprises. The ERGP has the ambitious target of 7 percent real GDP growth by 2020, initially driven by the oil sector and then increasingly by strong non-oil sector growth.

9. 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 the biggest obstacle. Having reliable electricity supply is consistently associated with higher levels of firm productivity.

Sectoral and Institutional Context

10. 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
11. The transition from a publicly-owned to largely privately-owned power market, which began in 2013, has put the sector under severe stress.
12. The operational and financial situation of the sector is further aggravated by weak governance and inadequate enforcement of contracts. These factors have exacerbated the flaws of privatization that resulted in new owners without a strong track record in the management of electricity utilities who purchased DISCOs' shares with high leverage. The sector's lack of financial viability hinders the full activation and enforcement of sector contracts and regulations, i.e. the financial consequences of sector companies being unwilling or unable to meet their contractual obligations are not enforced. The power market thus functions on a "best effort" basis with a resulting lack of accountability and poor service delivery.

Poverty and Electricity Access

13. Nigeria had 9.5 million electricity customers¹ in 2016 (NERC projection). The number of customers per DISCO varies widely, from 345,000 (Yola) to 1,750,000

¹ 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.

(Ibadan). The true number of customers is not accurately known, however. DISCOs' own figures for their tariff revision submissions totalled 6.49 million customers, while the latest household survey in 2015/16 estimates that around 19 million households have some access to electricity.

14. Residential customers in Nigeria account for about 59% of electricity consumed. About 19% of electricity is consumed by commercial customers, and industrial customers account for about 7%. 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.
15. Among households, electricity access is still limited in Nigeria. However, there is a large variation across regions, with connectivity higher in the South and in urban areas. Up to 83.6% of the urban population had access while only 39.1% of the rural population did.

Tariffs

16. 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.² For most customer classes and DISCOs, the tariffs increased by up to 60% between 2015 and 2016, but the increase has varied between DISCO.³ The unweighted average R2 tariff is now around Naira 27.6.

Social Issues

17. **Gender:** While female-headed households are more likely to be connected to the grid (72 percent) compared to male-headed households (53 percent),⁴ 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.
18. 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

² 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.

³ In 2016, six of the eleven DISCOs introduced different tariffs for residential customers with single phase or three phase connections.

⁴ More than two thirds (79.4%) of households in Nigeria are male headed, but they are, on average, slightly poorer than female-headed households.

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.

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 was developed to support the goal of energy sufficiency through a Reset of the power sector. Specifically, the PSRP 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 and enhance power sector financial viability and governance. 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.
23. The PforR supports results in three areas: (i) reliability of electricity supply is improved; (ii) financial sustainability is reached; and (iii) governance and transparency is improved. The following outcome indicators will be used to measure achievement of the PDO:
 - PDO Indicator 1: Annual electricity supplied to the distribution grid is increased;
 - PDO Indicator 2: Power sector companies receive their revenue requirement; and
 - PDO Indicator 3: Cash recovery index (as measured by the ratio of the share of kWh billed over the share of revenue collected) improves.

PforR Program Scope

24. The Performance Based Loan (PBL) will cover years 2018-2021 of the PSRP and support the implementation of key financial, operational, regulatory, and policy measures. It aims to reset the power sector for sustainable operation.

Program Boundary

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"> ▪ Dimension and commit to fully fund implied future sector deficits from 2017 to 2021 and execute a plan to fund the required Electricity Market Support until tariffs attain cost recovery levels ▪ Eliminate historical sector revenue deficits ▪ Eliminate historical MDA debts and automate future payments ▪ Establish sustainable and appropriate electricity tariffs ▪ Payment Assurance Facility 	<ul style="list-style-type: none"> ▪ Ensure a minimum of 4,000 MWh/h² of electricity is available daily from 2018 to support the stability of the sector ▪ Ensure improved DISCO performance using various measures 	<ul style="list-style-type: none"> ▪ Restore proper sector governance ▪ Improve sector transparency ▪ Make contracts effective ▪ Clear communication of the PSRP ▪ PSRP implementation unit 	<ul style="list-style-type: none"> ▪ Fiscal and monetary policies aimed at encouraging private sector investment ▪ Increase electricity access ▪ Economic procurement of power
Results Area 1: Electricity supplied to the grid annually	Results Area 2: Power sector functioning without a financial deficit	Results Area 3: Governance and efficiency is improved	

Excluded activities

25. The PforR does not support any investment-related activities and rather aims to improve service delivery through strengthening of power sector financial viability, governance 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 policies aimed at encouraging private sector investments; as well as investments in increased electricity access (electrification) and in strengthening transmission and distribution infrastructure. Separate World Bank investment operations support some of the investments in electrification and in alleviating transmission and distribution network constraints.
26. The disbursements under the proposed PforR will be governed by a set of twelve Disbursement Linked Indicators (DLIs), consisting of two Global DLIs and ten standard DLIs. The DLIs articulate the actions necessary to recover the sector and set it on the path to financial and operational sustainability.

Results Chain of the PforR

PDO: Improve the reliability of electricity supply and enhance power sector financial viability and governance		
Results Area 1: Reliability of supply	Results Area 2: Financial sustainability	Results Area 3: Governance
Global DLI 1: TCN and DISCOs receive their revenue requirement based on Reset		
Global DLI 2: The Financing Plan to fully cover the tariff shortfall of the sector and settle the historical shortfall is executed and is fiscally transparent		
DLI 1: Contractual arrangements ensure availability of generation capacity DLI 2: Generation capacity is procured competitively following an updated LCDP DLI 3: Performance Improvement Plans (PIPs) for DISCOs are enforced	DLI 4: End-user tariffs are adjusted to fully recover revenue requirement of the sector as determined by the new MYTO DLI 5: Mechanism to ensure timely payment of MDAs' electricity bills is in place and implemented DLI 6: GENCOs receive payments in a timely manner DLI 7: Payment discipline is enforced on DISCOs	DLI 8: Corporate governance of sector agencies (NBET and TCN) is strengthened DLI 9: Financial and operational transparency of the sector is improved DLI 10: Stakeholder engagement and communication about the PSRP are improved
Outcome Indicator 1: Annual electricity supplied to the distribution grid is increased	Outcome Indicator 2: Power sector companies receive their required revenue	Outcome Indicator 3: Cash recovery index improves

ES 4 Potential Environmental And Social Effects Of The Program For Results

27. The PforR is expected to have some potential environmental and social benefits, and social 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.
28. The environmental benefits pertain to the reduction in diesel-based self-generation and traditional fuels as a result of the improved reliability of electricity. The potential environmental risks and impacts are indirect, are expected to be limited, site specific, non-cumulative and relatively easy to manage to acceptable levels. Since the PforR aims to increase electricity supply within the existing operating capacity of the sector by focusing on regulatory, governance, financing and institutional measures of the PSRP and does not imply any type of physical works. The environmental risks expected to range from low to moderate and may result from the implementation of activities that will lead to increase in supply of electricity.

Potential Environmental Benefits and Risks

29. The potential environmental risks of the Program is envisaged to be vary from minor to moderate considering that the project will not finance operational/technical interventions such as civil works. However, the program is expected to generate some environmental benefits which will result from improved power availability.

Potential Environmental Benefits

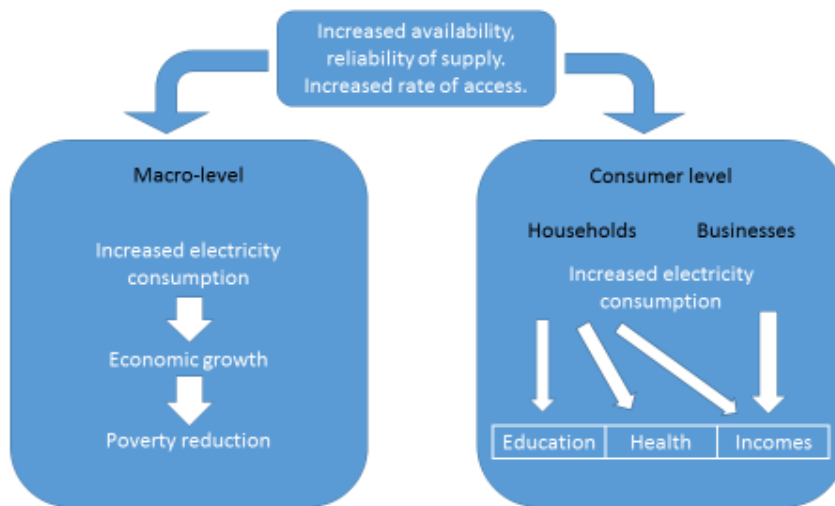
30. Stability in electricity supply as a result of Results Area 1 of the PforR could potentially lead to improved air quality as a result of the envisaged reduction in the use of self-generators by households and businesses. Currently, the level of pollution from these generators in Nigeria is enormous and can have devastating effect on the environment. Table 3 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.
31. 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 achievement of the increased reliability of supply by ensuring that electricity equivalent to 4,500MW capacity is sent out, can be achieved without incurring investment that could have significant environmental and social risks and impacts. The potential environmental risks associated with improved electricity generation are as follows:
- i. Increased power generation especially through fossil fuel (gas) can increase the risk of greenhouse gas (GHG) emission especially CO₂, CH₄, N₂O and increase in concentration of these gases in the atmosphere. Power generation can also generate sulphuric acids (SO₂ and SO₃), nitrogen oxides (NO_x) and particles, which have a major impact on the natural and urban environment.
 - ii. Increased generation of electricity may (a) increase the consumption of natural resources, especially water, fossil fuels and energy; (b) generate noise; (c) generate more effluents from thermal plants. The use of water in different parts of thermal plants gives rise to the subsequent discharging of effluent of different nature. be beyond PforR/category “B” as per OPCS guidelines.

Potential Social Benefits and Risks

32. 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.
33. Improving the availability and reliability of electricity supplies, by restructuring and privatizing the power sector, will enable an increase in electricity consumption. This,

in turn, will contribute to economic production and poverty reduction. As shown in Figure , these will be achieved through macro-level, or economy-wide, effects and through effects at the consumer level.

Impact pathways of electricity consumption



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

Households

34. 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

35. 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).
36. 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

37. 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

38. 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.

ES 6 Systems Assessment And Identification Of Gaps

39. 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.

<i>Core Principle 1: General Principle of Environmental and Social Impact Assessment and Management</i>	
	►
<i>Applicability:</i> , Core Principle 1 in terms of environmental and social management is one of the key principles of service delivery. Considering the PforR financing will focus on ensuring reliable electricity, efficient financing and good governance, it will generate some environmental and social issues indirectly through activities that will ensure reliable electricity and activities.	
<i>STRENGTHS</i>	
<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 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 complaint• Demonstrated efforts to increase stakeholder engagement both within the government and for civil society at charge• Establishment of ‘dedicated gender desk’ in the Federal Ministry of Power	
<i>GAPS</i>	
<ul style="list-style-type: none">• Weak enforcement capacity is a major concern. While there seem to be adequate legal and institutional frameworks for managing environmental issues, the ability of the relevant institutions, especially NESREA, to enforce the existent laws is rather weak and would require further strengthening.• The implementation of the existing legal/regulatory provisions faces challenges, such as multiple regulations; overstretched regulatory authorities, weak monitoring; inadequate and mismanaged funding; and a low degree of public awareness of environmental issues.• From 1992 to date, the EIA practice has continued in Nigeria with poor coverage of social concerns by the EIA procedural guidelines and EIA reports. A review of some previous EIA reports show that, besides the record of baseline information on the existing socio and economic condition and some evidence of organization of public forum, there was hardly any evidence of thorough analysis of social dimension of impacts.• Weak governance systems of DISCOs hinder delivery of policies, as demonstrated below	

	Billing	Repairs & complaints	Tariff consultations	Disconnections
Transparency	Estimated bills are a serious continuing concern for consumers.	Disconnect between NERC's rules and actual practice.	Availability of consultation documents and notices of meetings have been questioned.	Procedure set out by regulations that pre-date privatisation. Mixed messages from NERC about disconnections for non-payment of bills.
Accountability	Responsibility for metering unclear to consumers. Redress for over-estimated bills is difficult.	Means and procedure for making complaints is not clear to consumers.	Reasons for tariff increases not well understood. Legal challenge by consumers that process was contrary to regulations.	Disconnections not always made when they are warranted.
Participation		Little opportunity for customer feedback and little effort at customer relations.	Inclusivity of consultation process queried.	
Capacity	DISCOs do not have capacity to roll out meters quickly.	DISCOs' local offices show limited capacity to respond. Consumer groups have limited capacity.	Capacity of NERC and DISCOs to organise transparent and inclusive consultations in question.	

- Lack of mandate, terms of reference and strategy for gender desk in Ministry of Power hinders effectiveness of gender mainstreaming

ACTIONS AND OPPORTUNITIES

- Strengthening the capacity of the regulatory and enforcement institutions and their staff especially the FMEnv and NESREA will enhance effective implementation and enforcement of existing legal and regulatory frameworks guiding environmental management, especially regarding power generation activities.
- Strengthening NERC's and DISCOs' grievance redress mechanisms by building on current NERC initiatives to increase numbers of staff and training of staff in dealing with complaints from customers and reducing complaint response and resolution time.
 - Better customer feedback loops and mechanisms
- Capacity building of civil society organisations, such as NECRAN, to improve their social accountability assessment skills

Core Principle 3: Public and Worker Safety	
	►
Applicability: The nature of electricity makes it important to always protect the public and workers.	
STRENGTHS <ul style="list-style-type: none"> • The legal/regulatory system of the country includes provisions for protecting people and environment that is 	

applicable to regulating hazardous materials.

GAPS

- The national EIA system is weak and does not comprehensively encompass aspects of public and workers' safety.
- There is general lack of awareness on public health and safety issues, particularly in relation to exposure to hazardous materials, and workplace safety aspects. Often relevant authorities do not appreciate the need to ensure occupational health and safety. Thus, in most cases, most managers and contractors are not even aware of workers' compensation insurance and the fact that it is compulsory workers especially for those involved in certain risky activities like electricity. Thus, they rarely take insurance cover for their workers.

