RURAL ELECTRIFICATION AGENCY

PROJECT IMPLEMENTATION MANUAL

FOR THE

NIGERIA ELECTRIFICATION PROJECT

April 19, 2019

Table of Contents

List of Figures and Tables

Acronyms and Abbreviations

AMI	Advanced Metering Infrastructure
CBN	Central Bank of Nigeria
DPR	Detailed Project Report
EP	Screening and Evaluation Panel
ESSF	Environmental and Social Screening Form
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
FPFMD	Federal Project Financial Management Division
FPM	Financial Procedures Manual
GA	Grant Administration Firm
FMoF	Federal Ministry of Finance
FMPWH	Federal Ministry of Power, Works and Housing
HR	Human Resources
IC	Investment Committee
ICB	International Competitive Bidding
ICR	Implementation Completion Report
IEC	International Electrotechnical Commission
IFR	Interim Financial Report
IPSAS	International Public-Sector Accounting Standards
ISA	International Standards on Auditing
ISO	International Organization for Standardization
ISR	Implementation Status Report
IVA	Independent Verification Agency
kW	Kilo-Watt
LRP	Livelihood Restoration Plan
MSCF	Market Scale-up Challenge Fund
MSME	Micro, Small and Medium Enterprises
NEP	Nigeria Electrification Project
NERC	Nigerian Electricity Regulatory Commission

NEMSA	Nigeria Electricity Management Services Agency
OAUGF	Office of the Auditor General of the Federation
OBF	Output Based Fund
OBG	Output Based Grant
OSH	Occupational Safety and Health
PMU	Project Management Unit
MW	Mega-Watt
RAP	Resettlement Action Plan
REA	Rural Electrification Agency
RFP	Request for Proposals
SHS	Solar Home System
SON	Standards Organization of Nigeria
SONCAP	Standards Organization of Nigeria Conformity Assessment Programme
SP	Selection Panel
WB	World Bank

Definitions

Term	Definition
Applicant	An entity, or a Consortium, that submits an Initial Selection Application for the minimum subsidy tender or an application for the performance-based grant
Application	The application submitted by an Applicant in response to the Invitation for Initial Selection or an application submitted by an Applicant for the performance-based grant
Consortium	A group of individuals, companies, firms, bodies corporate or other entities that intend to participate in one of the Components through joint effort
Consortium Partner	An entity that has or will have an equity stake in a Consortium
Environmental and Social Management Framework	The REA's framework to management environmental and social risks at the level of the Nigerian Electrification Project
Environmental and Social Management System	The system to manage environmental and social risks that firms applying for Component 1 and 3 must have developed
Environmental and Social Management Plan	The plan that firms applying for the mini grid component must develop for sites with low environmental and social risks.
Initially Selected Applicant	An Applicant whose Application has met or exceeded ("passed") all the specified threshold requirements in the Initial Selection process for the minimum subsidy tender
Preferred Proposer	A Proposer whose Proposal has obtained the highest ranking in the RFP process for the minimum subsidy tender
Project	Nigeria Electrification Project
Proposer	An Initially Selected Applicant that submits a Proposal for the minimum subsidy tender
Successful Proposer	A Preferred Proposer that has successfully concluded negotiations for a grant agreement
Underserved area	Area with an existing but poorly supplied or non-functional distribution system, as defined in the Nigerian mini grid regulation
Unserved area	Area without an existing distribution system (otherwise called off-grid), as defined in the Nigerian mini grid regulation

1. Overview

1.1. Objective of the Manual

This Project Implementation Manual is prepared in accordance with the Financing Agreement and the Project Agreement signed between the Government of Nigeria and the World Bank on May 17, 2018 for the Nigeria Electrification Project (NEP) (Credit Number 6291/NG). This Manual contains the key management procedures for the implementation of the NEP.

The specific objectives of the Manual are:

- Provide operational guidance to all those involved in the administration and management of the NEP, to ensure effective and efficient delivery of the Project;
- Provide a framework for the implementation of the administrative, financial and accounting operations under the Project;
- Describe and standardize the procedures, processes and conditions for the disbursement of funds and define the responsibilities of each relevant entity at each stage of Project implementation; and
- Improve the performance of the Project through a continuous evaluation of the activities and results achieved, in accordance with the objectives of each component.

This document may be periodically amended in consultation with the governance bodies of the NEP.

1.2. Nigeria Electrification Project (NEP)

The Federal Government of Nigeria (FGN) aims to make reliable electricity available to 75 percent of the population by 2020, and 90 percent of the population by 2030, with at least a 10 percent share of renewable energy by 2025. The FGN recognizes that off-grid solutions are needed to accelerate electricity access.

To this end, the FGN, with the support of the World Bank, has embarked on a comprehensive project aimed to accelerate electricity access in rural areas through mini grids and stand-alone off-grid solutions. In addition, the project will improve electricity supply to selected universities and colleges, which currently have unreliable electricity supply and can serve as anchor loads for serving nearby communities in the future.

Project beneficiaries will be households, micro, small and medium enterprises (MSME), students, faculty staff, and patients at Federal Universities and Teaching Hospitals throughout Nigeria. Approximately 2.5 million people

(approximately 500,000 households), 70,000 MSMEs, seven universities, and two associated teaching hospitals will receive new or improved access to electricity services as a result of the NEP.

The project will create an enabling environment for private sector involvement through technical assistance. Women across all beneficiary groups will receive increased opportunities through a range of integrated activities including, the collection of gender-disaggregated data, gender-targeted marketing, community outreach, and training programs that will be delivered at various levels to encourage and facilitate women to participate in the project.

The project has four components, all of which will be implemented by the Rural Electrification Agency (REA) of Nigeria:

- Component 1: Solar Hybrid Mini Grids
  - Component 1.1: Minimum Subsidy Tender for Mini Grids
  - Component 1.2: Performance-Based Grants Program
- Component 2: Stand-alone Solar Systems for Homes and MSMEs
  - Component 2.1: Market Scale-up Challenge Grants
  - Component 2.2: Performance-based Grants
- Component 3: Energizing Education
- Component 4: Technical Assistance

1.2.1. Component 1: Solar Hybrid Mini Grids for Rural Economic Development

1.2.1.1. Component 1: Definition of Mini Grids and Eligible Technologies

A mini grid refers to an integrated local generation and distribution system capable of serving at least 2 end-users independently from the national grid. The technical focus of Component 1 is on solar hybrid systems (solar PV generation with battery and diesel back-up), but other renewable energy technologies may also be considered on a case-by-case basis.[1] Prepaid metering will be required to mitigate revenue collection risk and enhance the bankability of the mini grid projects. Furthermore, the mini grids will be required to be built to Nigeria's grid code in order to allow for integration with the main grid when it reaches the mini grid site.

[1] Other renewable energy technologies may be considered for Component 1.2.

1.2.1.2. Component 1: Objectives, Indicators, and Targets

The objective of promoting mini grids is to electrify unserved and underserved areas that have high economic growth potential, aimed at serving households, local enterprises and public institutions.

Progress towards achieving Component 1 will be measured by the indicators presented in Table 1. The Component targets are to electrify 300,000 households and 30,000 local enterprises through mini grids. The Project Management Unit will be responsible for reporting these indicators on a quarterly basis, based on data collected by the PMU from all mini grid developers participating in this Component.

Table 1: NEP Component 1 indicators

Indicator	Unit	Baseline	Mid-Term	End Target	Instrument
Number of households with access to electricity from mini grids	Number	0	100,000	300,000	Quarterly report
...of which headed by women	%	0	10	10	Quarterly report
Number of MSMEs with access to electricity from mini grids	Number	0	10,000	30,000	Quarterly report
...of which headed by women	%	0	10	10	Quarterly report
Percentage of employees related to mini grids and off-grid companies that are women	%	16	18	20	Quarterly report
Total value of results-based financing channeled to private sector mini grid developers	Amount (USD)	0	50,000,000	150,000,000	Quarterly report
Have citizens received the annual publication of feedback through consumer education and citizen engagement program?	Yes/No	N	Y	Y	Quarterly report
Increased consumption of electricity for productive uses by female-headed businesses and female farmers	%	0	2	5	Quarterly report
New generation capacity of renewable energy (solar) installed	MW	0	25	85	Quarterly report

1.2.1.3. Component 1: Structure and Budget

The total IDA commitment for Component 1 is USD150 million and is supplemented by technical assistance activities included in Component 4. The two sub components for mini grids are:

- **Minimum Subsidy Tender for Mini Grid.** USD70 million has been allocated to the minimum subsidy tender funding window. Given the scale of the energy access challenge in Nigeria and the limited number of private developers that are already actively prospecting for potential mini grid projects, this component aims to kick-start the

market and catalyze mini grid deployment at scale. This component consists of a competitive tender on the basis of a minimum subsidy requirement ($/end user) for 250 sites across four states. These sites will be packaged into lots to encourage economies of scale in procurement and efficiency in operations and management. The Tender will be implemented in two phases. The first pilot phase will consist of 57 sites packaged into four lots (one per state). The remaining sites will be tendered in the second phase.

- **Performance-Based Grants.** USD80 million has been allocated to the performance-based grants funding window. Performance-based grants will be provided to mini grid projects based on the number of new connections ($/end user) on a rolling basis. It is expected that there will be performance-based grants for about 580 mini grids/sites; for at least eight companies; and for around 230,000 connections.

Web-Based Platform

The mini grid component will use an innovative web-based platform for key interfacing aspects and program management. The web-based platform will be used for managing the RFP stage of the mini grid tender and the performance-based grant window of the mini-grid component.

1.2.2. Component 2: Stand-alone Solar Systems

1.2.2.1. Component 2: Definition of Stand-alone Solar Systems and Eligible Technologies

Stand-alone solar systems or Solar Home Systems (SHS) are photovoltaic (PV) energy solution units consisting of PV solar panels, a charge controller, and battery for energy storage. SHS can be designed to use both DC and AC systems although AC systems will require an AC inverter as an additional component. SHS eligible under the NEP will have a capacity of 6Wp or higher.

1.2.2.2. Component 2: Objectives, Indicators and Targets

The objective of this component is to help millions of underserved Nigerian households and micro small medium enterprises (MSMEs) access better energy services at lower cost than their current service, via stand-alone solar systems (Solar Home Systems (SHS)) provided by the private market.

The key results indicator for the SHS component is: Number of people, enterprises, and public institutions provided with new or improved electricity service.

In addition, the following intermediate indicators with their targets and the requirements for data collection and reporting as provided in Table 2 will be tracked regularly by the REA and reported on a quarterly basis.

Table 2: NEP component 2 indicators

Indicator	Unit	Baseline	Mid-term	End Target	Instruments
Number of households with access to electricity from stand-alone solar systems	Number	0	100,000	300,000	Quarterly surveys
…of which headed by women	Percentage	0	5	10	Quarterly surveys
Number of MSMEs with access to electricity from stand-alone solar systems	Number	0	20,000	40,000	Quarterly surveys
…of which headed by women	Percentage	0	6	10	Quarterly surveys
Total value of results-based financing channeled to private sector providers of stand-alone solar systems	USD	0	25,000,000	75,000,000	Quarterly surveys
New generation capacity of renewable energy (solar) installed	MW	0	5	15	Quarterly surveys

1.2.2.3. Component 2: Structure and Budget

The IDA commitment for Component 2 is USD75 million. This is supplemented by technical assistance activities included under Component 4. The SHS Component has two sub-components:

- **Market Scale-up Challenge Fund**. USD15 million is allocated to this sub component. This fund will offer up-front lump sum grants and other investor co-funding to the most capable providers with strong business plans to accelerate their sales to Nigerian households and MSMEs. A rigorous evaluation process and a tranche-based pay-out will be used to manage any risk of non-performance
- **Output Based Fund**. USD60 million is allocated to this sub component. This fund will provide fixed incentive grants in the range of 15-20% of the costs of the system to the grantees, per each eligible system installed

and verified. This support will enable the firms to finance the required investment in people, training, advertising, processes, and logistics inclusive of gender workforce integration and disaggregation as informed by the government gender program. The grant amount will be fixed for each system size/level of service category, and continually reduced over the life of the program.

Web-based Platform

Component 2 will use the same innovative web-based platform as Component 1. This customized platform will be used to manage the Market Scale-up Challenge Fund and the output-based grants window.

1.2.3. Component 3: Energizing Education

1.2.3.1. Component 3: Definition and Overview of Technologies

Access to uninterrupted power supply in Federal Universities and University Teaching hospitals in Nigeria has been cited as a major challenge and barrier to effective learning, institutional operations and student residency. Considering the role of education in economic growth and socio-economic development in Nigeria, the Ministry of Power, Works and Housing resolved to embark on viable projects that will ensure the availability of reliable, sustainable and affordable power to Nigeria's tertiary institutions. This led to the conception of the Energizing Education Programme (EEP).

The EEP seeks to provide adequate power supply (89.6MW in total) to thirty-seven (37) Federal Universities ("the Universities") and seven (7) University Teaching Hospitals across the Federal Republic of Nigeria, serving approximately 120,000 people. It also aims to provide street lights to promote and facilitate safe, secure and productive learning environments and develop and operate training centers to train university students in renewable energy technology innovations. These Universities will be powered by electricity generation systems of 1MW to 11MW that can operate isolated from the grid.

Due to cost implications and time constraints, the projects under the EEP cannot be implemented at the same time. Therefore, the EEP has been divided into phases to ensure effective implementation.

Phase 1 of the EEP is currently being implemented with funds from the FGN with the REA as the Implementing Body. Nine (9) Universities and one (1) Teaching Hospital have been selected for this and power supply will be provided through solar hybrid and gas-fired power plant solutions.

Phase 2 of the EEP is also being implemented by the REA but funded under the NEP. Seven (7) Federal Universities and two (2) University Teaching hospitals have been selected to benefit from this Phase. Project activities for the implementation of Phase 2 have commenced. It is projected that all universities under this phase will make use of solar hybrid technology.

1.2.3.2. Component 3: Objectives, Indicators, and Targets

The overall objective of the FGN's Energizing Education Program (EEP) is to provide reliable, affordable, and sustainable power to Federal universities and associated teaching hospitals, as well as install streetlights to improve security within the beneficiary universities and develop and operate training centers for training of existing students in renewable energy technology.

The key targets for the EEP are university students, academic and non-academic staff, doctors, nurses and patients at the selected university teaching hospitals.

As provided in Table 3, the following indicators with their targets and the requirements for data collection and reporting will be tracked regularly by the REA and reported on a quarterly basis to measure the impact of Component 3.

Table 3: Data collection and reporting targets

Indicator	Unit	Baseline	Mid-term	End Target	Instruments
Federal universities with new or improved electricity service	Number	0	3	7	Quarterly surveys
Federal universities with a teaching hospital with new or improved electricity service	Number	0	1	2	Quarterly surveys
New capacity of renewable energy (solar) installed	MW	0	6	19	Quarterly surveys

1.2.3.3. Component 3: Structure and Budget

The EEP Component will involve the following activities:

- **Engineering Procurement Construction (EPC) and Operations & Maintenance (O&M) Contracts**: REA will contract with competitively selected EPC contractors to build, operate and maintain the power plants at each site and also build and equip the training center. The procurement will allow bidders to bid on one or several sites. Each bidder will also be requested to include a three-year O&M contract for

the power station with an option to re-bid for additional years. The activities related to building and operating the power systems will cover two distinct contractual phases: The EPC phase and the O&M phase. REA will be the FGN signatory for both:

  - **EPC Phase**: Under the EPC contract, the developer is responsible for building the power system, street lighting (see below), and constructing and equipping a training center
  - **O&M Phase**: The scope of the O&M contract includes three years of operation and maintenance of the facilities by the EPC

- **Power station.** The program will install dedicated power stations at each of the university sites that will serve the campus independently from the existing distribution network. The physical distribution infrastructure owned by the distribution company will be retained, although electrically disconnected
- **Existing equipment**. During the detailed assessment phase, undertaken during the first year of the project, REA staff will review the campus' electricity distribution system to assess the need for repairs/upgrades.
- **Street lighting**. A street lighting system will be included to improve quality of campus life, particularly safety. This system will be designed in parallel with the power system design
- **Training facilities.** The EEP includes power system training with an emphasis on renewable energy. To this end, the EPC contract will include the erection and equipping of a training facility. The aim of this facility is to provide practical vocational level training to improve job prospects.

The IDA investment cost for this component is estimated to be USD105 million. This is based on the current REA designs as well as sizing for the university power systems, and conservative estimates for the system costs. All of these factors are subject to change. System design and sizing will be refined based on a more detailed assessment of each university campus.

1.2.4. Component 4: Technical Assistance

1.2.4.1. Component 4: Objectives

The objective of this component is to support project implementation and broad capacity building in the Federal Ministry of Power, Works and Housing (FMPWH) and the REA. This component will finance project implementation as well as help build a framework for rural electrification.

1.2.4.2. Component 4: Structure and Budget

The investment cost for this component is estimated to be USD25 million, of which the equivalent of USD20 million is provided by IDA and the equivalent of USD5 million is provided by the Government of Nigeria.

The activities under this component are detailed in the table below:

Table 4: Technical Assistance activities

Component	**Budget (IDA USD equivalent)**
Strengthening Implementation Capabilities	4.0
Strategy and Pipeline Development	3.0
Analytical Work on Finance Constraints	1.0
Evolving Regulatory Environment	1.5
Mini Grid Pre-Investment Activities	2.5
Stand-alone Solar Systems Technical Assistance	5.0
E&S Safeguards	2.5
Support for Local Supply Chain Development	0.5
Total	**20**

Component 4.1: Strengthening Implementation Capabilities (IDA USD4.0 million equivalent).

This support will fund REA's PMU, REA's technical, management, financial and administrative staff in Abuja and staff in the six regional offices, and the Grants Administrator. Support for institutional strengthening related to energy access will also be provided to key stakeholders including FMPWH, mini grid developers, solar companies and universities. It will also support a variety of REA activities, including engineering design and project management for Energizing Education (Component 3), and the Minimum Subsidy tender of Component 1.

In addition, the technical assistance will help build the capacity of local banks to lend to mini grid and stand-alone solar projects, in coordination with the IFC and the World Bank's finance experts. This activity will improve the local financial institutions' understanding of mini grid costs, revenues and risks and allow them to better appraise loan applications from mini grid project developers. The Central Bank of Nigeria (CBN) has made low cost funds available to PFIs to on-lend at a maximum interest rate of 9 percent. Mini grid developers are eligible for these loans, but uptake has been negligible due to limited interest and appetite from the financial institutions. Grant funding from this project will ideally need to be complemented by commercial debt financing, and there is therefore, an urgent need to raise awareness and

develop the capacity of local financial institutions to appraise mini grid projects. Eligible activities may include training delivered by mini grid experts and financial analysts familiar with mini grid economics as well as study visits to countries with a significant number of mini grids deployed to consult with the financial institutions that have lent to such projects and learn from their experience.

This Component will also build capacity of existing mini grid developers and other private companies interested in entering the mini grid market to identify sites viable for mini grid development, mobilize community engagement, establish business relationships with reputable vendors, develop bankable business plans with realistic load models and revenue forecasts, and ensure implementation of E&S safeguards.

Component 4.2: Strategy and Pipeline Development (IDA USD3.0 million equivalent)

This will be a vehicle for developing a pipeline of investments (including, but also beyond, those identified during project preparation) in mini grids and stand-alone solar systems. It will finance the development of an electrification strategy and a least-cost geospatial electricity mini grid and off-grid rollout plan in a participatory manner, bringing together FMPWH, development agencies, private sector (including developers and financiers), and communities. This will include, but not be limited to, energy demand studies, surveys and community identification for developing solar mini grids and individual solar systems.

To identify sites feasible for mini grid deployment and help developers determine financial viability, this activity will support nation-wide geospatial analysis and survey data collection. Specifically, this activity will finance determination of electrification status using satellite imagery and customized algorithms, manual building mapping of residential and non-residential structures in un-electrified communities, and surveys to collect socio-economic data and record consumption behavior in order to build customized load profiles and develop preliminary financial analyses. These outputs may be used to provide market intelligence to prospective developers prospecting for candidate mini grid sites or serve as the basis for additional mini grid tenders to be issued by REA.

Component 4.3: Analytical Work on Finance Constraints (IDA USD1.0 million equivalent)

During the first year of the project, a detailed assessment will be conducted aimed at determining financing constraints for private sector enterprises engaged in delivery of solar products. The assessment will provide recommendations regarding the potential design of novel and sustainable

financing instruments, including the possibility of establishing a credit line for this purpose. This assessment will be conducted in conjunction with the World Bank's Finance, Competitiveness and Innovation Global Practice. Potential interventions resulting from this assessment will be designed in alignment with ongoing financial sector policy dialogue and projects and the World Bank's IPF Policy – financial intermediary financing - which consists of the four focus areas described below. As local currency debt finance is constrained in Nigeria, mini grid developers may require collaboration with potential lenders, including the World Bank supported MSME fund, commercial banks, private equity funds and other development partners. These other development partners have initiated complementary initiatives that address this barrier and, together with the grant financing proposed through this project, these initiatives are expected to close the viability gap for mini grid investments. Table 2 lists these potential sources of debt and equity financing for mini grid developers in Nigeria.

Private solar firms have been constrained by limited access to market intelligence and affordable credit from local financial institutions. Many companies are struggling to secure equity investment from impact investors. Solar firms will need donor funding to leadoff their investments. Sales to lower income households are constrained by the lack of resources to expand reach to these segments. This is the case for geographical areas with low population densities, where the costs of delivery are significantly higher.

Component 4.4: Evolving Regulatory Environment (IDA USD1.5 million equivalent)

The NERC Regulations for Mini-grids take important first steps towards creating an enabling environment for private sector development of mini grids. This activity will assist NERC in operationalizing the new regulations. Furthermore, as deployment of mini-grids is scaled up in the country, these first-generation regulations may need to be updated and strengthened with feedback from private sector developers and based on experience on the ground. The activity will also include a review of the implementation of the first-generation NERC regulations, their impact on mini grid development, and guidance on improving the regulations.

Component 4.5: Mini Grid Pre-Investment Activities (IDA USD2.5 million equivalent)

These are part of the ongoing support. REA will procure a firm to establish a pre-investment support program to mini grid developers to mitigate the risk involved in the early stages of project development. These grants may be used to finance feasibility studies, and preparation of business plans and E&S safeguard assessments.

Component 4.6: Stand-alone Solar Systems Technical Assistance (IDA USD5.0 million equivalent)

Technical assistance will help mitigate the market and regulatory barriers, to make the financing support to the private sector go further and help the sector grow and mature. Several TA support pieces were identified during the preparation mission to address the market and regulatory barriers:

- An extensive national market study to identify the needs and market opportunities at household level through establishing energy demand for different levels of service and market segmentation. The study is likely to build on the MTF household survey scheduled to be carried out in the next few months. The study would provide insights that will help companies decide where to target their services
- Targeted sensitization campaign focusing on consumer awareness and sales promotion to support all eligible providers (currently supported by Lighting Africa Nigeria)
- Value chain integration for importers and distributors to establish new partnerships and further expand their networks (also currently supported by Lighting Africa Nigeria). Incubation and technical advice to new entrant solar companies to help them develop missing capacities, refine and develop business strategy, and support them in engaging with and attracting investors
- Adoption of Lighting Global standards for solar products in Nigeria will require testing and enforcement capability. Lighting Africa with Standards Organization of Nigeria and ECOWAS are presently leading this effort, which will require further support.