ACTIONS AND OPPORTUNITIES

- The FMEnv should improve the EIA system to incorporate important aspects lacking in the system, for example, issues relating to public and workers' 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.
- Encourage the National Insurance Commission to strengthen their monitoring activities to ensure that organizations and institutions adhere to rules and regulations as regards compulsory insurance policies.

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

Applicability

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.

STRENGTHS

- Part VI - Consumer Protection and Licensee 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.

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 underprivileged power consumers.

GAPS

Poor uptake by NERC of the Power Consumer Assistance Fund and other agencies in accordance with the Power Sector Reform Act

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.

ACTIONS AND OPPORTUNITIES

Ensuring that any future tariff adjustments are accompanied with mitigation measures (including through the tariff structure by ensuring that a basic level of consumption remains affordable) and raising awareness of consumers about these mitigation measures.

Ongoing enumeration of electricity consumers to ascertain potential demand and to also assist in financial projections based on consumer profiles from the data

Core Principle 6: Social Considerations – Social Conflict

Applicable. Although conflict is not directly related to this program Nigeria has known conflict for a wide variety of reasons and it is important to understand that conflict is part of the context in which the program will operate. Though not predicted to cause conflict the program needs to ensure that it does not exacerbate social conflict especially in the conflict and violence prone regions of the country. The program also needs to develop strategies to eliminate the theft of energy which has been linked to organised criminal activity and the accompanying local instability and insecurity which can exacerbate existing social conflict.

System Strengths:

- 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

Gaps

Weakness of grievance redress system and lack of transparency of tariff reform has at times led to demonstrations and allegations of social conflict and conflict over consumers' refusal to pay energy bills

Actions to fill gaps

Strengthened stakeholder engagement and grievance redress mechanisms and increased transparency to provide information and communication avenues for complaints and their resolutions.

Conclusion and Program Action Plan

40. 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, as required.

Program Action Plan

Action Description		Due Date	Responsible Party	Completion Measurement
Results area 3: Governance and Transparency Strengthened				
Governance:				
<ul style="list-style-type: none"> To improve planning and performance and to improve knowledge of customers' profile, build on NERC's current data collection plans that should be disaggregated by income level and gender, where possible (e.g. men- and women-headed households). Commence by assessing data gaps and developing terms of reference for pilot study. Gender: To achieve the PRSP's governance objectives in relation to gender and MoP's gender and energy policy goals strengthen the mandate of the gender focal point in the Ministry of Power by developing a work plan and clear lines of responsibility for the gender desk/focal point in the Ministry of Power. 		<p>ToRs and data collection gaps analysis by February 28, 2018</p> <p>Pilot survey to cover the 6 geo-political zones. To be agreed with</p> <p>Government Gender focal point work plan and budget allocation - February 2018</p>	<p>NERC</p> <p>NERC</p> <p>PSRP IMT – input from Ministry of Women's Affairs</p>	<p>Terms of Reference for data gap assessment and pilot study.</p> <p>Work plan with budget</p> <p>Draft strategy and objectives with budget and responsibility and accountability matrix</p>
Stakeholder and Citizen Engagement:				
Build on current system. Develop clear targets and monitoring criteria for NERC's customer complaints system.		Feb 2018	PSRP IMT/NERC	Monitoring plan (to include ToRs for 3 rd party assessor, could be an energy consumers' organization). Timeline for milestones etc.
To strengthen capacity and representatives of consumer organizations – develop 'outreach' program/strategy for these Groups and		Ongoing Launch workshop/press conference with organizations to raise awareness of outreach and capacity plan (first quarter after project effectiveness)	PSRP IMT/NERC	Specific engagement plan for consumer organizations to include capacity building objectives Minutes/Report of launch workshop
	Action Description	Due Date	Responsible Party	Completion Measurement

Action Description		Due Date	Responsible Party	Completion Measurement
1	Formulate guidelines and manuals for mainstreaming stakeholder engagement process, and environmental, health and safety issues into the implementation of the Program	Before start of program implementation	NERC, FMOWPH, NESREA	Completed guidelines in booklet form disseminated to stakeholders, training provided, and the guidelines operationalized.
2	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, FMOWPH, PSRP, IMT	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

41. 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 15.
42. A Public Consultation for the Environmental and Social Systems Assessment (ESSA) for the proposed Nigeria Power Sector Recovery Performance Based Loan (PBL) was held on January 25, 2018.

Summary of Discussions

43. The Bank team made a presentation on the Context of the PBL. The meeting noted that the origins of the PBL can be traced back to the World Bank Annual Meetings of October 2016, where representatives of the Federal Government of Nigeria (FGN) expressed concern regarding the multitude of issues facing the Nigerian power sector (including the broader macroeconomic crisis, currency depreciation, sabotage to gas pipelines and dysfunctional regulation). By December 2016, the situation had continued to deteriorate, and the World Bank was invited to Nigeria for

⁵ The World Bank was represented by: Ani Balabanyan, Lead Energy Specialist and TTL (GEE01); Kyran O'Sullivan, Lead Energy Specialist (GEE08); Edda Mwakaselo Ivan Smith, Sr. Social Development Specialist (GSU01); Muhamad Abba Wakil, Energy Specialist (GEE08); Jaeyoung Jin, Sr. Energy Specialist (GEE08); Tu Chi Nguyen, Young Professional (GPV06); Carolyn Warren, Consultant (GEE01); and Chinazo Ihuoma Ifeanyi-Nwaoha, Consultant (GEE08).

consultations. The consultations determined that, for the performance of the power sector to improve, several fundamental issues had to be addressed. The Government thus requested the Bank's support in developing and implementing a Power Sector Recovery Program the focus of the current PBL. Through separate operations, the Bank is supporting investment in the transmission network; off-grid electrification in rural areas; and the distribution sector.

44. Power Sector Recovery Program (PSRP) background. The meeting noted that the Government's program, the PSRP, has five key objectives: to restore the sector's financial viability; to improve power supply to meet growing demand; to strengthen the sector's institutional framework and increase transparency; to implement clear policies that promote and encourage investor confidence in the sector; and to establish a contract-based electricity market.
45. PBL overview. The meeting noted that the PBL aims to address the sector's financial sustainability, the enforcement of contracts and regulations and transparency and accountability. It does not support any infrastructure investment. The Program Development Objective is to improve the reliability of electricity supply and enhance power sector financial viability and governance. The Program has three Results Areas: (i) reliability of electricity supply is improved; financial sustainability is reached; and governance and transparency is improved. Because this Program is a Program-for-Results, disbursement of the US\$1 billion only occurs once real outcomes (known as Disbursement Linked Indicators, or DLIs) have been achieved.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	I
SECTION I: INTRODUCTION.....	2
SECTION II: STRATEGIC CONTEXT.....	4
SECTION III: PROGRAM DESCRIPTION.....	14
SECTION IV: POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS OF THE PROGRAM FOR RESULTS.....	20
SECTION V: OVERVIEW OF RELEVANT GOVERNMENT ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS	30
SECTION VI: SYSTEMS ASSESSMENT AND IDENTIFICATION OF GAPS	38
SECTION VII: CONCLUSIONS AND RECOMMENDATIONS	45
SECTION VIII: PROGRAM ACTION PLAN.....	48
SECTION IX: STAKEHOLDER CONSULTATIONS	50
ANNEX 1 - PSRP-ESSA CONSULTATION ATTENDANCE:.....	61
 TABLES	
Table 1: Results Chain of the PforR	19
Table 2: Summary of environmental risks and benefits, and social risks of PSRP PforR.....	21
Table 3: Average hourly fossil fuel emission levels for petrol, diesel and gas generators and Nigeria ambient air quality standards	23
Table 4: Existing National Environmental Protection Regulations	33
Table 5: Power sector institutions and their roles	37
Table 6: Program Action Plan for Social Management	48

Table 7: Program Action Plan for Environmental Management	49
-----------------------------------------------------------------	----

FIGURES

Figure 3: Monthly electricity usage by region and quintile, 2015-16.....	10
Figure 4: Proportion of households with a female head, by state	13
Figure 5: Program Boundary	15
Figure 6: Impact pathways of electricity consumption	25
Figure 7: Simplified mapping of stakeholders in electricity distribution in Nigeria	29

SECTION I: INTRODUCTION

1.1 Background and Purpose of the ESSA

- 1 The World Bank is proposing to support the Nigeria Power Sector Recovery Program (PSRP) with a Performance-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 enhance power sector financial viability and governance. The PforR promotes the sustainable performance of the power sector by supporting results in three key areas: reliability of electricity supply is improved; financial sustainability is reached; and governance and efficiency 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 One billion.
- 2 The Environmental and Social Management System Assessment (ESSA) for the Nigeria Power Sector Recovery PforR (hereafter, the Program) examines the Federal Government's existing environmental and social management systems that are the legal, regulatory, and institutional framework guiding the Program, defines measures to strengthen the system, and integrates these measures 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.
- 3 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 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.

- 4 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

- 5 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 and civil society stakeholders. The findings, conclusions and opinions expressed in the ESSA document are those of the Bank.
- 6 The scope of the ESSA includes the activities and systems necessary to achieve the Program Development Objective (PDO), and the defined results of the Power Sector Recovery Program, represented by the Program's Disbursement Linked Indicators (DLIs)⁶ and Results Area Framework. A scoping analysis was completed to determine the applicability of each of the six P4R Environmental and Social Core Principles to the various Program DLIs and Results Framework as presented in Figure and Table 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 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.

⁶ 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.

- 7 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.

SECTION II: STRATEGIC CONTEXT

2.1 Country Context

- 8 The 2015 elections marked, for the first time in Nigeria's history, a peaceful democratic transfer of power between two political parties, in a fast-deteriorating macroeconomic environment. The Buhari administration took office in a context of three major global economic transitions: the slowdown and rebalancing of the Chinese economy; lower commodity prices, especially sharply declining oil prices; and tightening financial conditions, with subsequent risk aversion of international investors. These external shocks have all had a significant impact on the Nigerian economy.
- 9 GDP growth fell from 6.3 percent in 2014 to 2.7 percent in 2015, and to negative 1.6 percent in 2016, marking Nigeria's first full-year of recession in 25 years. In 2016, global oil prices reached a 13-year low and oil production was severely constrained by vandalism and militant attacks in the Niger Delta, resulting in a significant contraction of oil Gross Domestic Product (GDP). While the oil sector represents only 8.3 percent of total real GDP, the lower foreign exchange (FX) earnings from oil exports – which were more than halved in 2016 – had significant spillover effects on non-oil sectors, especially industry and services, which are dependent on imports of inputs and raw materials. The reduction in forex supply was compounded by the Central Bank of Nigeria's (CBN) introduction of several FX allocation/utilization rules in order to maintain the official exchange rate at approximately NGN 305 per USD. Subsequently, imports declined even faster than exports, yielding an estimated current account surplus. The unmet demand from the interbank and Bureau de Change (BDC) channels increased demand for FX on the parallel market, leading to a widening parallel market premium of approximately 60 percent by February 2017, creating round tripping opportunities and distortions in the economy.
- 10 On the demand side, public consumption and investment were particularly affected in 2016. Government revenues are dominated by oil, which represented approximately three quarters of total revenue prior to 2015. This dependency was not adequately addressed during the boom years; as a result, total government revenues, which were already low at 10.5 percent of GDP in 2014, declined to 5.3 percent of GDP in 2016. Although recurrent spending was rationalized and capital budgets were under-executed, the fiscal deficit of the consolidated Government widened from 3.5 percent in 2015 to 4.7 percent of GDP in 2016. While the consolidated public debt-to-GDP ratio remains low (17 percent of GDP at the end of 2016), the World Bank's estimate of the interest payments-to-revenue ratio for the Federal Government is as high as 61 percent for 2016. Rising inflation and policy uncertainty led to falling private consumption and investment.
- 11 Nigeria's GDP returned to growth in the second quarter of 2017. Oil production began recovering, growing by year-over-year (y-o-y) 1.6 percent in 2017 Q2 (reaching 2 million

barrels per day in June 2017), assisted by the improved security situation in the oil-producing Niger Delta and the completion of repair and maintenance works on some of the oil installations, as well as a more stable oil price (US\$50.9 per barrel in 2017 Q2). As a result of the oil sector recovery and increased supply of FX, non-oil industry started recovering in 2017, growing 1.1 and 1.3 percent (y-o-y) in Q1 and Q2, respectively. Having substantially rebuilt its FX reserves, the CBN resumed its FX supply in February 2017, to reduce FX shortages and the parallel exchange rate premium. Furthermore, on the back of recovering dollar inflows, the CBN returned to convertibility with a new “Investors and Exporters” FX window, opened in April 2017. The parallel market rate aligned with the new window (at about 20 percent premium over the official exchange rate), imports recovered, and portfolio investors returned. However, the FX market remains segmented.

- 12 Economic growth was expected to recover slightly to above 1 percent in 2017, but this remained subject to significant risks, leaving the fiscal sector outcomes uncertain. Economic recovery in 2017 depended primarily on the restoration of oil production (World Bank estimate: 1.9 million barrels per day), supported by continued strong growth in agriculture. The recovery of the non-oil and service industries depended to a large extent on the sustained supply of FX to the markets. However, any new shock to the oil price or to Nigeria’s oil output under the current unorthodox policy regime limits CBN’s ability to maintain the FX supply. With higher oil prices and production and economic growth, revenues are expected to grow, creating fiscal space for public expenditure. But, given that the expected economic recovery hinges on the oil sector, there is a high degree of fragility and risk in the economy; as a result, fiscal sector outcomes are subject to considerable uncertainty.
- 13 The Government launched the National Economic Recovery and Growth Plan (ERGP) for the period 2017-2020 in March 2017. The ERGP sets 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. The priority areas of action under the ERGP are: stabilizing the macroeconomic environment; achieving agriculture and food security; ensuring energy sufficiency in power and petroleum products; improving transportation infrastructure; and driving industrialization through focus on small and medium scale enterprises. The ERGP has the ambitious target of 7 percent real GDP growth by 2020, initially driven by the oil sector and then increasingly by strong non-oil sector growth.
- 14 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 the biggest obstacle. Having reliable electricity supply is consistently associated with higher levels of firm productivity.

2.2 Sectoral and Institutional Context

- 15 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.

- 16 The transition from a publicly-owned to largely privately-owned power market, which began in 2013, has put the sector under severe stress. High losses, low collections and lack of cost recovery tariffs have resulted in an annual financial deficit to the sector of approximately US\$1 billion. For the years 2015 and 2016 combined, the tariff shortfall alone amounted to US\$1.4 billion. The poor financial viability of the eleven DISCOs has resulted in their low remittances to NBET (averaging 29 percent in 2016) with resulting lack of timely and full payments to GENCOs that, in turn, accumulate arrears to gas suppliers.
- 17 The causes for the crisis are interlinked and self-reinforcing. The inconsistent application of the tariff policy (the Multi-Year Tariff Order or MYTO) resulted in the deterioration of the financial situation of sector companies, especially DISCOs. In particular, lack of tariff adjustment to account for depreciation of the Naira in 2016 severely impacted the power sector, as approximately 65 percent of the sector costs are denominated in FX. Declining revenues further constrained access to commercial financing by DISCOs, whose balance sheets were already weak. Without access to financing, DISCOs have not progressed with much-needed investments in metering and rehabilitation of distribution networks that would improve service delivered to customers. Poor service delivery, in turn, has constrained the Government's ability to raise tariffs and enforce key contracts (including DISCOs' Vesting Contracts) with resulting non-payment across the supply chain and to the gas suppliers. Payment arrears to the gas suppliers and the occasional sabotage of the gas infrastructure have led to erratic gas supply, further deteriorating service delivery.
- 18 The operational and financial situation of the sector is further aggravated by weak governance and inadequate enforcement of contracts. These factors have exacerbated the flaws of privatization that resulted in new owners without a strong track record in the management of electricity utilities who purchased DISCOs' shares with high leverage. The sector's lack of financial viability hinders the full activation and enforcement of sector contracts and regulations, i.e. the financial consequences of sector companies being unwilling or unable to meet their contractual obligations are not enforced. The power market thus functions on a "best effort" basis with a resulting lack of accountability and poor service delivery.

2.3 Poverty and Electricity Access

- 19 Nigeria had 9.5 million electricity customers⁷ in 2016 (NERC projection). The number of customers per DISCO varies widely, from 345,000 (Yola) to 1,750,000 (Ibadan). The true number of customers is not accurately known, however. DISCOs' own figures for their tariff revision submissions totalled 6.49 million customers, while the latest household survey in 2015/16 estimates that around 19 million households have some access to electricity.
- 20 Electricity customers fall into four categories, residential, commercial, industrial, and public. Residential customers in Nigeria account for about 59% of electricity consumed (net of losses). About 19% of electricity is consumed by commercial customers, and industrial customers account for about 7%. 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.
- 21 Among households, electricity access is still limited in Nigeria. According to the General Household Survey (GHS) Panel Wave 3 conducted in 2015-16, 55.4% of the population (58.9% of households) were connected to the public/community electricity system in 2015-16. With about 80 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 1), with connectivity is higher in the South and in urban areas. Up to 83.6% of the urban population had access while only 39.1% of the rural population did. Similarly, the connection rate ranges from 26.7% in the North East to 82.4% in the South-South zone. Levels of access to electricity also vary between the states, from close to universal access in Lagos to about 11% in Taraba. Thirteen states have levels of access below 40%. This can be compared with the incidence of absolute poverty in each state, shown in Figure 2.

⁷ 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.

⁸ Cited in (Dec 2017): World Bank Nigeria: The Poverty and Distributional Impact of Raising Electricity Prices to Cost Recovery. The GHS panel is a randomly selected subsample from the GHS cross section consisting of 5,000 households. It is representative at the national and zonal levels (that is, the six geopolitical divisions, the North West, the South East, and so on). Please note that the GHS is not the survey used to calculate the official poverty rate for Nigeria. However, the latest round of the Living Standard Measurement Survey, which is used to calculate the official poverty rate, is in 2010. The GHS 2015-16, therefore, is used for this analysis since it provides more up-to-date information on the energy consumption of households.

Figure 1: Connection to the public/community electricity system by region and quintile, 2015-16

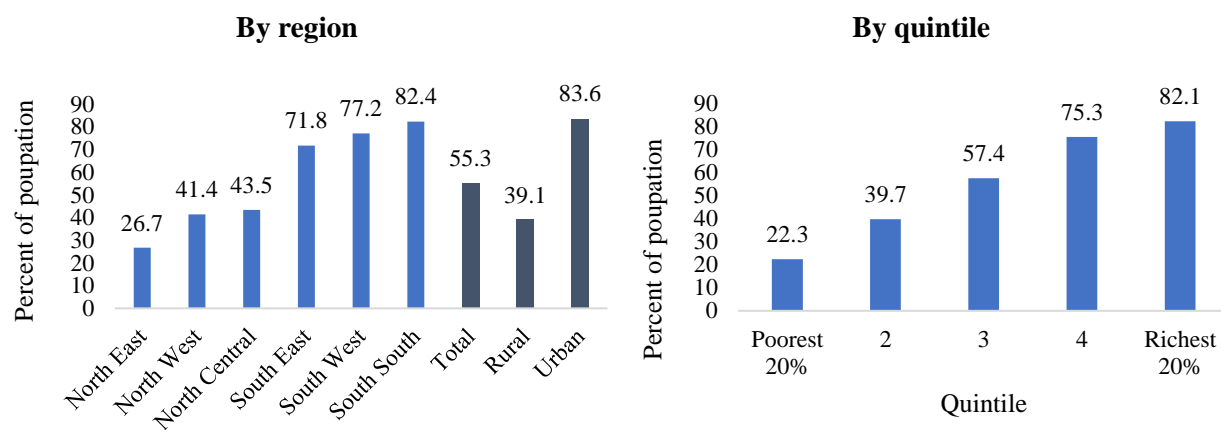
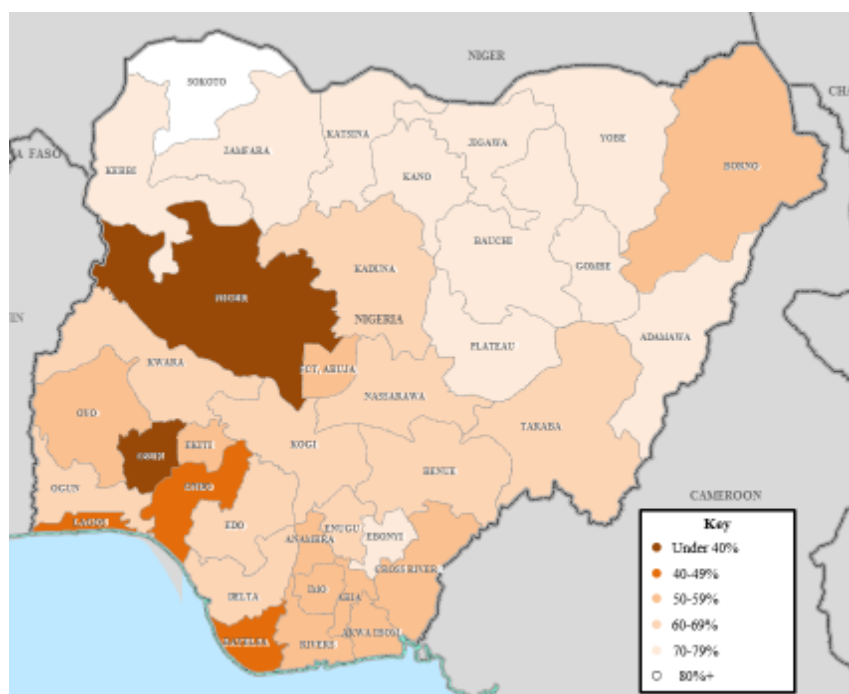


Figure 2: Incidence of absolute poverty by state 2010 (% population)



Source: NBS (2012) Nigeria Poverty Profile.

- 22 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.
- 23 Generally, electricity access and consumption are correlated with income levels. While 82.1% of the richest quintile, ranked by total household expenditure per capita had electricity, only 22.3% of the poorest quintile did. Similarly, only 30.4% of the poor (or the bottom 39%) were connected. 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.
- 24 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.
- 25 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.
- 26 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 house⁹.
- 27 Similarly, the use of electricity varies greatly across regions and income. Overall, 54.8% of the population (58% of households) reported spending on electricity in either the post-planting or post-harvest visit.¹⁰ Among those who purchased electricity, the amount of consumption is not large. An average household consumed around 74 kWh a month on average, with rural households using even less (around 59.2 kWh on average) while urban households consuming slightly more (83.9 kWh on average). Among the few households in the poorest quintile who

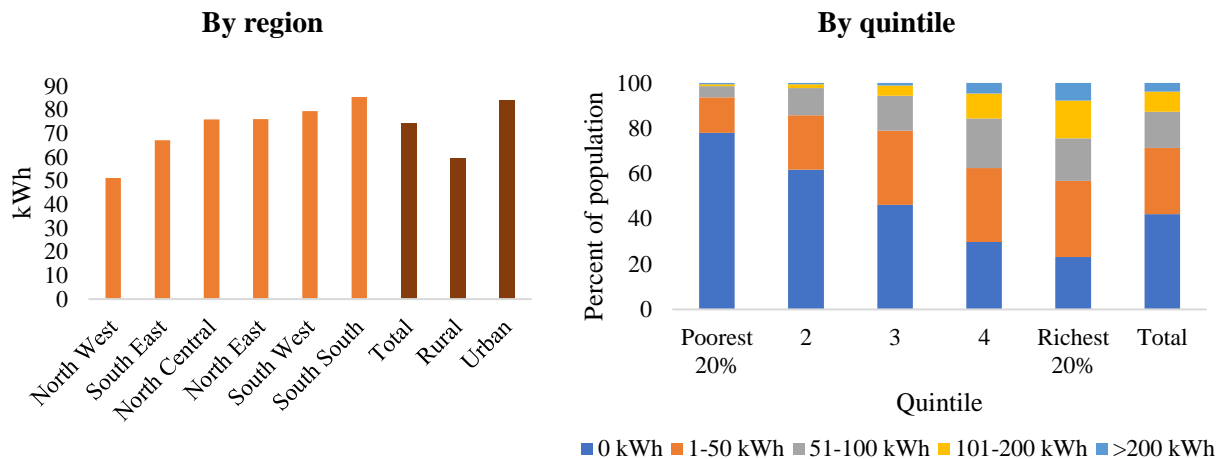
⁹ Ibid

¹⁰ The GHS-Panel Wave 3 was administered in two visits: post-planting (September - November 2015) and post-harvest (February - April 2016).

consumed electricity, 71% consumed 50 kWh or less, and 22.5% used between 50 and 100 kWh. Among the top quintile with electricity connection, 56.3% consumed more than 50 kWh (

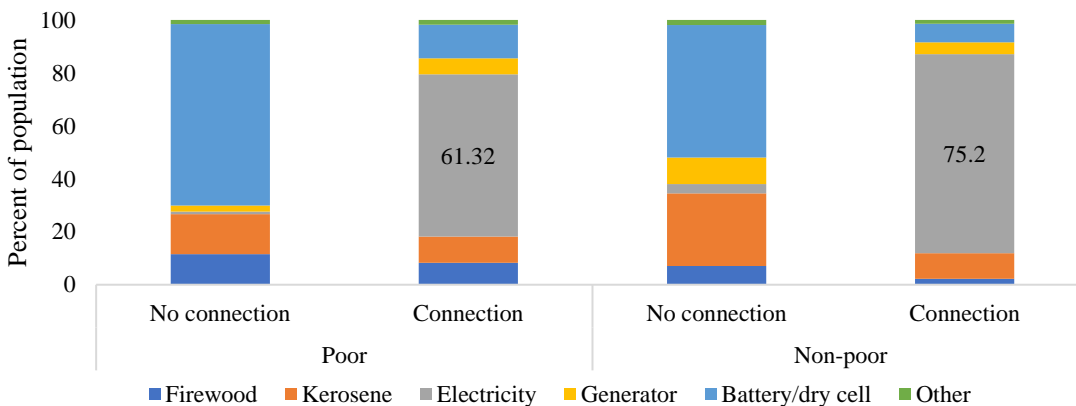
28 Figure 1).

Figure 1: Monthly electricity usage by region and quintile, 2015-16



Source: GHS-Panel Wave 3 2015-16

Figure 4: Main source of lighting fuel by poverty and connection status, 2015-16



Source: GHS-Panel Wave 3 2015-16

29 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.¹¹

2.4 Tariffs

- 30 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 Naira/kWh, but adjusted upward tariffs for all other customer classes.¹² For most customer classes and DISCOs, the tariffs increased by up to 60% between 2015 and 2016, but the increase has varied between DISCO.¹³ The unweighted average R2 tariff is now around Naira 27.6.
- 31 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.
- 32 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.
- 33 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

¹¹ 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.

¹² 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.

¹³ In 2016, six of the eleven DISCOs introduced different tariffs for residential customers with single phase or three phase connections.

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.

- 34 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).
- 35 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.¹⁴ 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

- 36 **Gender:** While female-headed households are more likely to be connected to the grid (72 percent) compared to male-headed households (53 percent),¹⁵ 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.
- 37 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 134 countries in the Human Development Report's Gender Equality Index.
- 38 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.
- 39 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.¹⁶ 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

¹⁴ 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.

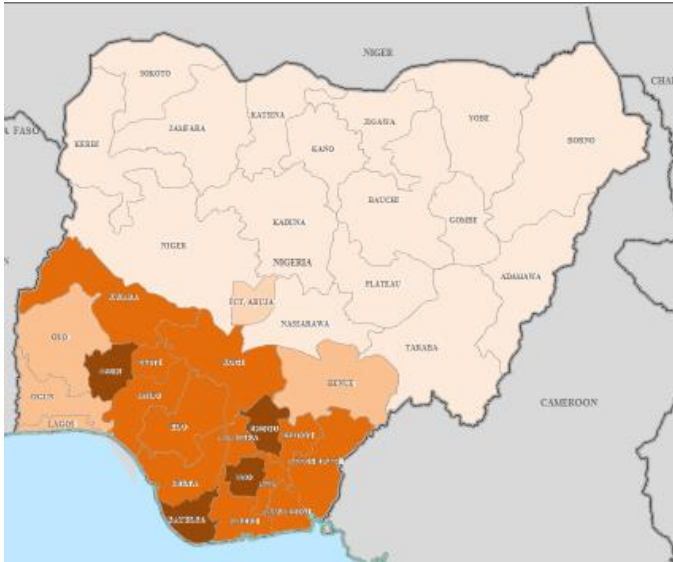
¹⁵ More than two thirds (79.4%) of households in Nigeria are male headed, but they are, on average, slightly poorer than female-headed households.