Component 4.7: E&S Safeguards (IDA USD2.5 million equivalent)

This will cover two areas: citizen engagement and developing strategic solutions for E&S risk management for the off-grid solar market. Citizen engagement will support education and awareness under the project's key delivery areas for households, small businesses and universities. The initiative will prioritize men and women equally as a prime target audience. It is in the project's interest to reach women who will be the end users of the proposed solar solutions. Citizen engagement is intended to address the following:

- Initial reservation in the adoption of a new technology for communities and households (for both solar mini-grids and SHS)
- Buyer inability to make informed purchasing decisions and decipher quality in the market
- Importance and advantages of conserving energy

- E&S awareness for solar technologies, such as recycling/ proper disposal of batteries.

Developing strategic solutions for E&S risk management for the off-grid solar market. This will support developing programmatic approaches to address key strategic challenges identified, which are:

- Land issues and competing land use challenges for mini grids
- Waste management, and more specifically, battery storage and recycling
- Need for harmonization of E&S standards among private mini-grid developers and their financiers.

Component 4.8: Support for Local Supply Chain Development (IDA USD0.5 million equivalent)

While most major electro-mechanical components for mini grid projects are imported today, there may be scope for local assembly and, possibly, manufacturing, given the scale of the Nigerian market. This consultancy assignment will map the supply chain for mini-grid components in Nigeria, assess the potential for local assembly and/or manufacturing, and provide concrete recommendations on the type and scale of support necessary to catalyze development of such industries in Nigeria.

2. Institutional Arrangements

2.1. Project-level Institutional Arrangements

Implementation of the Nigeria Electrification Project relies on the active participation of several important stakeholders and leverages the competency of each of these parties. At the Project level, the main stakeholders are the Rural Electrification Agency (REA), the NEP Project Management Unit (PMU), the Project Developers, the Federal Ministry of Finance (FMoF), the Federal Ministry of Power, Works and Housing (FMPWH), the World Bank, the Technical Review Committee, and the Investment Committee. The roles and responsibilities of these parties are delineated in this section.

2.1.1. Rural Electrification Agency

The REA's specific responsibilities are:

a) Ensure overall oversight and promotion of NEP
b) Open a designated USD-account with Central Bank of Nigeria for NEP;
c) Identify any problems with the applications process and propose possible improvements
d) Identify any problems with the verification process and/or applications and propose possible improvements
e) Monitor the progress of the program in achieving the outcome indicators; coordinate and consolidate reporting information for all NEP's implementing institutions for overall project reporting to World Bank.

2.1.2. Project Management Unit

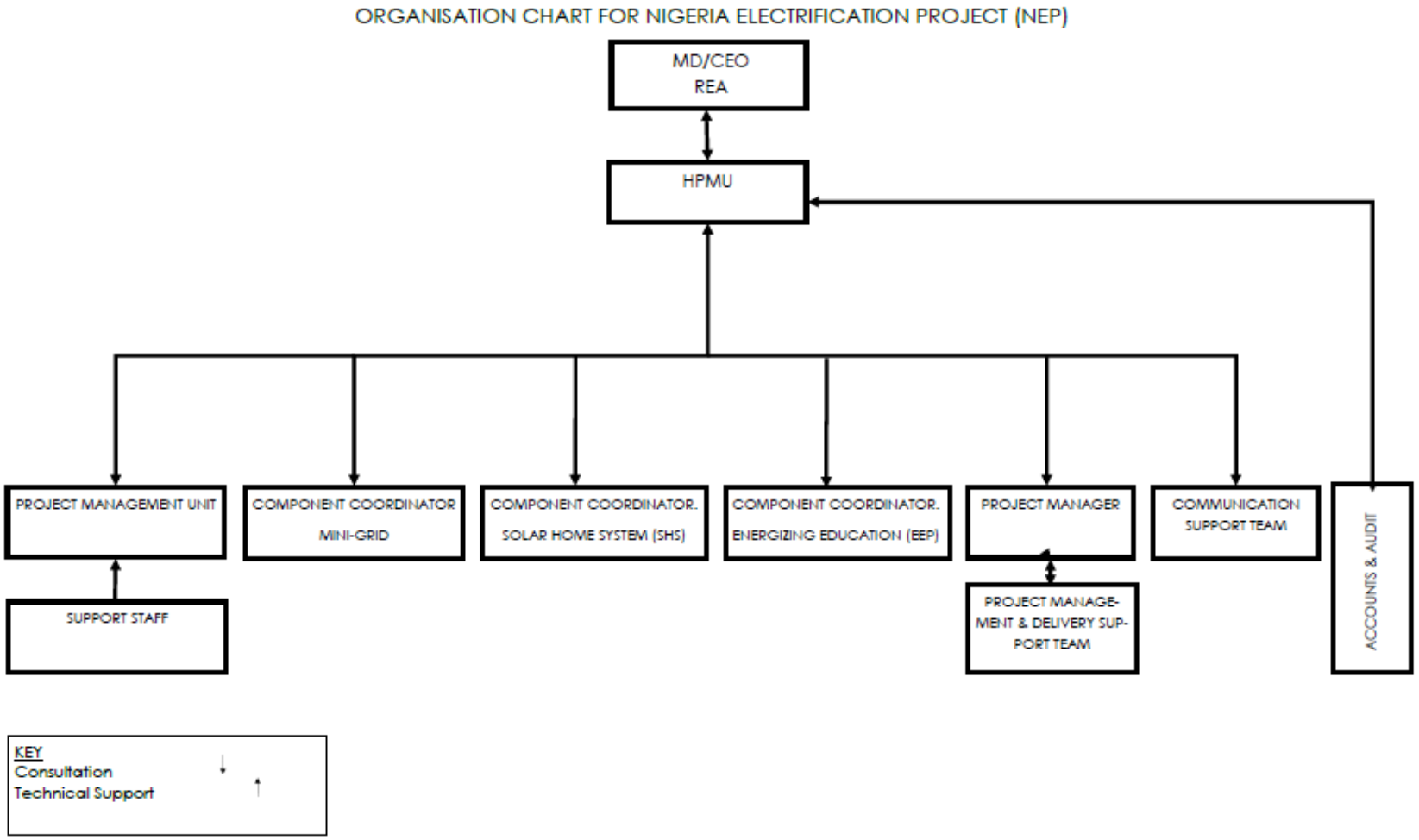
The Project Management Unit's responsibilities include:

a) Confirm that projects meet all eligibility criteria established in this Implementation Manual, including compliance with the World Bank's fiduciary and safeguards requirements
b) Manage designated accounts with Central Bank of Nigeria for NEP
c) Request of replenishment of account according to World Bank guidelines
d) Prepare Quarterly Reports to be furnished to the World Bank one month after the end of the period covered by such reports
e) Prepare Completion Report to be furnished to the World Bank three months after the Closing Date of the project
f) Financial reporting to the FMoF and the World Bank

g) Request No Objection from the World Bank where required by this Implementation Manual
h) Ensure Annual Audited Financial Reports for the Project are prepared and furnished to the World Bank within six months after each fiscal year;
i) Manage a centralized database, including a Management Information System for data collection, monitoring, reporting and verification
j) Ensure that the activities and projects approved for funding support comply with NEP guidelines.

Figure 1 is an organization chart of the PMU.

Figure 1: Organization Chart for the PMU



The PMU will consist of the following staff:

1. **Head of the PMU (HPMU):**

a) Oversee the Project Management Unit (PMU) of NEP and report regularly to the Managing Director of REA
b) Ensure that all financial and accounting requirements are met
c) Prepare annual work plans and budgets in consultation with other project staff
d) Initiate corrective measures to address internal shortcomings and irregularities as the need arises
e) Undertake any other responsibility required to ensure the achievement of the project development objectives
f) Coordinate project management activities, resources, equipment and information in line with the Credit Agreement
g) Act as the point of contact and communicate project status to all participants
h) Ensure accurate and timely submission of quarterly and annual activity progress reports and financial reports
i) Monitor project funds, approve project disbursements according to the WP and liaise with World Bank on budgetary changes if required
j) Review all aspects of the Project work plan based on the results of operations and changing economic conditions
k) Establish operating arrangements for financial management, accountability and procurement, including ensuring all supporting documents are maintained and an orderly filing system including e-filing is in place.

2. **Project Manager – Special Projects & Renewable Team**

a) Support day-to-day project implementation of project outcomes
b) Support effective communication of all interested parties about the project activities and goals
c) Identify any support and advice required for the management, planning assigned by the Head PMU
d) Ensure timely preparation and compilations necessary to fulfill the reporting obligations of the PMU to the relevant stakeholders as appropriate
e) Participate in transparent and competitive selection, recruitment, supervision and mentoring of respective project staff
f) Perform other duties that may be required by Head, PMU, MD and REA.

3. Senior Procurement Specialist

a) Ensure that procurement procedures as contained in the Procurement Manual are approved by the IDA are followed in all procurement activities of the Project
b) Keep adequate records of procurement activities for the Project
c) Prepare procurement plans, and progress reports for inclusion in the Financial Monitoring Report to be submitted to IDA through Head PMU
d) Supervise the procurement activities of the Project and report directly to Head PMU
e) Prepare the budget/plan together with the Project Technical Team, which includes; the Senior Technical Advisor, the Senior Environmental Specialist, Social Specialist, Monitoring and Evaluation/Database Management Specialist and Senior Commercial Specialist Prepare bid documents together with the Project Technical Team, Provide instructions for bidders on procedures for submission of bids, and prepare technical specifications for materials to be procured
f) Carry out the bid evaluation together with the Project Technical Team, and prepare the report in line with World Bank bid evaluation guidelines
g) Follow up on contracts recommendation and award, source price quotation from suppliers and ensure insurance cover for all imports.

4. Project Procurement Officer

a) Prepare and update the procurement plans
b) Send Request for No-Objection to the Bank for all post review transactions
c) Responsible for day-to-day procurement activities at the REA -PMU
d) Update and implement the Procurement Manual
e) Prepare Technical Evaluation report for QCBS, LCS, CQs & FBS contracts
f) Prepare Evaluation Reports for all National Competitive Bidding
g) Undertake sub-contract implementation
h) Provide procurement advisory services to all levels of Project implementation
i) Any other duties as may be assigned by the Senior Procurement Specialist.

5. Senior Technical Advisor

a) Assist the Project Management Unit (PMU) in preparation of site review criteria and methodology

b) Assist Project Management Unit (PMU) in reviewing and revising, as appropriate, the draft technical specifications
c) Assist REA in procurement activities leading to the procurement of goods, works and services under the Nigeria Electrification Project, ensuring compliance with specifications of REA and World Bank procurement guidelines
d) Assist in the supervision of contractors to ensure that system installation is in accordance with the approved standards and design specifications
e) Assist with preparation and when needed in updating the Project Implementation Manual for the NEP. The Project Implementation Manual would form the basis of a potential follow-on investment.

6. Senior Environmental Specialist

a) Carry out desktop review of project locations under consideration
b) Review field data and the results of the laboratory analysis
c) Review the classification of candidate mini grid sites into appropriate E&S category
d) Review ESMS prepared by developers, ESIAs, ESMP and other instruments as developed by consultants
e) Carry out consultations with regulatory agencies and key stakeholders
f) Coordinate with the social specialist
g) Coordinate and supervise monitoring, supervision and enforcement of safeguard policies of the Federal Ministry of Environment and those of the World Bank in the implementation of NEP
h) Supervise Safeguard consultants and review their reports and ensure such safeguard reports meet the requirements of the Federal Ministry of Environment and the World Bank
i) Coordinate Occupational Health and safety issues of NEP to meet best practices.