¹⁶ LSMS-Integrated Surveys on Agriculture General Household Survey 2012/13

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.

- 40 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 Figure.

Figure5: *Proportion of households with a female head, by state*



Source: NBS

- 41 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.
- 42 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.
- 43 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.

- 44 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.
- 45 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.
- 46 **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

- 47 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 was developed to support the goal of energy sufficiency through a Reset of the power sector. Specifically, the PSRP 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.
- 48 The PSRP seeks to de-risk the power sector for private investment through a comprehensive package of financial, operational, governance, and policy interventions. 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 historical and future sector deficits, 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 increase electricity access and ensure that new capacity is procured competitively on the basis of a Least Cost Development Plan (LCDP).

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

49 The Program's development objectives (PDO) are to improve the reliability of electricity supply and enhance power sector financial viability and governance. 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.

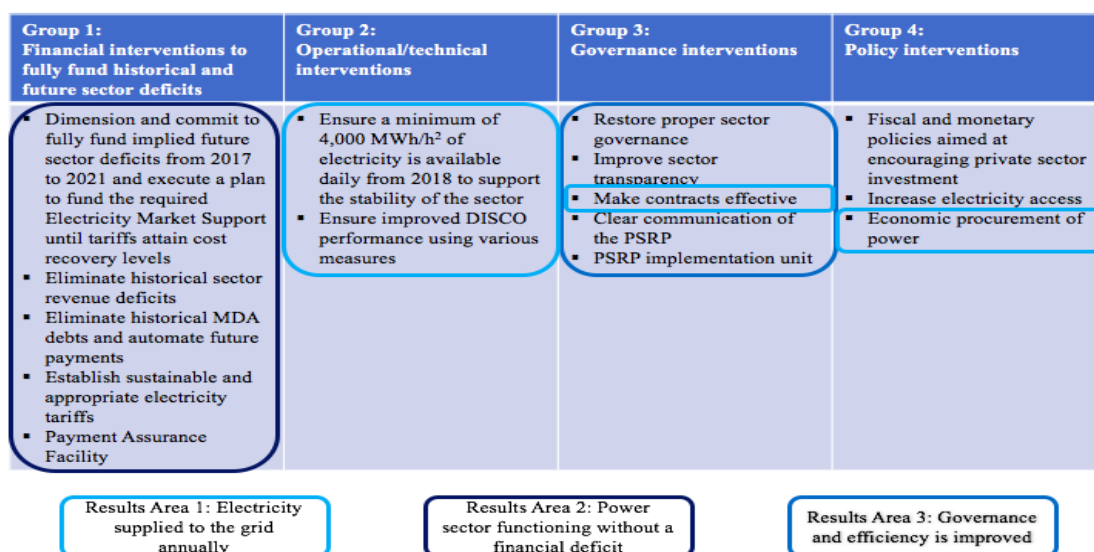
50 The PforR supports results in three areas: (i) reliability of electricity supply is improved; (ii) financial sustainability is reached; and (iii) governance and transparency is improved. The following outcome indicators will be used to measure achievement of the PDO:

- PDO Indicator 1: Annual electricity supplied to the distribution grid is increased;
- PDO Indicator 2: Power sector companies receive their revenue requirement; and
- PDO Indicator 3: Cash recovery index (as measured by the ratio of the share of kWh billed over the share of revenue collected) improves.

3.3 PforR Program Scope

51 The Performance Based Loan (PBL) will cover years 2018-2021 of the PSRP and support the implementation of key financial, operational, regulatory, and policy measures. It aims to reset the power sector for sustainable operation.

Figure 6: *Program Boundary*



- 52 Underlying the PforR design are the sector “Reset” and the receipt of full revenue requirement by the power sector companies. 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 the sector’s service delivery and operational efficiency.
- 53 The Reset will entail a redefinition of the revenue requirements of the DISCOs and TCN, based on new performance parameters and well-specified PIPs of DISCOs. 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, however, 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 Agreements and the parameters of the Nigeria Energy Regulatory Commission’s (NERC) current MYTO, which sets the revenue requirements of DISCOs and TCN, are not reflective of the actual sector situation. Furthermore, Performance Agreements have been the subject of contention between NERC, Bureau of Public Enterprise (BPE) and DISCOs, and thus, are neither fully agreed-upon nor enforced. The Reset is important for the turnaround of the performance of DISCOs, which remain the largest constraint in the supply chain and a key factor in poor service delivery. The Reset will allow DISCOs and TCN to receive their full revenue requirement and will thus serve as the basis for the enforcement of key sector contracts and regulations. The Reset will also be the basis from which the Government defines the end-user tariff adjustment trajectory.
- 54 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 delineation of institutional responsibilities over legacy issues and future performance is critical to this process. NERC will drive the process of the Reset, including the definition of future performance baselines and targets, while BPE will exercise an oversight role over DISCOs through its representation on their Boards. BPE will also play the primary role in addressing the legacy issues of privatization.
- 55 The receipt of revenue requirements by the 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 2021, when a number of PSRP measures – operational efficiency improvement, management of investment costs, enforcement of payment discipline and tariff adjustment – are expected to lead to the convergence of the sector revenue requirement and tariff revenue. In the interim (2017-21), the Government has committed to fund the difference between the revenue requirement and tariff revenue and ensure that the sector operates without a financial deficit. This will allow sector companies to meet their contractual obligations and start building trust and confidence in the sector, including among private investors and financiers. To that end, the Government has developed a Financing Plan to cover the recurrent tariff shortfall of the sector (2017-21) and to clear the historical tariff shortfall (2015-16).
- 56 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

- 57 The PforR includes a package of measures to ensure that at least 4,000 MWh/h of electricity is supplied to the distribution grid from 2018. 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' willingness to pay. As a result, DISCOs' collections against electricity bills increase at this level.
- 58 The PforR supports the availability of generation capacity through increased enforcement of contractual arrangements for GENCOs (PPAs) and pass-through of full generation costs consistent with these arrangements. While the available generation capacity of approximately 7,000MW is more than sufficient to ensure 4,000MWh/h supply, GENCOs' need to receive adequate payments to maintain the capacity in operational condition. Currently, not all PPAs are activated and many GENCOs receive only a single charge commensurate to their actual volume of electricity supplied. With the sector Reset, the contractual arrangements will be increasingly activated to ensure that GENCOs receive full payment consistent with their PPAs.
- 59 The PforR also supports the medium- to long-term availability of generation capacity through competitive procurement of new capacity consistent with a Least Cost Development Plan (LCDP). The existing generation capacity is currently not a constraint and is sufficient to meet the electricity supply targets of the PforR. Generation capacity additions in coming years (both brownfield and greenfield) need to be planned based on a LCDP and carefully phased-in as the existing constraints in gas supply, distribution, and, to a lesser extent, transmission, are removed. This is also important to avoid buildup of stranded generation assets with associated increased sector costs and contingent liabilities. Competitive procurement of additional capacity based on a LCDP, as well as increasing activation of PPAs based on a predictable schedule defined at the Reset, will establish a transparent, predictable and equitable framework for attracting private investments in generation.
- 60 The PforR helps address the constraints in the distribution segment and eliminate load rejection by DISCOs. This will be achieved through well-defined and detailed PIPs that DISCOs will prepare and NERC will approve and enforce. The PIPs will include the incorporation of Management Information Systems to support efficient, transparent and accountable execution of operations in all of DISCOs' business areas; phased deployment of consumption meters in accordance with the concept of "market segmentation"; measures to enhance billing and collection arrangements; and urgent investments in distribution infrastructure to address the existing constraints. NERC will include the funding requirements of the PIPs in determining the revenue requirement of DISCOs at the time of Reset, while exercising tight regulatory oversight over DISCOs' implementation of PIPs.

Results Area 2: Achieve financial sustainability

- 61 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.

- 62 The PforR supports a suite of measures that complement the establishment and execution of the Financing Plan and are intended to ensure that the sector companies operate without a financial deficit, while honoring their contractual obligations, including the payment obligations. Specifically, the PforR captures results expected from implementation of end-user electricity tariff adjustment based on the tariff trajectory defined at Reset and in parallel with the improvement of the service delivery. It also captures full and timely payments across the supply chain, particularly from the Ministries, Departments, and Agencies (MDAs) to DISCOs; from DISCOs to NBET; and from NBET to GENCOs. Payment enforcement will be strengthened through automation of MDAs' electricity payments, enforcement of DISCOs' Vesting Contracts and establishment of a transparent and rule-based mechanism for disbursement of the funding under the Financing Plan.

Results Area 3: Strengthen governance and transparency

- 63 Strengthening sector governance and improving transparency and accountability are the foundations for the successful implementation of the PSRP and its sustainability. With an overarching objective of improving sector efficiency and reducing losses, the PforR supports strengthened corporate governance of sector companies; improved transparency; and stakeholders' engagement and social accountability.
- 64 The PforR supports strengthening of the corporate governance of the sector companies through establishment of functional Boards in accordance with NERC's Code of Corporate Governance Guidelines. The Code specifies the minimum number of Board members (including the number of independent members), as well as requirements pertaining to Board members' qualifications, tenure, and conflict of interest situations. The Code also defines mandatory committees that should be established depending on the type of the sector company. The PforR involves establishment of Boards for state-owned TCN and NBET consistent with the NERC's Code, as well as NERC's regular monitoring and enforcement of the Code for TCN, NBET and DISCOs.
- 65 Additionally, the PforR supports measures to improve the financial transparency of the sector and strengthen the accountability of sector companies. Specifically, the Program involves NERC's publication of the audited financial statements of power sector companies (GENCOs, DISCOS, TCN, and NBET) on its website. It also involves NERC's publication of key operational and financial data for the power sector on a quarterly basis, including data on service quality. These measures will improve the credibility of the sector, as well as the investment environment.
- 66 Consistent with the PSRP, the PforR aims to improve stakeholder awareness and buy-in of power sector reforms. To that end, the PforR supports the implementation of a comprehensive national communication strategy and stakeholder engagement to build public trust, ensure message discipline across MDAs, shape the national dialogue about the power sector, and raise awareness regarding PSRP goals and benchmarks. The communications strategy is seeking public feedback in the early stages through surveys, focus group discussions, consultations, and the development of a website publishing key information regarding the implementation

status of the PSRP and the power sector. In accordance with the National Gender Policy and the World Bank's Gender Strategy, stakeholder engagement includes activities targeting women and gender inclusiveness to ensure that the voices of women are heard. Public opinion is expected to play a critical role in holding sector entities accountable for their PSRP commitments.

Excluded activities

- 67 The PforR does not support any investment-related activities and rather aims to improve service delivery through strengthening of power sector financial viability, governance 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 policies aimed at encouraging private sector investments; as well as investments in increased electricity access (electrification) and in strengthening transmission and distribution infrastructure. Separate World Bank investment operations support some of the investments in electrification and in alleviating transmission and distribution network constraints.
- 68 The disbursements under the proposed PforR will be governed by a set of twelve Disbursement Linked Indicators (DLIs), consisting of two Global DLIs and ten standard DLIs. The DLIs articulate the actions necessary to 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 – namely, the sector Reset and the execution of the Financing Plan – have been designated as Global DLIs; disbursements of the ten standard DLIs can only be completed upon verification that the Global DLIs have been achieved. The two Global DLIs, therefore, trigger not only the disbursement of the funding allocated to them (accounting for 35 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 Program are achieved.
- 69 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.

Table 1: Results Chain of the PforR

PDO: Improve the reliability of electricity supply and enhance power sector financial viability and governance		
Results Area 1: Reliability of supply	Results Area 2: Financial sustainability	Results Area 3: Governance
Global DLI 1: TCN and DISCOs receive their revenue requirement based on Reset		
Global DLI 2: The Financing Plan to fully cover the tariff shortfall of the sector and settle the historical shortfall is executed and is fiscally transparent		
DLI 1: Contractual arrangements ensure availability of generation capacity DLI 2: Generation capacity is procured competitively following an updated LCDP	DLI 4: End-user tariffs are adjusted to fully recover revenue requirement of the sector as determined by the new MYTO DLI 5: Mechanism to ensure timely payment of MDAs'	DLI 8: Corporate governance of sector agencies (NBET and TCN) is strengthened DLI 9: Financial and operational transparency of the sector is improved

DLI 3: Performance Improvement Plans (PIPs) for DISCOs are enforced	electricity bills is in place and implemented DLI 6: GENCOs receive payments in a timely manner DLI 7: Payment discipline is enforced on DISCOs	DLI 10: Stakeholder engagement and communication about the PSRP are improved
Outcome Indicator 1: Annual electricity supplied to the distribution grid is increased	Outcome Indicator 2: Power sector companies receive their required revenue	Outcome Indicator 3: Cash recovery index improves

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

- 70 The PforR is expected to have some potential environmental and social benefits, and social 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.
- 71 The environmental benefits pertain to the reduction in diesel-based self-generation and traditional fuels as a result of the improved reliability of electricity. The potential environmental risks and impacts are indirect, are expected to be limited, site specific, non-cumulative and relatively easy to manage to acceptable levels. Since the PforR aims to increase electricity supply within the existing operating capacity of the sector by focusing on regulatory, governance, financing and institutional measures of the PSRP and does not imply any type of physical works. The environmental risks expected to range from low to moderate and may result from the implementation of activities that will lead to increase in supply of electricity. The summary of potential environmental risks and benefits, and social risks and benefits is presented in Table 2.

Table 2: Summary of environmental risks and benefits, and social risks of PSRP PforR

Result Area	Environmental Benefits	Environmental Risks	Social Benefits	Social Risks
Result Area 1: Reliability of electricity improved	<ul style="list-style-type: none"> • Improved air quality and reduction in pollutant and greenhouse gas emission as a result of reduction in the use of generators by businesses and households. • Reduced share of poor households using firewood and charcoal for cooking, which leads to deforestation which is one of the contributing factors to climate change. • Reduced use of basic household fuels such as candles and kerosene, which may be harmful to the environment. 	<ul style="list-style-type: none"> • Increased power generation especially through fossil fuel (natural gas) will lead to greenhouse gas emission especially CO₂, CH₄, N₂O, but this is expected to be offset by reduction in the use of diesel-based generators and reduction in the gas flaring. • Increased reliability of electricity with attendant enhanced generation and distribution will also generate noise and pollute the environment. • Effective generation of electricity to ensure reliability can also generate effluent from thermal plants. • Increased operation which ensures electricity reliability can lead to land contamination associated with substations and transformers (oil spills). 	<ul style="list-style-type: none"> • Increased employment and income and reduced poverty due to improved electricity supply. • Reduced complaints and conflict between consumers and distribution companies (DISCOs) • Reduced wastage of food and other perishables in homes as a result of steady electricity, with resulting improved food security. • Reduced loss of work hours due to reduction in electricity cuts; and reduced cost of electricity on the long run due to its reliability. • Women and children will no longer spend several hours each day gathering firewood; this deprives women of opportunities to undertake other economic activities and deprives children of school. • Households will gain access to modern communication 	<ul style="list-style-type: none"> • Stability in electricity supply can also lead to unemployment and loss of livelihoods for those that depend on the sale and repair of generators used in homes for livelihoods.

			appliances such as phones or TVs as well as other resources that allow them to run small home-based businesses.	
Result Area 2: Financial sustainability reached	<ul style="list-style-type: none"> • Reduced foot print on environment as a result of good payment mechanism and efficient pricing since electricity consumption will be optimized, that is people will be mindful of what they use in order to reduce cost. 	Negligible	<ul style="list-style-type: none"> • Improved competitiveness as businesses that currently mostly use their own generator to meet most of their electricity needs, increasingly rely on grid supplied and less expensive electricity. 	<ul style="list-style-type: none"> • Increased cost of electricity can generate social unrest, unemployment, loss of income and poverty. • Payment enforcement mechanisms can also lead to conflict between DISCOs and consumers although this may be minor.
Result Area 3: Governance and transparency strengthened	Negligible	Negligible	<ul style="list-style-type: none"> • Reduced conflict between power suppliers and consumers and improved trust between citizens and the Government as a result of an increased focus on communications and stakeholder engagement. 	Low

4.1 Potential Environmental Benefits and Risks

72 The potential environmental risks of the Program is envisaged to be vary from minor to moderate considering that the project will not finance operational/technical interventions such as civil works. However, the program is expected to generate some environmental benefits which will result from improved power availability.

Potential Environmental Benefits

73 Stability in electricity supply as a result of Results Area 1 of the PforR could potentially lead to improved air quality as a result of the envisaged reduction in the use of self-generators by households and businesses. Currently, the level of pollution from these generators in Nigeria is enormous and can have devastating effect on the environment. Table 3 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 3: 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)¹⁷

74 With enforcement of payment for electricity supply, consumption will be optimized by users and this could in turn reduce pressure on the use of firewood, charcoal and other traditional fuels.

75 Availability of electricity will help to reduce the use of traditional fuels such as candles and kerosene, which can be harmful to people's health and the environment.

Potential Environmental Risks

76 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 daily reports prepared by the Nigerian System Operator indicate that more than 5,000 MW/h has been sent out of generating plants at certain points in time, most recently on December 8, 2017. Hence, the achievement of the increased reliability of supply by ensuring that equivalent of 4,500 MW capacity electricity is sent out (the Program target for increased reliability) can be achieved without incurring brownfield or greenfield investments. Hence, the achievement of the increased reliability of supply by ensuring that electricity equivalent to 4,500MW capacity is sent out can be achieved without incurring investment that could have

¹⁷ Federal Environmental Protection Agency (FEPA) (1991) National Interim Guidelines and Standards for Industrial Effluents, Gaseous Emissions and Hazardous Waste Management in Nigeria, pp 59-67.

significant environmental and social risks and impacts that may be beyond PforR/category “B” as per OPCS guidelines. There may be additional investment(s) by Government and Private Actors in the sector. However, such investment(s) will be outside the boundaries of this PforR/PSRP. The FGN will be required to proactively inform the Bank that the extant Nigeria EIA laws have been adhered to. The Bank team will continue to engage with the FGN prior and during appraisal to arrive at a common understanding on the responsibility of the FGN and the Bank in this regard. Implementation will be closely monitored through routine program reporting and occasional verification mission by the World Bank.

- 77 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.
- 78 The TA component will use the IPF instrument to support a set of TA activities. Environmental and social impacts under the TA component is negligible, typical category C type of impacts, and is addressed separately through the Integrated Safeguards Data Sheet (ISDS).
- 79 The potential environmental risks associated with improved electricity generation are as follows:
 - i. Increased power generation especially through fossil fuel (gas) can increase the risk of greenhouse gas (GHG) emission especially CO₂, CH₄, N₂O and increase in concentration of these gases in the atmosphere. Power generation can also generate sulphuric acids (SO₂ and SO₃), nitrogen oxides (NO_x) and particles, which have a major impact on the natural and urban environment. However, the additional GHG emission is expected to be offset by the reduction in diesel-based self-generation by businesses and households, which emits more GHG than gas-based generation as well as by reduction in gas flaring
 - ii. Increased generation of electricity may (a) increase the consumption of natural resources, especially water, fossil fuels and energy; (b) generate noise; (c) generate more effluents from thermal plants. The use of water in different parts of thermal plants gives rise to the subsequent discharging of effluent of different nature. Effluents can be classified into two groups: cooling water, which produce a thermal impact in the original source, and the discharging of effluent containing different substances. The points at which most effluent is produced are steam generation (bleeding of boiler water, chemical washing of boilers, regeneration liquids for the condenser cleansing systems, etc.), cooling of the condenser, the processing and purification of feed water, etc; (d) generate risk of land contamination associated with substations and transformers (oil spills). Water quality of surrounding water bodies could be affected due to washing off of oil and grease and some other dangerous materials generated by the increased generation.

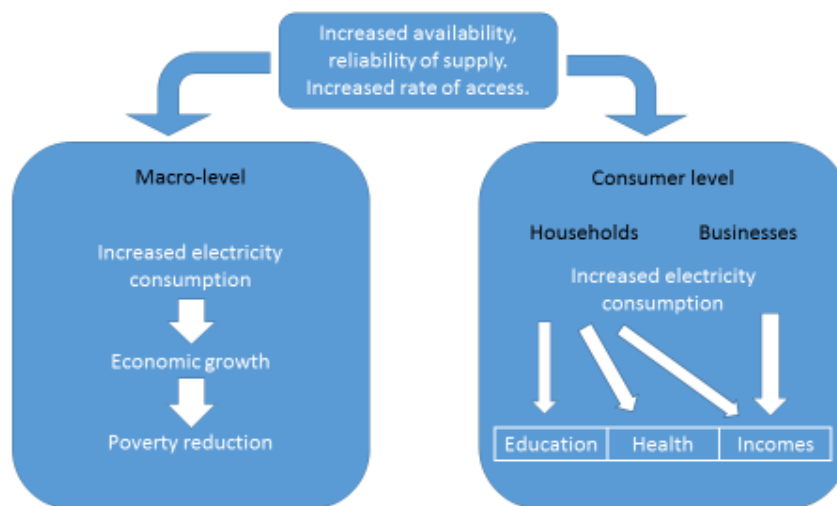
4.2 Potential Social Benefits and Risks

- 80 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.

- 81 Improving the availability and reliability of electricity supplies, by restructuring and privatizing the power sector, will enable an increase in electricity consumption. This, in turn, will contribute to economic production and poverty reduction. As shown in Figure 7, these will be achieved through macro-level, or economy-wide, effects and through effects at the consumer level.

Figure 7: Impact pathways of electricity consumption



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

Households

- 82 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.
- 83 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.
- 84 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.
- 85 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

- 86 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.
- 87 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

- 88 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.¹⁸
- 89 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)¹⁹.
- 90 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
- 91 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

¹⁸ 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.

¹⁹ Danielsen, K. (2012) *Gender equality, women's rights and access to energy services*, Ministry of Foreign Affairs of Denmark.

empowerment (Winther, 2016)²⁰. 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.’

- 92 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.²¹ The quality of health care, for maternal services, for example, would be improved. Reliable lighting also increases women’s sense of security.
- 93 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.
- 94 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 organisations of electricity consumers could also contribute to their political empowerment.

Affordability

- 95 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.
- 96 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

²⁰ Tanja Winther (2016) Getting the right gender indicators: observations, challenges and strategies, presentation at GECCO/ENERGIA webinar, 21 April 2016.

²¹ Household air pollution from cooking fuels would not be affected, because very few households would use electricity for cooking.

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.

- 97 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.
- 98 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.
- 99 The coverage of lifeline tariff is limited, and benefit the non-poor more than the poor. 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)²².
- 100 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.
- 101 The subsidy to R1 customers is covered by cross-subsidisation within the tariff structure of each DISCO. Further data and analysis could establish whether phasing out subsidised tariffs would be feasible, allowing subsidies to be focused on the connection cost barrier.

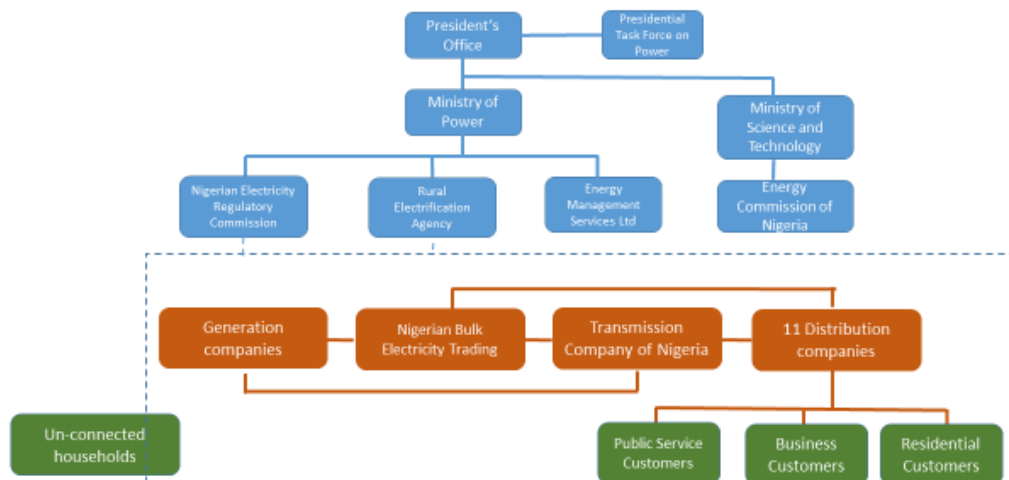
Governance and Accountability

- 102 The principal actors in the distribution stage of the electricity value chain are the distribution companies and the consumers. Figure 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

²² December 4, 2017: World Bank Nigeria: The Poverty and Distributional Impact of Raising Electricity Prices to Cost Recovery

time. This section, therefore, focuses on the engagement between consumers and the DISCOs, taking into account the role of NERC.

Figure 8: Simplified mapping of stakeholders in electricity distribution in Nigeria



103 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)

104 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

105 As discussed in paragraph 46, 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.

Past unrest about tariff reforms

106The 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.

107The potential social risks, impacts and benefits of the Power Sector Recovery Program 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.).

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

5.1 Description of policy and legal framework

108The government of Nigeria (GON) 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 summarises the policy, regulatory, institutional and legal frameworks for environmental management Nigeria. The World Bank safeguard policies and international environmental agreements and conventions were also presented.

5.1.1 Environmental Policy and Regulatory Framework

109 This sub-section describes the GON'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.

110 **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.

111 **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.

112 **Environmental Impact Assessment Act (EIA) N0. 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.

113 Nigerian Environmental Management Act: This act was drafted following the amalgamation of the Federal Environmental Protection Agency into the Ministry of Environment 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 authorised 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.

114 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.

115 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)

116To enhance environmental protection in Nigeria, some statutory provisions have been put in place: Table 4 summarizes the existing regulations applicable to environmental protection.

Table 4: 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 non-agricultural, commercial, industrial and residential purposes.

117Other 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

5.1.2 Social Policy and Regulatory Framework

118The Program Results Areas 1 and 3 whose overall objective is to ‘Strengthen governance and Transparency’, 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

119Good 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.

120**The National Energy Policy:** The Federal Government of Nigeria recognises 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 Federal Ministry of Power, 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 Federal Ministry of Finance 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.

121Chapter 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.

122**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 equipment²³.
- 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

123The 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;

²³Annual Report of the sustainable development /climate change, gender and human rights unit. (No date)

124**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

125The National Energy Regulatory Commission(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.
- Establishment of functional Customer Complaints Forum offices
- Compliance to monthly reporting requirements as stipulated in the Regulation.

5.3 Description of institutional framework

126The main institutions with key responsibilities for environmental and social management are as follows:

Environment Sector

127In the environment sector, the key institution is the Federal Ministry of Environment (FMEnv). The ministry in accordance with its mandatory functions will ensure that the project implementation conforms to the Environmental (Impact) Assessment Act 1992. Within

FMEEnv, 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 FMEEnv is the Impact Mitigation Monitoring (IMM) branch, with special responsibility for monitoring the implementation of Environmental Management Plans (EMP) contained in approved EIAs.

128 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/ Electricity Sector

129 In the power/electricity sector, the key agencies/institutions and their roles are summarized in the table below:

Table 5: Power sector institutions and their roles

S/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 2010, 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 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)²⁴

SECTION VI: SYSTEMS ASSESSMENT AND IDENTIFICATION OF GAPS

130 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. 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

131 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

<i>Core Principle 1: General Principle of Environmental and Social Impact Assessment and Management</i>	
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: <ul style="list-style-type: none"> ▶ 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 (i) early screening of potential effects; (ii) consideration of strategic, technical, potential induced, cumulative, and trans-boundary impacts; (iii) identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized; (iv) clear articulation of institutional responsibilities and resources to support implementation of plans; and (v) responsiveness and accountability through stakeholder consultation, timely dissemination of program information,

²⁴ 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.