7. Senior Social Specialist

a) Take the overall responsibility of resettlement and social safeguards during the design, implementation and monitoring of the project in accordance with the World Bank Safeguard Policy Statement and relevant laws of the Federal Republic of Nigeria
b) Develop ToR for elaboration of relevant social safeguards due diligence instruments
c) Coordinate the activities of the consultant engaged to prepare relevant safeguards instruments and review all social safeguards related instruments

d) Develop and implement stakeholder consultations and communication programs, GRM, to ensure the full awareness and participation of affected persons and stakeholder agencies
e) Review and ensure implementation of the NEP grievance redress mechanism
f) Prepare monitoring reports on the project resettlement and social safeguards issues
g) Coordinate with other specialists like the Environmentalist and provide necessary safeguard inputs and approvals from relevant agencies for the overall project implementation
h) Provide support to implement, monitor and report on implementation of the gender action plan.

8. Monitoring and Evaluation/Database Management Specialist

a) Design and implement Monitoring and Evaluation framework/strategy/system of the project to assess timely and quality implementation of activities to achieve results (outputs, outcomes and impacts), including work plan, targets and indicators
b) Review, adopt, test and modify existing/available monitoring tools, techniques and methods to suit the specific needs of the company
c) Facilitate baseline study for benchmarks and assessing progress and achievements
d) Take the lead in establishing data collection procedures and database
e) Monitor all project activities and progress towards achieving the project output
f) Develop monitoring and impact indicator for project success
g) Design web-based M&E reporting system accessible to the Project Management Unit and partners
h) Develop targets and performance indicators to be included in the monitoring system for Project activities, annual reviews and special studies
i) Suggest strategies for improving the efficiency and effectiveness of the project by identifying bottlenecks in completing project activities and developing plans to minimize or eliminate such bottlenecks
j) Report monthly, quarterly, half-yearly and annual progress on all project activities.

9. Senior Commercial Specialist

a) Assess and provide inputs to the technical documents prepared by the Project Management Unit

b) Partake in financial and technical evaluation of bids of EPC contractors for EEP
c) Assess the feasibility of the proposed activities in terms of costs, implementation, staffing and risk
d) Registration of international service providers with relevant government agencies
e) Ensure attention to detail, efficient working and quality outputs from the NEP, PMU and contracted service providers.

10. Project Accountant (FPFMD seconded)

a) The Project Accountant, who will be supported by 2 – 3 other relevantly qualified accounting officers, will report to the Director, FPFMD and Head of PMU
b) Ensure accurate accounting records are kept in line with approved accounting standards and in line with the Bank and Government's regulations
c) Render periodic reports, (i.e. monthly/quarterly/annually) in the formats approved by the Banks
d) Draw up annual budgets and work plans together with the PMU
e) Ensure prompt release of funds, once approved, to beneficiaries
f) Liaison between the FPFMD, Central Bank of Nigeria and the PMU
g) Maintain relevant books and records for the Project
h) Ensure that all accounting records are updated promptly
i) Supervise the preparation of monthly Bank Reconciliation for all Bank Accounts
j) Together with the PMU management, maintain, develop and update the Financial Procedures Manual on a regular basis
k) Together with the PMU ensure strict adherence to installed internal control systems for all areas of project operation
l) Liaise with the internal/external auditors and follow up any audit queries/management letters.

11. Assistant Project Accountant (FPFMD seconded)

a) Responsible for issuing receipts, preparing Payment Vouchers and maintaining the cash records in accordance with laid down procedures
b) Maintain of Advance Payments Register and monitoring of advances settlement
c) Initiate payments on REMITA Platform
d) Ensure the Fixed Assets Register, Register of Imports, and other subsidiary ledgers are appropriately kept and up to date

e) Post of payment vouchers on Flexible Accounting Software
f) Keep appropriate records of prepayments and advances
g) Assist the Store Officer in ensuring appropriate documentation and adequate stock controls
h) Ensure that all accounting records are maintained in line with approved accounting standards and in line with the Bank's requirements and Government's regulations
i) Render periodic reports, (i.e. monthly/quarterly/annually) in the formats approved by the Bank
j) Ensure relevant books and records are maintained for the Project
k) Ensure that all accounting records are updated promptly
l) Ensure that monthly Bank Reconciliation statements are prepared for all Bank Accounts
m) Carry out other duties / special assignments as may be delegated by the Project Accountant.

12. Project Finance Officer (FPFMD seconded)

a) Manage the petty cash float and maintain the petty cash book
b) Ensure petty cash disbursements are appropriately and adequately documented
c) Initiate payments on REMITA Platform
d) Process IPSAS Trial Balance
e) Update the Mandate Register
f) Other activities as may be directed by the PA or the Head of PMU

13. Project Internal Auditor (FPFMD seconded)

a) Report to the Head of the PMU/Implementing Ministry/Agency
b) Ensure that there is adequate internal control system in the unit Should have unrestricted access to any Project documents, files, or minutes
c) Prepare annual audit work plan with emphasis on the identified project risk areas
d) Ensure that expenditure is in line with approved budget
e) Supervise/perform the internal audit function of all activities of the Project and review and evaluate the adequacy of the internal control structure as well as records and reports with a view to appropriately recommending improvements to the systems
f) Develop and monitor audit programs and procedures to cover all financial operations of the PMU
g) Point out irregularities to the Project Management without delay
h) Provide on the job training for Internal Audit staff

i) Regularly (and on ad-hoc basis) audit the accounts, records, assets and stores of the project
j) In conjunction with the Project Accountant, liaise with External Auditors to carry out the annual audit expeditiously and ensure that External Auditors' and Bank Mission's recommendations are implemented without delay.

14. Component 1 Coordinator Mini Grids

a) Liaise with the private sector to promote the Solar Hybrid Mini-Grid Component activities, including publicizing application requirements and guidelines. This will be done in close coordination with the Private Sector Liaison Officer
b) Review claim submission packages from the Grants Administrator and disbursement projections and providing feedback and advice as necessary
c) Serve as a member in the Selection Panel (SP) established to evaluate firms that are eligible to access the Minimum Subsidy Tender for Mini-Grids and Performance Based Grants Program
d) Act as the point of contact within the PMU for all grant applicants and program information
e) Coordinate activities between the Grants Administrator, REA PMU, and IVA, including calling for meetings and setting the agenda during work program review
f) Work closely with the web-based platform administrator on the online application materials to be made available to firms looking to apply to the mini grid program, and on the other operational requirements for tracking and reporting on monitoring and verification on the online platform
g) Work with the PMU on ensuring timely implementation according to the disbursement timelines and flagging any challenges with disbursement
h) Monitor project progress through the Grant Administrator reporting on milestone achievement by the grantees and flagging as well as responding to any issues that may arise in the process
i) Provide support to the Grants Administrator, PMU, and the IVA to streamline work processes and assist with schedule management
j) Build systems to improve project coordination and implementation.

15. Component 2 Coordinator SHS

a) Liaise with the private sector to promote SHS Component activities, including publicizing application requirements and guidelines, this will be done in close coordination with the Private Sector Liaison Officer

b) Review claim submission packages from the Grants Administrator and disbursement projections and providing feedback and advice as necessary
c) Serve as a member in the Selection Panel (SP) established to evaluate firms eligible to access the Market Scale Up Challenge Fund of the REA SHS grant program
d) Act as the point of contact within the PMU for all grant applicants and program information
e) Coordinate activities between the Grants Administrator, REA PMU, and IVA, including calling for meetings and setting the agenda during work program review
f) Work closely with the web-based platform administrator on the online application materials to be made available to firms looking to apply to the SHS program and on the other operational requirements for tracking and reporting on monitoring and verification on this platform
g) Work with the PMU on ensuring timely implementation according to the disbursement timelines and flagging any challenges with disbursement
h) Monitor project progress through Grant Administrator reporting on milestone achievement by the grantees and flagging as well as responding to any issues that may arise in the process
i) Provide support to the Grants Administrator, PMU, and the IVA to streamline work processes and assist with schedule management
j) Implement necessary processes to improve project coordination and implementation.

16. Component 3 Coordinator EEP

a) Oversee implementation of the EEP in accordance with the project development objectives
b) Provide project management (which includes obtaining necessary approvals, permits etc.) throughout the project cycle
c) Provide leadership towards achieving the objectives of the component
d) Coordinate activities of the program specialists
e) Manage key Stakeholders' throughout the Project Phase
f) Coordinate phased implementation of the EEP
g) Provide regular reports and updates on progress of the EEP to the Head PMU and MD REA
h) Promote the EEP towards providing relevant information to the public including potential bidders for the EPC and O&M Contracts for the implementation of the EEP Phase 2 projects
i) Participate in the review of EPC and O&M Contracts with successful bidders for the projects under the EEP.

17. Private sector liaison officers for Mini Grid

a) Act as relationship managers of the REA NEP with the private sector in designated areas
b) Provide necessary information to stakeholders that promotes the interests of the Program
c) Manage information dissemination to stakeholders
d) Own the query management process: process stakeholder enquiries, identify critical points of clarification, and coordinate REA/PMU specialist to resolve stakeholder enquiries
e) Promote awareness of NEP within the community
f) Identify and implement solutions to resolve any issues that may result in a dissatisfied customer
g) Ensure that the customer management system is updated with all conversations and agreements
h) Provide regular updates to PMU on station activities
i) Provide market intelligence by monitoring through surveys and other tools/ avenues for feedback.

18. NEP (4) desk officers in the state offices

a) Supervise NEP activities in the state offices as requested by the PMU
b) Facilitate of projects in each site and provide overall support to REA in the implementation of NEP
c) Engage in community dialogue with referrals, house to-house outreach and referrals to NEP related activities
d) Build and maintain relationships with key stakeholders across the community, including businesses, professionals and other community organizations
e) Address a broader array of grievance redress, health and development issues, including, but not limited to worker influx and other related health issues if the need arises
f) Establish awareness of NEP within the community
g) Establish awareness amongst individuals within the community on the activities of subproject investors and collection services
h) Liaise and strategize with the PMU, REA Zonal Officers and Promotion Officers in the regions
i) Coordinate a local volunteer team to help achieve key objectives
j) Coordinate site visits by potential mini grid developers, financiers and other stakeholders

The PMU will be supported by additional experts as well as seconders from the REA or will hire consultants on a need basis to backstop the implementation of NEP.

2.1.3. Federal Ministry of Finance

The responsibilities of the Federal Ministry of Finance (FMoF) include:

a) Sign Legal Agreement with the World Bank
b) Ensure effectiveness of NEP
c) Participate in Project missions.

2.1.4. Federal Ministry of Power, Works and Housing

The responsibilities of the Federal Ministry of Power, Works and Housing (FMPWH) include:

a) Enable the REA to carry out all necessary work required for the successful implementation of NEP
b) Provide policy directives to assist the REA in meeting objectives
c) Issue and promote policies related to renewable energy and rural electrification.

2.1.5. Federal Ministry of Environment

The responsibilities of the Federal Ministry of Environment include:

a) Provide approvals for project categorizations
b) Review and approve all safeguards instruments for NEP
c) Disclosure of safeguards instruments.

2.1.6. World Bank

The responsibilities of the World Bank include:

a) Sign Legal Agreement with the FMoF
b) Supervise the NEP
c) Review No Objection Requests and provide timely No Objection Letters where required and appropriate
d) Replenish NEP designated account as per REA's disbursement projections and consistent with the Bank's disbursement guidelines
e) Process requests for revision of the Legal Agreements if requested.