	<p>► Design conflict resolution mechanism geared toward: (i) resolving conflicts, (ii) systematically registering grievances through appropriate channels; (iii) provide status report periodically – indicating the nature of the dispute, resolution, and status and reasons of disputes which have not been resolved.</p>
<p>Applicable, Core Principle 1 in terms of environmental and social management is one of the key principles of service delivery. Considering the PforR financing will focus on ensuring reliable electricity, efficient financing and good governance, it will generate some environmental and social issues indirectly through activities that will ensure reliable electricity and activities.</p>	
<p>STRENGTHS</p> <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 Policy and Directive. FMEnv and FMOWPH are aware of ensuring compliance with EIA procedures. • The Environmental Guidelines and Standards for Regulating the Oil and Gas Industry in Nigeria (EGASPIN) also provides the guidelines for environmental issues relating to oil and gas activities in Nigeria. • The FMOWPH and FMOE have experience of integrating rules and procedures for environmental and social management in individual projects generally. EIA capacity training for FMOE has been conducted under Bank and other donor's existing programs. • Strong commitment at both Federal and state level to have robust stakeholder and grievance redress mechanisms • DISCOs committed in theory to improve transparency and stakeholder management processes • Good grievance mechanisms by NERC call centres established for customer complaints, readily available website with instructions of how to make a complaint • Demonstrated efforts to increase stakeholder engagement both within the government and for civil society at charge • National Gender and Energy Policies strive to mainstream gender within the power sector at all levels of operation and delivery • Establishment of 'dedicated gender desk' in the Federal Ministry of Power • Power Sector Reform Act has a specific focus on ensuring that low income households benefit from the power sector and are protected from increase in tariffs as • The Nigeria Electricity Regulatory Commission (NERC) provides guidelines to DISCOs for public consultations over tariff reviews. The DISCOs are expected to consult with residential, industrial and commercial customers, associations of customers, civil society groups that advocate for consumer interests and professional groups, such as the Manufacturers Association of Nigeria. In their tariff review submissions to NERC the DISCOs are expected to demonstrate that they have effectively consulted with stakeholders. Although NERC has claimed that consultations before the tariff increase in February 2016 were adequate, this has been contested.²⁵ • NERC also provides regulations for new connections, disconnections, metering, billing and customer complaints. These all pre-date the privatization of electricity distribution.²⁶ NERC has also advertised the rights of consumers. Interviewees reported that in some cases the complaints procedure is used effectively. In Abuja, for example, customers complained that their bills were excessive, and the DISCO was required to refund about Naira 50 million. <p>GAPS</p>	

²⁵ On 12 July 2016, the Federal High Court ruled the tariff increase of February 2016 to be invalid, on the grounds that it had been introduced without due process. NERC is appealing this decision, with the backing of the government, so tariffs have not been changed. <http://www.thisdaylive.com/index.php/2016/07/26/backs-nerc-on-electricity-tariffs-hike/>

²⁶ www.nercng.org Accessed 28 April 2016.

- Weak enforcement capacity is a major concern. While there seem to be adequate legal and institutional frameworks for managing environmental issues, the ability of the relevant institutions, especially NESREA, to enforce the existent laws is rather weak and would require further strengthening.
- The implementation of the existing legal/regulatory provisions faces challenges, such as multiple regulations; overstretched regulatory authorities, weak monitoring; inadequate and mismanaged funding; and a low degree of public awareness of environmental issues.
- From 1992 to date, the EIA practice has continued in Nigeria with poor coverage of social concerns by the EIA procedural guidelines and EIA reports. A review of some previous EIA reports show that, besides the record of baseline information on the existing socio and economic condition and some evidence of organization of public forum, there was hardly any evidence of thorough analysis of social dimension of impacts. In fact, the EIA Act No 86 of 1992 encourages the public and interested third party stakeholders make an input in the assessment process only during public review, which takes place after preparation of the draft report (which is often not well publicized). Early public participation during scoping and preparation of the Terms of Reference (TOR) will contribute greatly to the success of the project.
- Weak governance systems of DISCOs hinder delivery of policies, as demonstrated below

	Billing	Repairs & complaints	Tariff consultations	Disconnections
Transparency	Estimated bills are a serious continuing concern for consumers.	Disconnect between NERC's rules and actual practice.	Availability of consultation documents and notices of meetings have been questioned.	Procedure set out by regulations that pre-date privatisation. Mixed messages from NERC about disconnections for non-payment of bills.
Accountability	Responsibility for metering unclear to consumers. Redress for over-estimated bills is difficult.	Means and procedure for making complaints is not clear to consumers.	Reasons for tariff increases not well understood. Legal challenge by consumers that process was contrary to regulations.	Disconnections not always made when they are warranted.
Participation		Little opportunity for customer feedback and little effort at customer relations.	Inclusivity of consultation process queried.	
Capacity	DISCOs do not have capacity to roll out meters quickly.	DISCOs' local offices show limited capacity to respond. Consumer groups have limited capacity.	Capacity of NERC and DISCOs to organise transparent and inclusive consultations in question.	

- Lack of mandate, terms of reference and strategy for gender desk in Ministry of Power hinders effectiveness of gender mainstreaming
- The narrative about NERC and DISCOs' citizenship engagement indicates the effort of these bodies to sensitize current customers and prospective ones about the benefits of the new electricity arrangement. However, some consumers have a contrary opinion about NERC's and DISCOs' version about citizenship engagement. The opinion among these customers is that such engagement did not take place because the DISCOs used a rented audience.²⁷

ACTIONS AND OPPORTUNITIES

²⁷ Information from World Bank Focus Group Discussions with electricity consumers in May 2016

<ul style="list-style-type: none"> • Strengthening the capacity of the regulatory and enforcement institutions and their staff especially the FMEnv and NESREA will enhance effective implementation and enforcement of existing legal and regulatory frameworks guiding environmental management, especially regarding power generation activities. • The NERC, DISCOs and GenCos and other stakeholders in the power sector should increase information dissemination to enhance public awareness about power sector reform and the MYTO and the need for power users to pay for power in order to guarantee power stability and reliability. This will reduce tension and conflicts that accompany increase in electricity price and thus facilitate cooperation of consumers. • Besides information dissemination, there should also be community engagement and public consultation through town hall meetings in order to carry the people along and equally enable them to contribute to the reform process. Already some DisCos conduct radio phone-in programs through which they respond to feedback and deal with consumer complaints. This should be intensified and complemented with scheduled town hall meetings with consumers in order to facilitate their cooperation. • Strengthening NERC's and DISCOs' grievance redress mechanisms by building on current NERC initiatives to increase numbers of staff and training of staff in dealing with complaints from customers and reducing complaint response and resolution time. <ul style="list-style-type: none"> ◦ Better customer feedback loops and mechanisms • Strengthening of NERC's and DISCOs' stakeholder management systems. To include between dissemination of key documentation and notices, for example: <ul style="list-style-type: none"> ◦ advance notice of power outages ◦ Clear explanation of tariff increases and formula for calculating customers' bills • Capacity building of civil society organisations, such as NECRAN, to improve their social accountability assessment skills

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: <ul style="list-style-type: none"> ▶ 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 areas will have adverse impact on natural habitats and physical cultural resources since it does not 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	Bank Directive for Program-for-Results Financing: <ul style="list-style-type: none"> ▶ 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

<p><i>practices developed or promoted under the program;</i></p> <p><i>(b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials; and</i></p> <p><i>(c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.</i></p>	<p>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.</p> <p>► 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.</p>
<p>Applicability: Applicable</p> <p>The nature of electricity makes it important to always protect the public and workers.</p>	
<p>STRENGTHS</p> <ul style="list-style-type: none"> • The legal/regulatory system of the country includes provisions for protecting people and environment that is applicable to regulating hazardous materials. • There are national policies and guidelines addressing public and workers' safety for example the compulsory insurance policy. In Nigeria, there are five compulsory insurance covers among them are workers compensation insurance, which is meant to cover workers against injuries, disability and death; and occupier's liability insurance. These two insurance covers are applicable in this case. <p>GAPS</p> <ul style="list-style-type: none"> • The national EIA system is weak and does not comprehensively encompass aspects of public and workers' safety. • There is general lack of awareness on public health and safety issues, particularly in relation to exposure to hazardous materials, and workplace safety aspects. Often relevant authorities do not appreciate the need to ensure occupational health and safety. Thus, in most cases, most managers and contractors are not even aware of workers' compensation insurance and the fact that it is compulsory workers especially for those involved in certain risky activities like electricity. Thus, they rarely take insurance cover for their workers. <p>ACTIONS AND OPPORTUNITIES</p> <ul style="list-style-type: none"> • The FMEnv should improve the EIA system to incorporate important aspects lacking in the system, for example, issues relating to public and workers' 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. • Encourage the National Insurance Commission to strengthen their monitoring activities to ensure that organizations and institutions adhere to rules and regulations as regards compulsory insurance policies. • The GenCos and DISCos should provide protective clothing and other safety equipment and first aid facilities for their field workers. They should also provide insurance cover to the workers that are exposed to electricity hazard. • The GenCos and DISCos should also publicly display safety instructions and warning in areas with risky equipment or facilities so as to inform workers and the public in order to avoid dangers associated with such equipment or facilities. 	

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;

	<ul style="list-style-type: none"> ▶ 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>1.</p>
<p>Applicability: Not Applicable</p> <ul style="list-style-type: none"> • It is not expected that the PforR areas of the PSRP will lead to land acquisition as it does not involve construction of new power plants, thus core principle four 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: <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>Applicable</p> <p>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>	
<p>STRENGTHS</p> <p>Part VI - Consumer Protection and Licensee 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> <p>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 underprivileged power consumers.</p>	
<p>GAPS</p> <p>Poor uptake by NERC of the Power Consumer Assistance Fund and other agencies in accordance with the Power Sector Reform Act</p> <p>Poor knowledge/understanding of how to operationalise the fund and to monitor progress</p> <p>Lack of data on consumers’ vulnerability profile (e.g. income levels, access to electricity, etc.</p>	
<p>ACTIONS AND OPPORTUNITIES</p>	

Ensuring that any future tariff adjustments are accompanied with mitigation measures (including through the tariff structure by ensuring that a basic level of consumption remains affordable) and raising awareness of consumers about these mitigation measures.

Ongoing enumeration of electricity consumers to ascertain potential demand and to also assist in financial projections based on consumer profiles from the data

Core Principle 6: Social Considerations – 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.

Applicable. As discussed in paragraph 16 and although conflict is not directly related to this program Nigeria has known conflict for a wide variety of reasons and it is important to understand that conflict is part of the context in which the program will operate. Though not predicted to cause conflict the program needs to ensure that it does not exacerbate social conflict especially in the conflict and violence prone regions of the country. The program also needs to develop strategies to eliminate the theft of energy which has been linked to organised criminal activity and the accompanying local instability and insecurity which can exacerbate existing social conflict.

System Strengths:

- 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

Gaps

Weakness of grievance redress system and lack of transparency of tariff reform has at times led to demonstrations and allegations of social conflict and conflict over consumers' refusal to pay energy bills

Actions to fill gaps

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

132 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

133 **Screening of Program Interventions:** In screening investment projects, a proposed project is classified as Category A if it is likely to have ‘significant adverse environmental impacts that are sensitive, diverse, or unprecedented. These impacts may affect an area broader than the sites or facilities subject to physical works.’ This definition is not expected to be applicable to the Program interventions. The Program boundaries are expected to be limited to activities with relatively small-scale and site-specific impacts where mitigation measures are readily available. The Program excludes activities that have significantly adverse environmental impact.

134 The PforR policy excludes high-risk activities (Category-A-Type Investments) - The Program interventions are limited to Category B type of activities. No Category-A-type interventions are included within the Program.

135 **Significance of Impacts:** The magnitude of the potential risks and impacts of this PforR are consistent with PforR operations. The impacts of the proposed Program are envisaged to be small-scale and site-specific consistent with Category B.

Implementation Support for Environmental Aspects:

136 The institutional support for managing the environmental aspects of the PAP will be as follows:

137 The main implementation responsibility of the PAP will be on the proponent/PSRP Implementation Monitoring Team. This team should include an environmental specialist who will monitor and report on environmental risks and impact related issues of this Program.

138 The Formulation of guidelines and manuals: while the country has well-defined regulatory systems for safeguarding the environment and addressing social issues, they can be supplemented or further mainstreamed through formulation of clearer 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 PSRP and the Multi-Year Tariff Order (MYTO) implementation so that the consumers will be aware of the process of bill generation and calculation and thus enhance their cooperation; (2) manage environmental, health and safety risks associated with generation and distribution of electricity; (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.

139 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 (FMOWPH, 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 (FMOWPH) 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.

140 Monitoring of environmental performance: There is need to enhance the monitoring of the performance of the transmission, generation and 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

141 One of the key aims of the PSRP is to improve the reliability of electricity to existing consumers and the quality of the service they receive from the DISCOs. The impacts of these objectives on consumers will be felt through improved reliability of the service and the prices they pay for electricity.

142 These impacts will only be realized if the supply of electricity to consumers does significantly improve and more households and businesses can rely on grid connected electricity. So far, customers feel they have not benefited in any way from privatisation of DISCOs. Indeed, they believe they are now paying a lot more for a deteriorating service. The coincidence of a large tariff increase in February 2016 and a higher incidence of outages due to interruptions to gas supplies for generation, has contributed to these negative perceptions and experiences. It has probably also contributed to the continuing under-payment of monthly bills.

143 The reliability of the supply of electricity is not fully in the control of the DISCOs, however, they are the interface between the entire electricity value chain and the consumers. Although the performance of generation companies and the TCN is critical in determining the reliability of electricity supplies, customers do not necessarily recognise this. The combination of unreliable supplies, higher tariffs and the DISCOs' practice of sending estimated bills, have resulted in a lack of trust between customers and DISCOs. This is adversely affecting the financial situation of the DISCOs and the power sector generally.

144 The reluctance of DISCOs to ensure that all customers are metered, and to read meters when they are installed, is believed by customers to be driven by DISCOs' need to maximise revenue. Their precarious financial situation lends some weight to this. Estimated billing, and lack of timely or effective redress when customers complain, is a major source of dissatisfaction amongst customers. The enforcement of NERC regulations on estimated billing is perceived to be lacking.

145 **Recommendation:** Proper metering would help rebuild trust between DISCOs and their customers by enabling accurate billing for all customers.

146 The introduction of full cost-recovery tariffs, was achieved with the tariff revision in February 2016. The several million customers on the R2 tariff include households with a wide range of

levels of electricity consumption and household income.²⁸ Average household electricity consumption is quite low (below 120 kWh per month), and households with below average consumption are likely to face the greatest affordability challenge.

147**Recommendation:** The PSIA provides greater understanding of how higher tariffs are affecting the consumption of households in different income groups.

148Building trust between customers and DISCOs will contribute to reducing collection losses, including losses due to theft. This requires improved communication between DISCOs and their customers. To assist this, NERC needs to be clearer about its regulations and it should enforce its own regulations (e.g. for estimated billing).

149**Recommendation:** The DISCOs need to strengthen their capacity to provide high quality customer service, with responsive staff and clear procedures for all customer interactions (e.g. billing, repairs, complaints, connections/disconnections).

150Customers need a more effective voice through representative consumer organisations. The formation of representative electricity consumer groups would help future consultations on tariffs, or other aspects of the service, to be more inclusive. Support for consumer groups should be contingent on a gender balance in membership and office holders.

151**Recommendation:** The capacity of consumer organisations, such as NECAN, needs to be strengthened, and local (e.g. neighbourhood and community) groups should be encouraged by the DISCOs.

152Trust between customers and DISCOs would be assisted by making more information available to the public about electricity consumption and plans to extend distribution. NERC and the NBS regularly provide data about generation capacity and power generated. Standard household survey questionnaires should be revised to enable the collection of more detailed information about electricity consumption.

153**Recommendation:** Data about customer numbers, electricity consumed and distribution losses should also be made publicly available. In accordance with the draft Energy Policy (2013), this information should be gender disaggregated, where possible (e.g. women- and male-headed households).

154With the Energy and Gender policies and the establishment of a gender focal point within the Ministry of Power the Federal Government has demonstrated its commitment to enhanced stakeholder engagement, gender equity and improved governance, as part of its power sector reform program. However, for these commitments to have an impact they must be underwritten by strategies and budgets and accountability chains. The gender focal point's remit and responsibilities is currently unclear.

155**Recommendation:** A clear workplan terms of reference for the gender focal point in the Ministry together with objectives and outputs would help to operationalize this innovative post.

156The Government has several mechanisms and policies and systems, as discussed in this document, that should enable it to be well placed for addressing the challenges of the PSRP. However, as has been identified in this ESSA, there are several gaps in the delivery and

²⁸ A high proportion of poor households will be included among the 80 million people without an electricity connection.

management of these systems that could see a repeat of past consumer frustration and income loss if not properly addressed.

157The 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

158The Table below indicates the breakdown of actions to be included in the Program Action Plan with indicative timeline, responsibility for implementation and indicators for measuring the completion of such actions.

Table 6: Program Action Plan for Social Management

Action Description	Due Date	Responsible Party	Completion Measurement
Results area 3: Governance and Transparency Strengthened			
Governance:			
<ul style="list-style-type: none"> To improve planning and performance and to improve knowledge of customers' profile, build on NERC's current data collection plans that should be disaggregated by income level and gender, where possible (e.g. men- and women-headed households). Commence by assessing data gaps and developing terms of reference for pilot study. 	<p>ToRs and data collection gaps analysis by February 28, 2018</p> <p>Pilot survey to cover the 6 geo-political zones. To be agreed with</p>	<p>NERC</p> <p>NERC</p>	<p>Terms of Reference for data gap assessment and pilot study.</p>
<ul style="list-style-type: none"> Gender: To achieve the PRSP's governance objectives in relation to gender and MoP's gender and energy policy goals strengthen the mandate of the gender focal point in the Ministry of Power by developing a work plan and clear lines of responsibility for 	<p>Government Gender focal point work plan and budget allocation - February 2018</p>	<p>PSRP IMT – input from Ministry of Women's Affairs</p>	<p>Work plan with budget</p> <p>Draft strategy and objectives with budget and responsibility and accountability matrix</p>

Action Description	Due Date	Responsible Party	Completion Measurement
the gender desk/focal point in the Ministry of Power.			
Stakeholder and Citizen Engagement: Build on current system. Develop clear targets and monitoring criteria for NERC's customer complaints system.	Feb 2018	PSRP IMT/NERC	Monitoring plan (to include ToRs for 3 rd party assessor, could be an energy consumers' organization). Timeline for milestones etc.
To strengthen capacity and representatives of consumer organizations – develop 'outreach' program/strategy for these Groups and	Ongoing Launch workshop/press conference with organizations to raise awareness of outreach and capacity plan (first quarter after project effectiveness)	PSRP IMT/NERC	Specific engagement plan for consumer organizations to include capacity building objectives Minutes/Report of launch workshop

Table 7: Program Action Plan for Environmental Management

	Action Description	Due Date	Responsible Party	Completion Measurement
1	Formulate guidelines and manuals for mainstreaming stakeholder engagement process, and environmental, health and safety issues into the implementation of the Program	Before start of program implementation	NERC, FMOWPH, NESREA	Completed guidelines in booklet form disseminated to stakeholders, training provided, and the guidelines operationalized.
2	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, FMOWPH, PSRP IMT	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

159 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 1²⁹.

160 A Public Consultation on the Environmental and Social Systems Assessment (ESSA) for the proposed Nigeria Power Sector Recovery Performance Based Loan (PBL) was held, in Abuja, on January 25, 2018.

Summary of Discussions

161 The World Bank Project Team presented the context of the PBL. The meeting noted that the origins of the PBL can be traced back to the World Bank Annual Meetings of October 2016, where representatives of the Federal Government of Nigeria (FGN) expressed concern regarding the multitude of issues facing the Nigerian power sector (including the broader macroeconomic crisis, currency depreciation, sabotage to gas pipelines and dysfunctional regulation). By December 2016, the situation had continued to deteriorate, and the World Bank was invited to Nigeria for consultations. The consultations determined that, for the performance of the power sector to improve, several fundamental issues had to be addressed. The Government thus requested the Bank's support in developing and implementing a Power Sector Recovery Program – the focus of the current PBL. Through separate operations, the Bank is supporting investment in the transmission network; off-grid electrification in rural areas; and the distribution sector.

162 Power Sector Recovery Program (PSRP) background. The meeting noted that the Government's program, the PSRP, has five key objectives: to restore the sector's financial viability; to improve power supply to meet growing demand; to strengthen the sector's institutional framework and increase transparency; to implement clear policies that promote and encourage investor confidence in the sector; and to establish a contract-based electricity market.

163 PBL overview. The meeting noted that the PBL aims to address the sector's financial sustainability, the enforcement of contracts and regulations and transparency and accountability. It does not support any infrastructure investment. The Program Development Objective is to improve the reliability of electricity supply and enhance power sector financial viability and governance. The Program has three Results Areas: (i) reliability of electricity

²⁹ The World Bank was represented by: Ani Balabanyan, Lead Energy Specialist and TTL (GEE01); Kyran O'Sullivan, Lead Energy Specialist (GEE08); Edda Mwakaselo Ivan Smith, Sr. Social Development Specialist (GSU01); Muhamad Abba Wakil, Energy Specialist (GEE08); Jaeyoung Jin, Sr. Energy Specialist (GEE08); Tu Chi Nguyen, Young Professional (GPV06); Carolyn Warren, Consultant (GEE01); and Chinazo Ihuoma Ifeanyi-Nwaoha, Consultant (GEE08).

supply is improved; financial sustainability is reached; and governance and transparency is improved. Because this Program is a Program-for-Results, disbursement of the US\$1 billion only occurs once real outcomes (known as Disbursement Linked Indicators, or DLIs) have been achieved. It is important to note that all DLIs for the Program are derived from the PSRP of the FGN.

PSRP/PBL Questions and Answers

Organization	Question/Comment	Response
Nigerian National Petroleum Corporation (NNPC)	From looking at the DLIs, it appears that the Program does not address the gas sector or the issue of gas supply. However, the gas sector is owed a significant amount of money by the power sector.	A major objective of the PBL is to make contracts effective. The Government is committed to ensuring that the sector receives its revenue requirement from 2018 onward. On that basis, there will be increasing activation of contracts, including power purchase agreements (PPAs) and gas supply agreements (GSAs).
Abuja Distribution Company (DISCO)	Has the PBL structure been implemented elsewhere in Sub-Saharan Africa? What has been the outcome, in terms of commitment from Government in implementing the triggers for the DLIs?	There are currently six PBLs under implementation or preparation in Nigeria. Energy Program for Results operations are also being implemented in Ethiopia and prepared in Senegal. The instrument is relatively flexible, and encourages real progress by tying disbursements to achievements.
Ibadan DISCO	What is the PBL going to do to improve the DISCO business?	<p>First, it is better to ask what the <i>Government</i> is going to do to improve the DISCO business, as the PSRP is the Government's program. The World Bank can only support and incentivize the PSRP.</p> <p>Over the next four years, the Financing Plan promises US\$6.4 billion for the industry to ensure that every sector entity, including DISCOs, receives their revenue requirement. On that basis, there will be increasing activation of contracts, and improved supply.</p>

		<p>The Government has also requested an additional \$500 million World Bank project to support DISCOs. The project is in the early stages of preparation, but there will be further engagement and consultation with the DISCOs as the project progresses.</p>
Ibadan DISCO	<p>It is true that the sector owes money to the gas suppliers. However, that is because electricity is sold at below cost-recovery level. If that issue is not addressed, there is no way that the performance of the sector can improve.</p>	<p>On one hand, there is poor supply; on the other, tariffs are below cost-recovery. The sector has huge losses and inefficiencies. In this environment, it is very difficult to raise tariffs. There is also the issue of social fairness: when the sector has so many issues, is raising tariffs justifiable? A tariff increase now would only make customers more unhappy. Improvements in performance and service delivery have to take place before any tariff adjustment is feasible.</p>
Africa Clean Energy Summit	<p>Energy is critical to economic development and the eradication of poverty. It is clear that the PBL supports GENCOs and DISCOs, but will there be any support for the off-grid sector (e.g. grants)?</p>	<p>The Bank is only involved in assisting the Government in its own projects. Therefore, the question should be, “Is the Government doing anything to promote off-grid electrification?”</p> <p>The Government has requested a \$350 million World Bank project to support rural electrification, implemented through the Rural Electrification Agency (REA), which focuses on establishing mini-grids and solar home systems in areas unreachable by the grid. That project should be operational by the beginning of next year.</p> <p>There will be an element of grant funding in the off-grid operation, as the operation is designed to</p>

		<p>provide incentives for the private sector to provide these services. The investment needs in Nigeria are so massive (approximately 50% of the population has no connection to electricity) that electrification cannot be tackled by the World Bank alone. There are too many people without electricity and too few companies. Lessons learned from Kenya are being incorporated into the design of this off-grid operation.</p>
European Union Sustainable Energy Access,	<ol style="list-style-type: none"> 1. The Program has a goal of increasing available generation up to 4,500 MW. Will there also be results and technical indicators for the transmission and distribution sectors, in terms of wheeling capacity and energy to be delivered? 2. With regard to competitive procurement, is it for only generation, or also for transmission and distribution? In case of generation, what kind of model for competitive procurement are the Bank and the Government planning to use, and what will be the Bank's instruments of support to the Government (e.g. guarantees, technical assistance)? 	<p>Regarding #1: Unfortunately, there is a lack of statistics to trace reliability of supply at the end-user level. One of the key actions agreed with NERC as part of the Program is the Reset of the revenue requirement for every DISCO; as part of this process, DISCOs will develop Performance Improvement Plans. As these Plans, and the Management Information Systems stipulated in the Guidelines, are implemented, technical indicators and statistics will become increasingly available.</p> <p>Regarding #2: Institutionalizing system planning – and competitive procurement – is a major objective of both the PSRP and PBL. Ideally, system planning should capture both generation and transmission. There is already an existing NERC regulation for competitive procurement (primarily for generation). It is in the consumer's benefit to ensure that any new generation capacity gets contracted in least cost and in a competitive manner, as such, this</p>

		is one of the Disbursement Linked Indicators.
Coalition for the Environment	<p>The World Bank's focus on social and environmental issues has allowed the protection of the tropical high forest.</p> <p>Extension of the national grid into some rural areas is unsustainable. Are there incentives to encourage the utilization of off-grid renewable energy technologies? Also, is there an incentive to encourage the Government to alter the energy mix to increase the proportion of renewables?</p>	<p>The World Bank supports the Government's policies which promote renewables.</p> <p>All system planning starts with the definition of policy objectives; any Nigerian policies pertaining to renewable energy should be reflected in the system planning. Off-grid electrification will favor solar and renewable energy, as it offers the least cost option for off-grid electrification in Nigeria.</p>
DISCO	Every project is meant to deliver value to the end-user. Is the performance of this Program going to be based on the physical achievement of infrastructure or the value that the end-user receives?	The PBL actually requires no physical investment. Rather, the disbursement of the loan supports "softer" outcomes that are required to improve the performance of the sector (e.g. policies, regulations, contract enforcement, revenue requirement).
Nigerian Electricity Management Service Agency (NEMSA)	We've been discussing reliability of power supply. To determine reliability, it is necessary to look at the network and technical losses. NEMSA is responsible for monitoring networks, but there is no mention of the organization in any documents. Will the World Bank be able to assist this NEMSA during this operation?	NEMSA does play a role in the implementation of the PSRP, and has been consulted by the Minister regarding its role. However, the World Bank Program only addresses the subset of the PSRP; it is not possible for our loan to cover everything.
Ibom Power	<p>GENCOs are owed a lot of money, so it would be nice to hear that some funding will be going toward making GENCOs whole. However, the role of GENCOs in the PSRP is unclear. Is there a direct responsibility for GENCOs? Is there something they are supposed to do?</p> <p>Regarding DLI 4, has the World Bank considered that it is also an election year and there have been difficulties increasing electricity tariffs in Nigeria,</p>	Regarding #1: Under this Program, GENCOs will receive their revenue requirement. In turn, they are obligated to meet their contractual requirements; specifically, by providing the energy agreed in the power purchase agreements and meeting the payment requirements of gas supply agreements.