2.1.7. Technical Review Committee for Component 1 (Mini grid)

A Technical Review Committee, consisting of a Technical Specialist, Procurement Specialist, Commercial Specialist, Environmental Specialist, Social Specialist (all members of the PMU) and a Transaction

Advisor/international-technical advisor will have the responsibility of evaluating proposals under all funding windows, and providing technical and financial due diligence on the proposals/applications under consideration.

The Transaction/international-technical adviser will be engaged to provide required support to the Technical Review Committee. The Transaction Advisor will provide technical and financial due diligence on the proposals/applications under consideration, for example, by assessing whether the technical design and specifications of the proposed mini grid are feasible and whether or not the business plan demonstrates operational viability of the mini grid.

PMU will recruit a Transaction Advisor/international-technical advisor, who will report to the PMU.

2.1.8. Investment Committee for Component 1 (Mini grid)

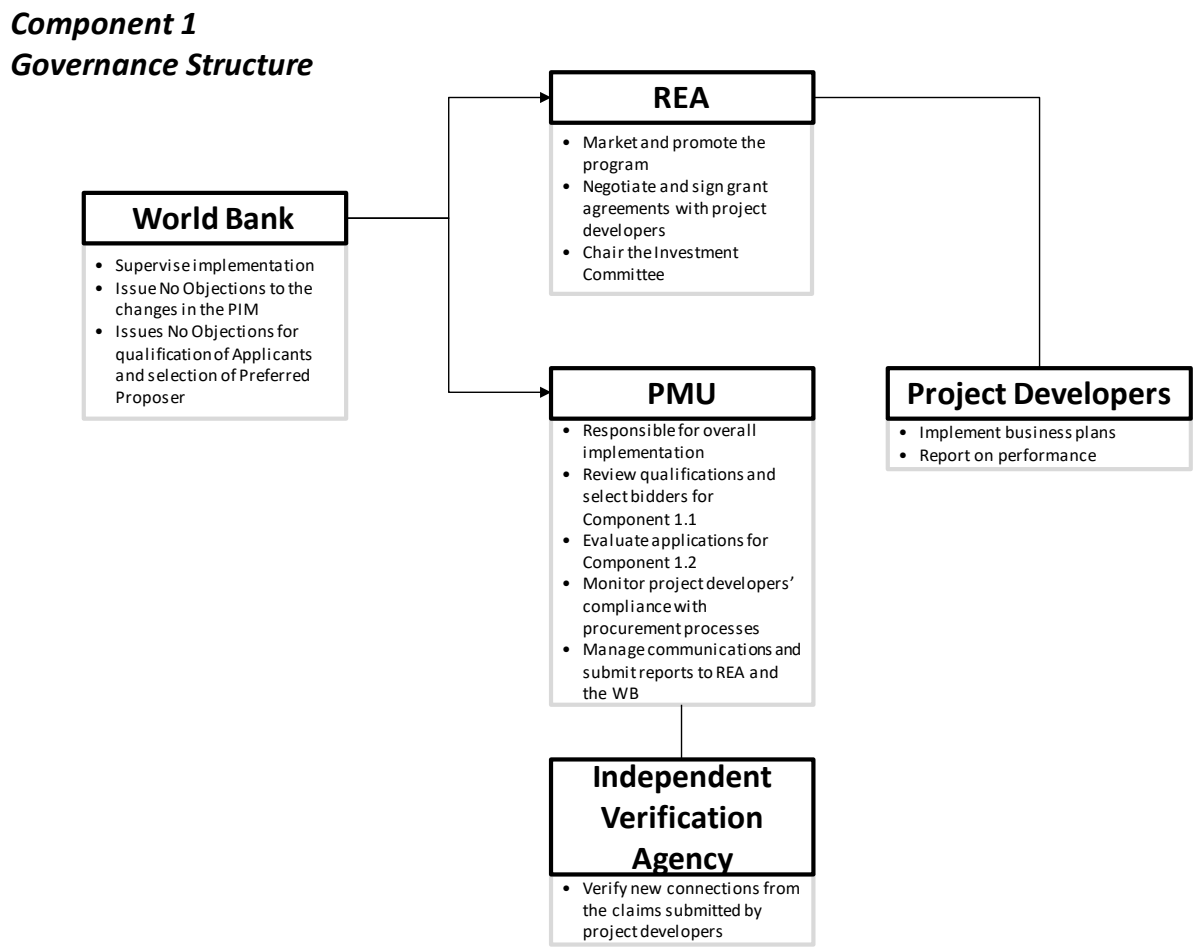
The Technical Review Committee will conduct administrative screening of proposals/applications for completeness and eligibility, as well as technical and financial appraisal of the proposals/applications. The official decision to provide grant support will be made by the Investment Committee, consisting of the Managing Director of the REA, the Head of the PMU, and an observer from a development partner.

The Investment Committee will make the funding decision based on the recommendations of the Technical Review Committee, and any deviation from the recommendations of the Technical Review Committee will require a written justification from the Investment Committee, to be retained in the project files.

2.2. Component 1: Parties and Responsibilities

The governance structure under Component 1 is depicted in the diagram below.

Figure 2: Governance Structure of Component 1



2.2.1. Rural Electrification Agency (REA)

The REA will be responsible for the following:

a) Market and promote the program and provide relevant information about program and procedures to Project Developers;
b) Negotiate and sign Grant Agreements with Project Developers
c) Chair the Investment Committee.

2.2.2. Project Management Unit

The PMU will be responsible for the following:

a) Confirm that the Project Developers meet eligibility and qualification criteria established in this Implementation Manual
b) Review Project Developer project applications and verify that the applications are complete and include evidence for meeting all qualification requirements
c) Liaise with Project Developers, where necessary to ensure completeness of applications/proposals

d) Monitor Project Developers' compliance with the Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF)
e) Monitor Project Developers' compliance with procurement procedures, as established here. If required, carry out procurement capacity assessment of the Project Developers, in consultation with the World Bank
f) Monitor Project Developers' compliance with Technical Specifications
g) Participate in the Technical Review Committee and Investment Committee
h) Review reports submitted by Project Developers and submit consolidated reports to the REA and the World Bank
i) Ensure Interim Unaudited Financial Reports for the Project are prepared and furnished to the World Bank within forty-five days after each calendar quarter
j) Manage Project Communications.

2.2.3. World Bank

The World Bank will be responsible for the following:

a) Supervise implementation of the NEP Component 1
b) Issue No Objections to the changes in the Project Implementation Manual
c) Issue No Objection Letters for qualification of Applicants (for the mini grid tender and the performance-based grant), for the selection of the Preferred Proposer (mini grid tender), and for the approval of site-specific technical applications (performance-based grant).

2.2.4. Independent Verification Agent (IVA)

The IVA will be responsible for the following:

a) Verify the new connections from the claims submitted by the mini grid developers
b) Submit completed verification reports to the PMU for review and further processing.

2.2.5. Project Developer

The responsibilities of the Project Developer are presented below.

Application and Tender Process

1. Prepare a *Performance Based Grant Application*, including a Corporate Business Plan and an Environmental and Social Management System

(ESMS). If eligible and qualified for the performance-based program, submit detailed technical designs for individual projects
2. Prepare Applications for Initial Selection and Proposals according to the guidelines issued in the Invitation for Initial Selection and Request for Proposals (RFP) to participate in the Minimum Subsidy Tender for Mini Grids Program
3. For both 1 and 2 above, provide evidence of new mini grid customer connection in order to satisfy requirements for disbursement of grants
4. If needed, prepare a *Pre-investment Grant Application Package* to access pre-investment support under the NEP Pre-investment Grant Program
5. Make sure that the grant application packages or proposals include all the information and documentation required for the PMU to verify that all requirements have been met.

Project Implementation

1. Sign Grant Agreements with the REA
2. Implement projects faithfully as described in the grant agreement
3. Implement the ESMP and RAP, if applicable.

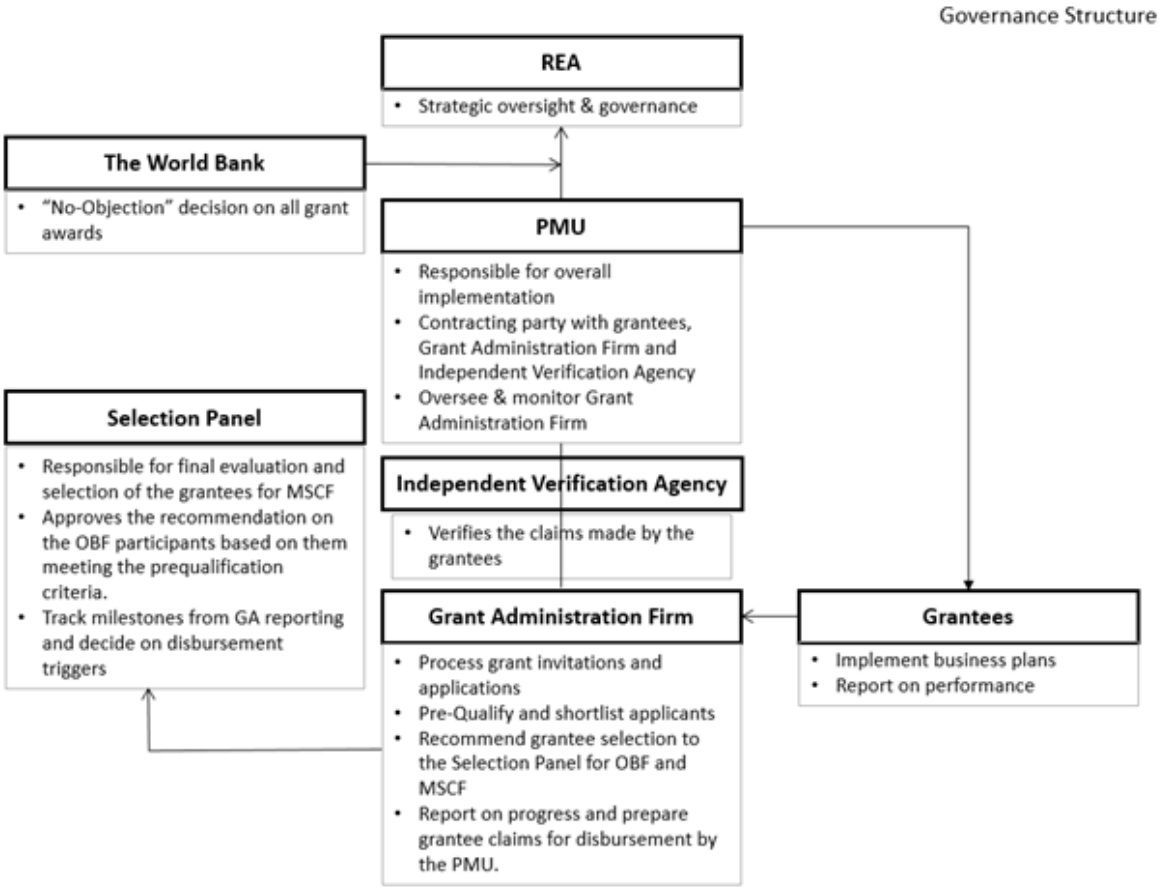
Reporting

1. Provide feedback as requested by the REA through questionnaires, evaluation workshops, etc. (the reporting burden on Project Developers shall be minimized to the extent possible)
2. Provide regular reports as specified in the Project Implementation Manual (procurement plan, Implementation plan, financial report, monitoring indicators etc.)
3. If needed, participate in discussions with the PMU, the REA and the World Bank throughout the project.

2.3. Component 2: Parties and Responsibilities

The governance structure under Component 2 is depicted in the diagram below.

Figure 3: Governance Structure of Component 2



2.3.1. Rural Electrification Agency

The REA will be supervising the implementation of this component. As the implementing agency of the NEP, the REA will delegate significant portions of the operating and investment decisions to the Grant Administration Firm, the Selection Panel, and the PMU.