	especially when elections are coming up?	Regarding #2: Elections are relevant for the tariff increase, but there are also other issues to consider (e.g. service delivery and payment discipline). By addressing these other issues, this Program will lay the necessary groundwork for an eventual increase.
Mainstream Energy	When is this Program going to begin?	The Program is expected to receive Board approval in April.
Kano DISCO	DISCOs feel that they are more exposed to risk than other sector entities. As such, it is necessary to take the issue of tariffs seriously. Many Nigerians will pay more for power, if reliability increases. The DISCOs do acknowledge that they cannot depend entirely on tariff increases, however. Also, it is necessary to consider the strength of the DISCOs, in light of all of the regulatory changes.	Both the PSRP and the PBL recognize the criticality of DISCO turnaround, and the Financing Plan has been developed to ensure that every company receives its revenue requirement from this year. However, this does not undermine the importance of eventually raising tariffs; improvements in performance and service delivery are simply necessary before any adjustment can take place. By 2021, the completion of the Program, there will be efficiency improvements, service delivery will improve, and those improvements will allow for tariff adjustment, if necessary.
Ibom Power	Court cases of DISCOs against NBET have any impact on what we are discussing today?	The World Bank hopes that by addressing the historical deficit and deficit going forward, the court cases will no longer be relevant, and the sector will be able to have a fresh start.
NNPC	Gas contracts were signed in 2011 and 2013. These reserves have a finite volume and have been in production for years. By the time that contracts become effective, there will be scenarios in which suppliers will not be able to supply for the time period stipulated in	Contract enforcement and activation is envisioned from the point of Reset; it is hoped that all contracts can be activated by that point.

	the contract as a result of delay. If contracts don't become effective in three to four years, contracts will be terminated before they become effective.	
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164The social and environment World Bank team presented the ESSA. The meeting noted the ESSA aims to ensure the consistency of the PBL with the World Bank's six Environmental and Social core principles, namely:

- Core Principle 1: Promote environmental and social sustainability, avoid, minimize, mitigate adverse impacts and promote informed decision-making.
- Core Principle 2: Avoid, minimize and mitigate against adverse impacts on natural habitats and physical cultural resources.
- Core Principle 3: Protect the public and workers against potential risks associated with (a) construction and/or operations of facilities; (b) exposure to toxic chemicals, hazardous wastes and dangerous materials; and (c) reconstruction or rehabilitation of infrastructure in areas prone to natural disasters.
- Core Principle 4: Avoid or minimize displacement due to land acquisition or restriction of access to natural resources and PAPs are assisted in improving/restoring livelihoods and living standards.
- Core Principle 5: Cultural appropriateness of, and equitable access to, program benefits – giving special attention to Indigenous Peoples and vulnerable groups.
- Core Principle 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

It was noted that Core Principles 2 and 4 do not apply to the PBL, due to the lack of infrastructure investment.

165The ESSA noted the following potential environmental and social impacts of the Program:

- Improved air quality and reduction in pollutant and greenhouse gas emissions as a result of reduction in the use of generators by businesses and households.
- Reduced share of poor households using firewood and charcoal for cooking, which leads to deforestation, which is one of the contributing factors to climate change.
- Reduced use of basic household fuels, such as candles and kerosene, which may be harmful to the environment.

166The ESSA aims to identify environmental and social issues, and highlight risks to management. It aims to assess the client's systems, capacity, and performance. The analysis yielded the following results.

	Strengths	Gaps
Core Principle 1	<ul style="list-style-type: none"> • National policies, regulations and other legislation for environmental management are well-defined. • The national Environmental Impact Assessment (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. • The Environmental Guidelines and Standards for Regulating the Oil and Gas Industry in Nigeria (EGASPIN) also provide the guidelines for environmental issues relating to oil and gas activities in Nigeria. • Good grievance mechanisms by NERC: call centers established for customer complaints, readily-available website with instructions on how to make a complaint. • Demonstrated efforts to increase stakeholder engagement both within the FGN and for civil society at charge. • National Gender and Energy Policies strive to mainstream gender within the power sector at all levels of operation and delivery. 	<ul style="list-style-type: none"> • Weak enforcement capacity is a major concern. • The implementation of the existing legal/regulatory provisions faces challenges, such as multiple regulations; overstretched regulatory authorities; weak monitoring; inadequate and mismanaged funding; and a low degree of public awareness of environmental issues. • Weak governance systems of DISCOs hinder delivery of policies. • Lack of mandate, terms of reference and strategy for gender desk in Ministry of Power hinders effectiveness of gender mainstreaming.
Core Principle 3	<ul style="list-style-type: none"> • The legal/regulatory system of the country includes provisions for protecting people and the environment that are applicable to regulating hazardous materials. • There are national policies and guidelines addressing public and workers' safety, including the compulsory insurance policy, for example. 	<ul style="list-style-type: none"> • The national EIA system is weak and does not comprehensively encompass aspects of public and workers' safety. • There is general lack of awareness on public health and safety issues, particularly in relation to exposure to hazardous materials, and workplace safety aspects.
Core Principle 5	<ul style="list-style-type: none"> • Part VI - Consumer Protection and Licensee 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 	<ul style="list-style-type: none"> • Poor uptake by NERC (and other agencies) of the Power Consumer Assistance Fund in accordance with the Power Sector Reform Act.

	severely ill. Additionally, the Act describes procedures for dealing with and assisting customers who have difficulty in paying bills. • 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 underprivileged power consumers.	<ul style="list-style-type: none"> • Poor knowledge/understanding of how to operationalize the Fund and to monitor progress. • Lack of data on consumers' vulnerability profiles (e.g. income levels, access to electricity).
Core Principle 6	<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. 	Weakness of grievance redress system and lack of transparency regarding tariff reform has, at times, led to demonstrations and allegations of social conflict over consumers' refusal to pay energy bills.

167To enhance the environmental and social performance of the Program, the ESSA proposed the following measures:

- **Gender.** To achieve the PRSP's governance objectives in relation to gender and the Ministry of Power's gender and energy policy goals, strengthen the mandate of the gender focal point in the Ministry of Power by developing a work plan and clear lines of responsibility for the gender desk/focal point.
- **Stakeholder and Citizen Engagement.** Build on current system; develop clear targets and monitoring criteria for NERC's customer complaints system; develop "outreach program"/strategy to strengthen capacity and representation of consumer organizations.
- Formulate guidelines and manuals for mainstreaming stakeholder engagement process, and environmental, health and safety issues into the implementation of the Program.
- Conduct annual monitoring of progress on environmental and social issues, especially regarding the compliance of the Program activities with the environmental standards and regulations.

ESSA Questions and Answers

Organization	Question/Comment	Response
European Union Nigerian Energy Support Programme	There is an attribution issue regarding the "reduced share of poor households using firewood" and "women and children will no longer spend time each day gathering firewood" as a result of this Program. Whenever a user of firewood goes up in the energy ladder, the person does not typically go for an electric stove; they	Regarding #1: The point is taken to heart. However, it is known that people will increasingly rely on electricity, if it is available. This point will be toned down and clarified.

	<p>will most-often go for kerosene or gas. Even in urban areas, people will probably not use electric stoves; they will rather use gas if they can, or most will use kerosene.</p> <p>Will the World Bank operation cover the clarification of the EIA framework (which currently classifies projects on the basis of three separate categories)? The process to follow for each category is not clear. Could the World Bank address this?</p>	<p>Regarding #2 (answered by Federal Ministry of the Environment): The evaluation processes for the each of the three categories of projects are different. The Act actually stipulates that the Ministry and developer should determine the appropriate categorization and action.</p> <p>Regarding #2 (World Bank): Support to improve the EIA process could potentially be a part of the technical assistance component of the Program.</p>
Coalition for the Environment	It is difficult to follow the relationship between this intervention and the use of firewood.	<i>Response above.</i>
NNPC	The Power Consumer Assistance Fund was mentioned and clarification is necessary. It is not clear how the Fund will help to address the issue of tariff adjustment. Any tariff adjustment could impact income.	There doesn't appear to be significant knowledge about the PCAF by either NERC or the consumers. This is something that could potentially be addressed under the PforR or through technical assistance.
Africa Clean Energy Summit	It is commendable to note that the World Bank requires an ESSA. Previous World Bank operations have highlighted some of the weaknesses in existing EIA processes. Can technical assistance be used to audit of the manpower of MDAs involved in the EIA process and provide assistance?	Technical assistance will be provided to numerous MDAs. Support for the EIA process could potentially be a part of that.
Federal Ministry of the Environment	Micro-ecosystems could be impacted by increased generation and distribution.	Under this Program, there be no infrastructure investment. As such, there will be no destruction of sites with high-value biodiversity.
Abuja DISCO	With an increase in generation capacity comes an increase in supply. As DISCOs make the upgrades necessary to accommodate this new supply, there will be some friction between poor Nigerians	DISCOs can currently supply customers with up to 5,000 MW. To supply additional customers, DISCOs will need to build new feeders, transformers, and invest

	<p>using on the lines improperly and the agencies responsible for resettlement or demolitions. Exploitation of the distribution network has to be fixed, and with that comes social issues related to encroachment. Why have anxieties associated with upgrades required to accommodate new capacity not been addressed in the ESSA?</p>	<p>in back-office systems. However, in terms of the PSRP, analysis shows that no new investment by DISCOs is required. To go beyond the goals articulated in the PSRP, investment may be necessary.</p> <p>A central element of the PSRP is Reset. DISCOs, as part of the Reset, will prepare Performance Improvement Plans. Other World Bank programs can support the investments articulated in the Performance Improvement Plans. The PBL itself is just trying to make the market function by addressing issues of contract enforcement and financial viability.</p>
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Annex 1 - PSRP-ESSA Consultation Attendance: Thursday, 25 January 2018

S/N	NAME	ORGANISATION
	DISCOS	
1.	Okala O. Uche	Enugu Electricity Distribution Company
2.	Sola Adeyegbe	Ibadan Electricity Distribution Company
3.	Ade Ayileka	Ibadan Electricity Distribution Company
4.	Mustapha Usman	Yola Electricity Distribution Company
5.	Ije Okeke	Abuja Electricity Distribution Company
6.	Tony Uweze	Abuja Electricity Distribution Company
7.	Nosa Igbiniedion	Eko Electricity Distribution Company
8.	Osa Amadin	Abuja Electricity Distribution Company
9.	Sadiq Mohammed	Kano Electricity Distribution Company
10.	Adetunji Adeyeye	Association of Nigeria Electricity Distribution Companies
11.	Chinwe Nnorom	Portharcort Electricity Distribution Company
12.	Chigozirim Egeruoh	Portharcort Electricity Distribution Company
13.	Aranki A.J.R.	Yola Electricity Distribution Company
14.	Collins Chabuka	Abuja Electricity Distribution Company
15.	Abdulkadir Njeddah	Jos Electricity Distribution Company
16.	Lawal Lawal	Kaduna Electricity Distribution Company
17.	Yemi Omoyelu	Benin Electricity Distribution Company
x	MDAs	
18.	Solomon Makinde	NNPC
19.	R. A. Odetoro	Federal Ministry of Environment
20.	Bekeobim Federick	Federal Ministry of Power
21.	Engr. William C. Metich	NEMSA
22.	Tolu Jaji	FMF
23.	Onwuama Victor	FMoP
24.	Adaobi Nnorukah	NBET
25.	Catherine E. Okpoko	FMoP
26.	Esther Eghobamien	Federal Ministry of Women Affairs and Social Development
27.	Okpukpara Emeka	Nextier Power
28.	Clem Ezeolisah	TCN
29.	Ominiyi Abimbola	FMoPWH
x	GENCOS	
30.	Adedamisi Pegba-Otemolu	Mainstream Energy
31.	Engr. Umana Michael	Mainstream Energy

32.	Engr. Wilson Umeh	Geometric Power
33.	Dr. Rita Okon	Ibom Power
34.	Awwal Abubakar	Egbin Power
35.	Emeka Akparah	Omosho
36.	Adamu Abdullahi	Geregu Power
x	CSOs	
37.	Odigha Odigha	NGO Coalition for Environment (NGOCE)
38.	Tseen Martins	Foundation for the Vulnerable
39.	Kate Ugor	Foundation for the Vulnerable
40.	Bosede Akinbolusere	Development Initiative for Community Enhancement (DICE)
41.	Victor Fodeke	Africa Clean Energy Summit
42.	Chibueze Ekeh	EMRC (power)
43.	Dozie Nwaoha	EMRC (power)
44.	John Victor Dakwogit	Enhmeed Environment for Sustainable Development and Empowerment
x	DONORS	
45.	Luis-Coulos Miko	NESP
46.	Orby Michael-Kasim	European Union
47.	Qusim Salawudeen	NESI SS
48.	Joy Chikezie	NESI SS
x	Others	
49.	Durugbo Mac	PSRP CTT
50.	Michael Akanji	PSRP CTT
51.	Elizabeth Ugboro	Noah's Ark / PSRP CTT
52.	Adeola Ogunade	Noah's Ark / PSRP CTT
53.	Rocky Agbese	PSRP CTT
54.	Chikanne Ezeigbo	PSRP CTT
55.	Oyegade Taiwo	PSRP CTT
56.	Bestman Tamara	PSRP CTT
x	PSRP IMT	
57.	Awele Okigbo	PSRP IMT
58.	Simeon Atakulu	PSRP IMT
59.	Odegua Ofoegbu	PSRP IMT
60.	Isioma Okobi	PSRP IMT
61.	Abubakar Musa	PSRP IMT
62.	Anibaba Abiodun	PSRP IMT
x	WORLD BANK	

63.	Olukayode Taiwo	World Bank
64.	Nnaemeka Chukwuone	World Bank
65.	Muhammad Wakil	World Bank
66.	Amos Abu	World Bank
67.	Lucky Erhaze	World Bank
68.	Edda Ivan-Smith	World Bank
69.	Elijah Siakpere	World Bank
70.	Kyran O’Sullivan	World Bank
71.	Ani Balabayan	World Bank
72.	Chinazo Nwaoha	World Bank
73.	Carolyn Warren	World Bank
74.	Jaeyoung Jin	World Bank
75.	Tu Chi Nguyen	World Bank