2.3.2. Project Management Unit

The Project Management Unit's responsibilities include:

a) Process payments to Grantees
b) Monitor and evaluate of the activities supported under Component 2
c) Collate and present information across Component 2.

The PMU Accountant, appointed by the Accountant General in the Federal Project Financial Management Division (FPFMD), will process payments within 72 hours of receipt of the package containing the audited claims logs from the Grants Administrator. If there are delays with payments, the World Bank will review the funds flow arrangements and may recommend that the payments be handled by the Grants Administrator. This would require an

arrangement change under those circumstances discussed with Director, [FPFMD].

2.3.3. Grant Administration Firm (GA)

A Grant Administration Firm (GA) will report to the PMU and will be responsible for the following:

a) Administer the grants and track the grant allocations to the grantees
b) Receive applications submitted online by the private developers
c) Screen applicants against eligibility criteria for pre-qualification
d) Request and review reports of grantees on (i) claims requests for the output-based grants (ii) tracking of progress toward meeting the milestones and results achieved by the grantees
e) Assist the PMU with the contracting of grantees
f) Prepare disbursement forecasts and disbursement instructions to the PMU.

A panel for Screening and Evaluation (EP) will be established within the Grants Administration Firm. The EP will be responsible for the following:

a) Receive and process grant applications
b) Score applications for pre-qualification
c) Provide the Selection Panel with those applications that are eligible to receive grants from the Output Based Fund (OBF) and those applications that pre-qualify for evaluation for the Market Scale-up Challenge Fund (MSCF).

2.3.4. Independent Verification Agency (IVA)

An Independent Verification Agency (IVA), will be contracted by and report to the PMU, but will work closely with the Grants Administrator on the verification process. The IVA will be responsible for the following:

a) Verify the new connections/sales of solar products from the claims submitted by the grantees
b) Submit completed verification reports to the GA for review and further processing.

2.3.5. Selection Panel (SP)

The Selection Panel (SP) will select the companies to be awarded the MSCF upon recommendation of pre-qualified firms by the Grants Administrator.

Members of the SP will be appointed by the REA and will comprise of 3-4 members who will have in-depth knowledge of the business of SHS in the private sector covering all business models and all aspects of the business.

They will be selected in their personal and professional capacity and appointed after approval by the REA and no-objection by the World Bank.

The following skill sets, and experience must be present within the SP:

Table 5: Governance Structure of Component 2

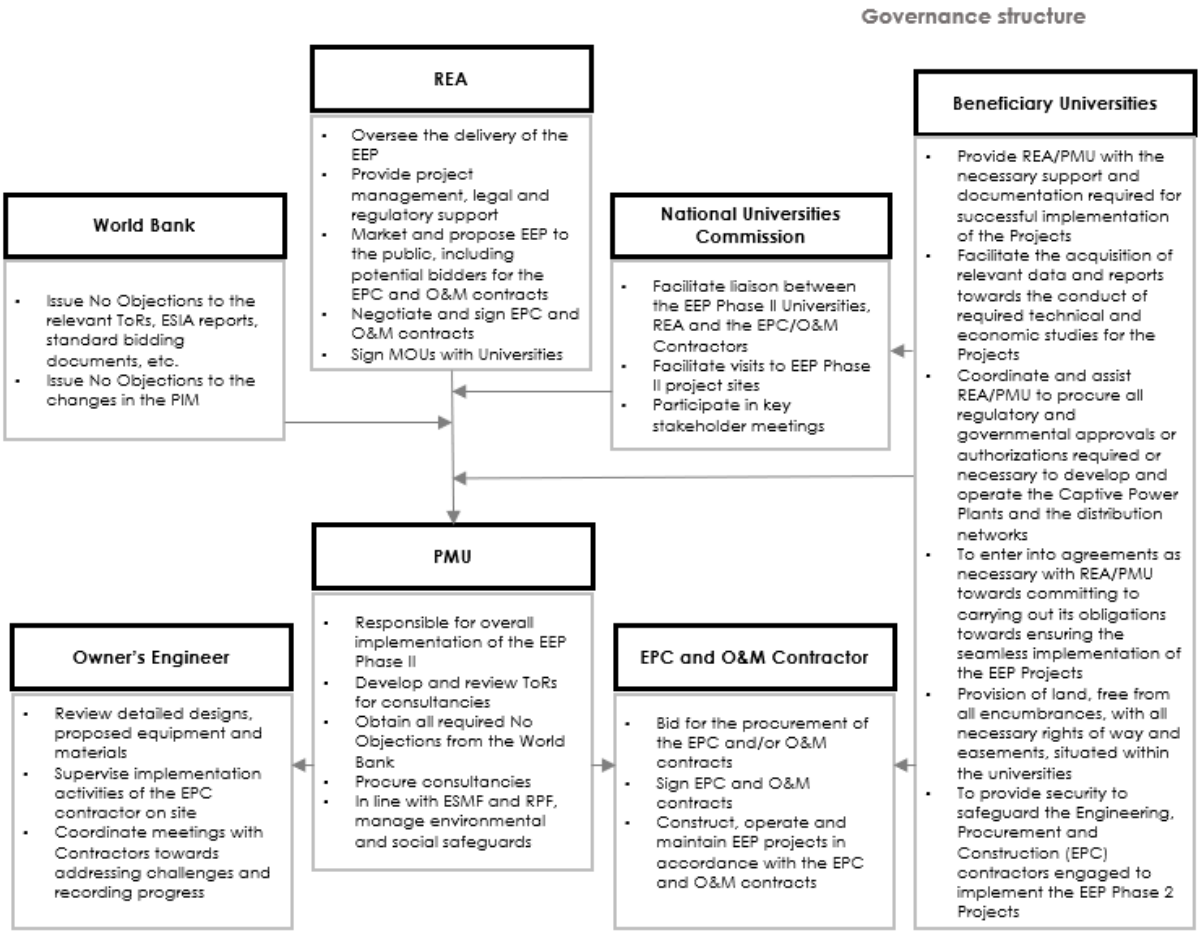
Skill / Experience	Description
SHS markets business expert	• Significant experience in the business of providing SHS to individual consumers in the private market • If not available, then experience in other Fast-Moving Consumer Goods industries or consumer financial services
Financial Management (Commercial)	• High-level professional financial training and experience of financial management in commercial enterprises involved in trade or services

The following roles will be assigned by REA within the SP:

Table 6: Governance Structure of Component 2

Role	Responsibility
Chairman of Selection Panel	• Leads the Selection process • Guides committee discussion on applications with varying evaluations. • Responsible for preparing and presenting decisions to the PMU • Evaluates applications
Administrator	• Responsible for tracking applications, capturing and collating evaluations, tracking and filing all documentation • Reports to the Chairman in relation to the Selection process. • Evaluates applications
Selection Panel Member	• Evaluates applications

2.4. Component 3: Parties and Responsibilities



2.4.1. Rural Electrification Agency

Towards implementing Phase 2 of the EEP, REA using the Project Management and Execution Plans as guides, will:

d) Oversee all the affairs of the EEP; by driving delivery of the Program's objective within the stipulated timeframes
e) Provide project management, legal and regulatory support (which includes obtaining necessary approvals, permits etc.) throughout project cycle
f) Manage key Stakeholders' expectations throughout the Project Phase
g) Provide technical support where required
h) Participate in and develop reports for baseline surveys
i) Market and promote the EEP towards providing relevant information to the public including potential bidders for the EPC and O&M Contracts for the implementation of the EEP Phase 2 projects

j) Negotiate and sign EPC and O&M Contracts with successful bidders for the projects under the EEP
k) Sign MOUs with the universities.

2.4.2. Project Management Unit

The responsibilities of the PMU will provide the following support in implementing the Phase 2 of the EEP:

a) Develop and review TORs for consultancies and submit to the World Bank for No Objection
b) Conduct procurement for consultancies
c) Provide technical assistance during conduct of energy demand audits for EEP Phase 2 beneficiary institutions
d) Coordinate baseline survey activities and review related reports
e) Conduct procurement activities towards procuring the EPC and O&M Contractors, which includes but is not limited to; development of procurement and legal documentation, issuing REOIs and standard bidding documents, evaluation of proposals and selection of successful bidders etc.
f) Obtain all required No Objections from the World Bank
g) In line with NEP ESMF and RPF, manage environmental and social safeguards, which includes developing and enforcing environmental and social guidelines, requirements on labour management, provide guidance and direction for ensuring environmental and social compliance, facilitate the process for obtaining environmental permits and approval, develop environmental and social due diligence reports, etc.
h) Review, ESIA and ESMP reports and provide comments for improvement
i) Review and implement applicable Resettlement / Livelihood Restoration Plan prior to commencement of work under the EEP
j) Manage the financial aspect of EEP Phase 2, which includes; coordinating the financial management assessment and disbursement plans
k) Participate in the Factory Acceptance Tests (FATs) of equipment procured
l) Supervise implementation of the NEP Component 3.

2.4.3. World Bank

The World Bank will be responsible for the following:

a) Issue No Objections to the changes in the Project Implementation Manual
b) Issue No Objections to relevant TORs, ESIA reports, standard bidding documents etc.

2.4.4. National Universities Commission

The National Universities Commission (NUC) will be responsible for providing the following support for the implementation of the EEP Phase 2:

a) Liaise with the EEP Phase 2 universities and teaching hospitals for communication between the Universities, REA and the EPC/O&M Contractors
b) Facilitate visits to EEP Project sites (including inspections, baseline surveys, energy audits, handover of project sites etc.)
c) Participate in key stakeholder meetings.

2.4.5. EPC and O&M Contractor

The EPC Contractors will:

a) Partake in the bidding process for the procurement of the EPC and O&M Contracts
b) Sign EPC and O&M Contracts
c) Construct, operate and maintain EEP projects as stipulated in the EPC and O&M Contracts.

2.4.6. Owners Engineer

a) Supervise implementation activities of the EPC Contractors on site (carry out site inspections to ascertain milestones covered)
b) Review detailed designs, proposed equipment and materials
c) Participate in the Factory Acceptance Tests (FATs) of equipment procured
d) Coordinate meetings with the Contractors towards addressing challenges and recording progress
e) Develop progress reports to REA and REA PMU.

3. Implementation

Component 1: Solar Hybrid Mini Grids

3.1. Component 1.1: Minimum Subsidy Tender for Mini Grids

3.1.1. Program Description

This section describes the different phases of the Minimum Subsidy Tender ('the Tender'), explains the Tender structure, and provides an overview of the Tender requirements.

Pilot Tender to Large-Scale Tender

The REA will implement a competitive Tender to develop mini grids on a build-own-operate model. This Component aims to catalyze mini grid deployment at scale and kick-start the market. Indeed, despite the scale of the energy access challenge in Nigeria, there is a limited number of private developers that are actively prospecting for potential mini grid projects.

The REA has prioritized 250 sites to be tendered under this Component. REA initially identified about 600 candidate sites with high potential for mini grid electrification, based on geo-referenced data on population clusters and sites, including population density, number and type of productive end-uses, and the presence of community infrastructure such as schools, water pumps and health facilities. The REA has also collected geo-referenced data on telecom towers, agro-processing, and other agricultural activities and their associated electricity demand. After conducting field surveys to validate the geo-referenced data, about 250 of these off-grid sites have been prioritized to be tendered, based on the population, productive loads and estimated load profiles, as part of this competitive tendering program.

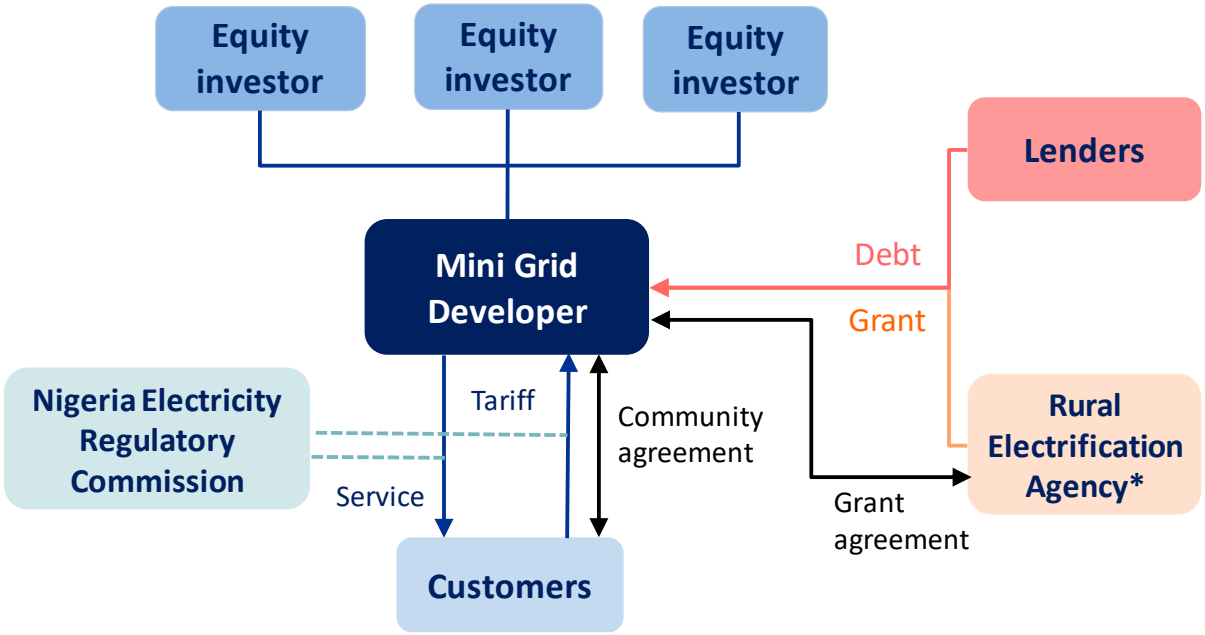
The Tender will be implemented in two phases. The first phase will be a pilot tender for 57 sites across four states: Niger, Sokoto, Ogun, and Cross River states. In the second phase, the tender will be scaled up to complete 250 sites across these four states. The sites will be packaged into four lots, one for each state, to promote economies of scale in procurement and construction, as well as cost efficiencies in operations and maintenance.

The Tender process will use an innovative online platform to disseminate information to Proposers at the RFP stage. Proposers will submit their Proposals on the platform, and the REA will use the platform to evaluate the proposals.

Tender Structure

Figure 4 shows the Mini Grid Business Structure under the Tender.

Figure 4: Mini Grid Business Structure under the Tender



* Technical compliance involves coordination with the Nigeria Electricity Management Services Agency (NEMSA)

The Mini Grid business structure is as follows:

- Mini Grid Developers are at the center of the structure, interacting with all other parties. The Mini Grid Developer will be a single entity, or a consortium, that signs a grant agreement with the REA following the RFP process
- Mini Grid Developers may form Special Purpose Vehicles (SPV) but this is not a requirement
- Customers are residential households and small and medium enterprises in each lot tendered
- Equity investors will provide equity to the Mini Grid Developer—some Mini Grid Developers may have identified equity investors at Initial Selection phase, but this is not required
- Lenders will provide the debt portion of the Capital Expenses (CAPEX)—some Mini Grid Developers may have identified lenders at the Initial Selection phase, but this is not required
- The REA will provide a subsidy to cover a part of the CAPEX. The Tender is on a least-subsidy basis. Proposers will determine the amount of subsidy they need to build the mini grids. The award is competitive, which means that the Proposers with lowest subsidy will be ranked highest

- The National Energy Regulatory Commission oversees tariff and service standards.

Overview of Requirements

For each lot, Proposers will submit a proposal. Proposals will be evaluated on the basis of quality (technical proposal) and price (minimum subsidy required) needed to build, own and operate a portfolio of mini grids to serve the sites of each lot. Each mini grid will be designed to serve a pre-defined number of connections, for a pre-defined quality of service, and Proposers will be required to propose a system design that best fits the demand profile.

Proposers may confirm a system design suggested by the REA for each site or justify another system design. The REA has defined four mini grid system designs for solar hybrid mini grids with battery storage, or diesel, or both. The REA will match each site to one or more suitable system designs, according to its load profile. Proposers will be allowed to offer system designs different than the one identified by the REA. However, any departure from the system design suggested by the REA will require a detailed explanation by the Proposer in its proposal. The REA reserves the right to reject proposals that do not conform to the system design it has ascribed. Proposers will have to comply with minimum technical requirements for the system design selected for each site.

All the mini grids developed through the Tender will be required to obtain a permit, and as such will benefit from the protection provided under the regulations. Under the regulations, mini grids above 100kW must obtain a permit. Mini grids below 100kW may choose to either register as an operator or apply for a permit. Registering as an operator allows for minimal regulation in terms of tariff-setting and compliance with technical codes and standards; but a permit offers more protection to investors by offering entitlement to compensation in the case that the main grid arrives, as per the Nigerian Electricity Regulatory Commission (NERC) regulations.[2]

Proposers will be required to submit, as part of their proposals, business plans that explain how they intend to stimulate demand during the daytime. Development of productive uses is considered critical to stimulating daytime demand for electricity and improving the sustainability of the mini grid.

3.1.2. Tender Implementation Process

The tender will be implemented in four phases, as illustrated in Figure 5 below.

[2] Nigerian Electricity Regulatory Commission Regulations for Mini Grids (2016).

Figure 5: Phases for Tender Implementation

The selection process will consist of a two-stage process:

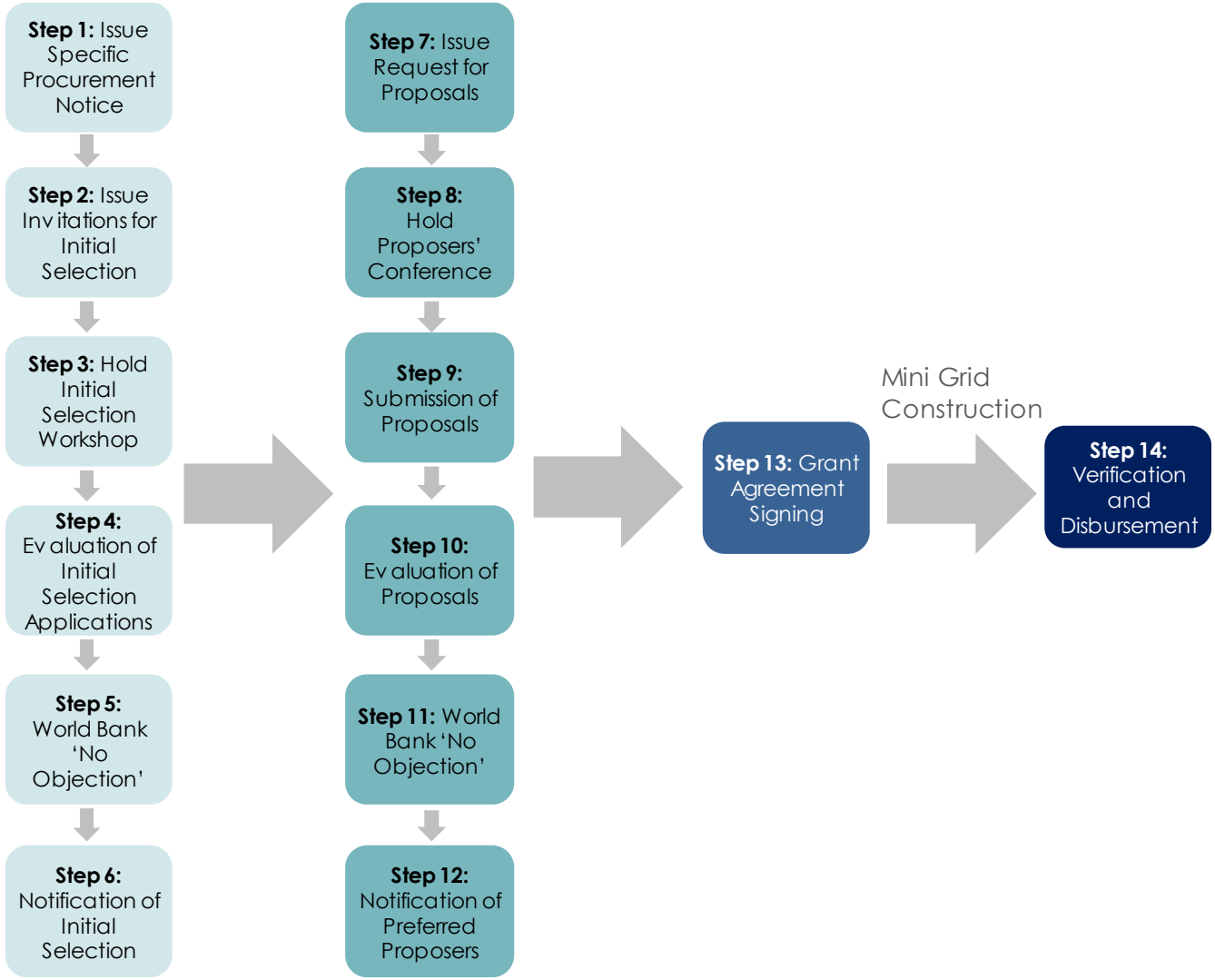
- **Invitation for Initial Selection:** at this stage, Applicants shall demonstrate that they are eligible and qualified (both technically and financially) to submit a Proposal for the minimum subsidy grant. The Applicants must prove they meet the initial selection criteria (see Section 3.1.2.1)
- **Request for Proposals:** Initially Selected Applicants will be able to submit Proposals in response to the issued RFP (see Section 3.1.2.3).

Once the Proposals have been evaluated, the PMU will notify Preferred Proposers. The rest of the tender implementation can be divided into two phases:

- **Grant Agreement:** The REA and the Preferred Proposers will negotiate. Once negotiations are successfully concluded, the REA will enter into a Grant Agreement with the Successful Proposer (see Section 3.1.2.3)
- **Verification and disbursement:** once the Grant Agreement is signed, the Successful Proposers will build the mini grids and connect their customers. The grant will be disbursed upon verification that end users have been connected to the network and have been provided satisfactory service (see Section 3.1.2.4).

A detailed scheme of all the steps in the application and approval process is illustrated in Figure 6 below.

Figure 6: Detailed Application and Approval Process for the Minimum Subsidy Tender



3.1.2.1. Invitation for Initial Selection

Step 1: Issue Specific Procurement Notice

In advance of the Invitation for Initial Selection, the REA will issue a Specific Procurement Notice to advertise the imminent launch of the Invitation. The Procurement notice will be advertised in media such as newspapers, radio, the internet, organizational networks, as well as the REA's website and social media platforms.

Step 2: Issue Invitation for Initial Selection

The REA will launch the Invitation for Initial Selection and set a deadline for submission by interested Applicants. A standardized Initial Selection Document will be issued and be available on REA's website at: http://rea.gov.ng/mini-grid-tender.

The Initial Selection Document (ISD) will contain the following:

- Instructions to Applicants (ITA)
- Initial Selection Data Sheet (ISDS)
- Initial Selection Criteria and Requirements
- Application Forms
- Eligible Countries
- Fraud and Corruption
- Scope of Employer's Requirements containing an overview of the opportunity, and a link to the REA's Environmental and Social Management Framework (ESMF)
- Appendix with the relevant legal and regulatory framework.

Applicants will have to submit their Initial Selection Applications in hard copy (for the first pilot tender).

Initial Selection Criteria

The initial selection criteria are divided into five categories:

- Eligibility—pertaining to the nature and type of company and individuals that may enter the program
- Historical contracts and litigation—pertaining to history of non-performance and litigation of the Applicant
- E&S compliance—requirement to show compliance with World Bank and REA safeguards
- Technical capacity—relating to the experience of the Applicant

- Financial capacity—relating to the Applicant's capacity to get financing.

The initial selection process is a two-step process:

- First, all Applicants will be assessed against the pass/fail criteria listed in Table 7
- Second, if the number of Initially Selected Applicants if above 16, the REA will apply the scoring criteria listed in Table 8 , to score and rank the Applicants that passed the pass/fail criteria, and retain maximum 20 Initially Selected Applicants.

At the Initial Selection stage, Applicants are selected to submit a proposal for any one lot only. At the RFP stage, any Initially Selected Applicant wishing to submit a proposal for more than one lot will be required to prove that it meets the aggregate financial capacity requirements for the combination of lots it submits a Proposal for.

Table 7: Pass/Fail Initial selection criteria for the mini grid Tender

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
Eligibility	The Applicant must be either: • A single legal entity • A consortium that is incorporated as a legal entity in Nigeria, having the capacity to enter into a contract under the laws of the Federal Republic of Nigeria, or • An unincorporated consortium whose members are jointly and severally liable	• For a single legal entity: – Articles of Incorporation or – Documents of Registration of the entity, or equivalent documents of constitution • For an incorporated consortium: Consortium Agreement, stating that the members are jointly and severally liable • For an unincorporated consortium: Letter of intent to form a Consortium, stating that the members are jointly and severally liable	Pass/fail	Applicant
Eligibility	The Applicant has no conflict of interest	Signed application submission letter certifying that no any officer of the relevant committees of REA or REA Board member is a former or present director, shareholder, or has any pecuniary interest in the Applicant	Pass/fail	Each member of a consortium or single legal entity
Eligibility	The Applicant has not been declared ineligible by the World Bank and has not been excluded as a result of prohibition in the Federal Republic of Nigeria laws or official regulations against commercial relations with the Applicant's country, or by an act of compliance with UN Security Council resolution	Signed application submission letter, with self-certification and completed World Bank standard forms	Pass/fail	Each member of a consortium or single legal entity
Historical contracts	The Applicant has declared information related to its history of litigation and has	Completed World Bank template with history of litigation and any pending	Pass/fail	Each member of a consortium or single legal

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
and litigation	declared any pending litigation	litigation, if any		entity
Historical contracts and litigation	The Applicant has declared information related to history of non-performing contracts	Completed World Bank template with a list of non-performing contracts since January 2014, if any	Pass/fail	Each member of a consortium or single legal entity
E&S compliance	The Applicant must be compliant with the REA's and the World Bank's Environmental, Social, Health, and Safety (ESHS) standards	Declaration that the Applicant has a clean track record on E&S compliance shown by no environmental or labor violation or fines since January 2016	Pass/fail	Each member of a consortium or single legal entity
Technical capacity	Experience in developing mini grids	Evidence that the Applicant has designed and built at least 2 mini grids* of at least 10kW in generation capacity each since January 2014, and that these mini grids are still in operation* at the time of issuance of the initial selection document, shown by: • A description of the mini grid systems (size, generation technology, number of customers, location, year of commercial operations date (COD), and annual gross generation) • References (names, contacts)	Pass/fail	At least one member of a consortium or single legal entity
Technical capacity	Experience in operating mini grids	Evidence that the Applicant has operated at least 2 mini grids* of at least 10kW in generation capacity each since January 2014, and these mini grids are still in operation* at the time of issuance of the initial selection document, shown by: • A description of the mini grid systems (size, generation	Pass/fail	At least one member of a consortium or single legal entity

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
		technology, number of customers, location, year of COD, and annual gross generation) • References (names, contacts)		
Financial capacity	Financial position	Good financial position shown by audited financial statements for the past 3 years (2016, 2017, 2018)	Pass/fail	Each member of a consortium or single legal entity
Financial capacity	Liquid assets available	Minimum USD1,000,000 or its NGN equivalent in liquid assets as shown in the financial statement for 2018		Single entity or all members of consortium combined
Financial capacity	Ability to secure debt	Applicant has successfully raised at least USD 5 million (or its NGN equivalent) for at least 2 projects in infrastructure since January 2014. For these projects, the Applicant should provide: • A brief description of the project and of the equity amount raised • References (names and contact information)	Pass/fail	Single entity or all members of consortium combined

*** Definitions**:

- For the purpose of evaluating Applicants' experience, 'mini grids' are defined as systems with:
  - Generation capacity between 10kW and 10MW, and
  - A network that distributes power to two or more customers.
- Mini grid in 'operation now' is defined as:
  - The customers are served by the mini grid, or

- The customers are served by the main grid, if the main grid arrived in the community previously served by the mini grid and the assets were bought out by the utility or decommissioned.

Table 8: Scoring criteria for the mini grid Tender

Category	Criterion	How the evidence will be evaluated	Which entity must satisfy the criteria
Technical capacity	Number of mini grids of at least 10kW in generation capacity developed since January 2014 and still in operation at the time of issuance of the Initial Selection document above 2	Score increases with each additional project above 2	Single entity or all members of a consortium combined
Technical capacity	Number of mini grids of at least 10kW in generation capacity operated since January 2014 and still in operation at the time of issuance of the Initial Selection document above 2	Score increases with each additional project above 2	Single entity or all members of a consortium combined
Financial capacity	Liquid assets, net of the Applicant's other commitments that exceed USD 1 million or its Nigerian Naira equivalent	Score increases for each additional 0.5 million USD	Single entity or all members of a consortium combined
Financial capacity	Number of infrastructure projects for which the Applicant has successfully raised debt for an amount above USD5 million or its Nigerian Naira equivalent since January 2014 above 2	Score increases with each additional project above 2	Single entity or all members of a consortium combined

Step 3: Invitation for Initial Selection Workshop

After the issue of the Initial Selection Document, the REA will hold an Initial Selection Workshop. The workshop will provide an overview of the Tender, will explain the initial selection criteria and process, and will address concerns of the Applicants.

Minutes of the Initial Selection Workshop will be electronically transmitted promptly to all Applicants, including those not present at the Initial Selection Workshop, and published on REA's website. The minutes will include the text of the questions raised without identifying the source, and the responses given, together with any responses prepared after the meeting.

Step 4: Evaluation of Initial Selection Applications

The PMU will be responsible to evaluate the Initial Selection Applications. The PMU will evaluate the Initial Selection Applications within 20 business days of the submission deadline using the initial selection criteria defined in Table 7.

While reviewing the Initial Selection Applications, the PMU may perform background checks on any information supplied by the Applicant, especially the Applicant's level of compliance with applicable laws (e.g., registration, taxation, etc.). The PMU may also decide to undertake visits to reference projects of Applicants for in-depth assessments.

Step 5: World Bank No Objection

The PMU will submit the results of the evaluation to the World Bank for No Objection upon its evaluation of Initial Selection Applications. The World Bank will take one of the following two possible actions:

a) Issue a No Objection letter
b) Inform the REA that it cannot issue the No Objection Letter and clearly state the reasons.

The World Bank will respond to the request for No Objection within 10 business days.

Step 6: Notification of Initial Selection

The PMU will, within 5 business days of receipt of the response from the World Bank, notify Qualified Applicants that they are Qualified and will be invited to submit a Proposal. The PMU will also notify Applicants that are not qualified within 5 business days.

3.1.2.2. Request for Proposals

Step 7: Issue Request for Proposals

All Initially Selected Applicants will be asked to submit a Proposal. Proposers will be invited to submit separate Proposals for each lot. Proposers will not be allowed to select specific sites within a lot but will have to submit Proposals for the whole lot. Proposers wishing to offer any price reduction in terms of subsidy requirement for the award of more than one lot will be required to indicate so in their Proposal.

The technical requirements for each lot will be articulated in the Request for Proposals (RFP). These will include distribution network up to grid code; certified equipment; pre-paid metering systems; and a certain number of productive and consumer appliances to be made available to mini grid customers.

The initial selection criteria defined in Table 7 should hold through the RFP stage until the award of the grant agreement to the Successful Proposer. At the RFP stage, a bid bond may be required to ensure that the Preferred Proposer is ready to negotiate in good faith based on its Proposal.

Proposers will be encouraged to partner with local companies. At the RFP stage, there will be careful consideration of efficient solutions that reduce costs to customers, notably using local resources, in compliance with World Bank procurement processes.

Step 8: Hold Proposers' Conference

A Proposers' Conference will be held after the RFP has been issued. This Conference will allow the bidding process to be transparent and to address any concerns of the Proposers. The Proposers' Conference will tackle; the market potential for each lot in the RFP; the framework (legislation, policy, regulation and support mechanisms) that applies to this specific RFP; the rules of the competitive process, including the selection criteria; and the legal framework used to formalize the obligations between the REA and the Successful Proposers. The full features of the web-based platform that will be used to conduct this tender process will also be explained at the Proposers' Conference.

Minutes of the Proposers' Conference will be electronically transmitted promptly to all Applicants, including those not present at the Initial Selection Workshop, and published on REA's website. The minutes will include the text of the questions raised without identifying the source, and the responses given, together with any responses prepared after the meeting.

The REA will organize group visits to the sites where the mini grids are to be installed and convene meetings with community leaders. The Proposers applying for the Tender may be required to seek approval from the REA before embarking on site visits. The costs of visiting the sites shall be at each Proposer's own expense.

Step 9: Proposal Submission

After the Proposers' Conference, the REA shall invite all Initially Selected Applicants to submit Proposals through the web-based platform. Load date and other site-related data (e.g., project coordinates, site statistics, load profiles) will be uploaded on the web-based platform and made available to Initially Selected Applicants. Proposals will be to supply electricity to communities in each lot while meeting the minimum technical requirements for the system design appropriate for each site. Proposers will be provided with login information to view the information on the Odyssey platform and given a deadline within which to prepare and submit their proposals in the format presented on the platform. Proposers will need to submit a technical proposal and a financial proposal.

Subject to proper justification to be further detailed in the RFP the PMU may, before the selection of the Preferred Proposers, reject any or all Initial Selection Applications and/or proposals submitted by all Proposers for any lot. The PMU may also terminate the entire process without incurring liability with respect to the expenses incurred by Proposers in preparation of documents in response to either the Initial Selection or the RFP.

Step 10: Evaluation of Proposals

The evaluation of Proposals will be in three steps:

- **Administrative review**: the PMU shall evaluate the completeness of the Proposals submitted within 5 business days of submissions. The PMU may at its discretion ask Proposers for missing documents
- **Technical Committee Review**: the Technical Committee shall review and rank the proposals according to the selection criteria within 20 business days of the administrative review. The PMU will prepare an executive summary of the winning proposals and a reserve list of non-selected Proposers by order of ranking for each lot. The Technical Committee will submit the executive summary and reserve list for approval by the Investment Committee
- **Investment Committee Approval**: the Investment Committee will approve the Technical Committee's evaluation within 10 business days. Any deviation from the recommendations of the Technical Review

Committee will require a written justification from the Investment Committee, to be retained in the project files.

Step 11: World Bank No Objection

The Technical Committee will seek no-objection from the World Bank prior to making any awards. The World Bank shall provide a No-objection or a letter stating that it cannot issue a No Objection stating the reasons within 10 business days of receipt from the Investment Committee.

Step 12: Notification of Preferred Proposers

The PMU will notify Preferred Proposers that they are invited to negotiate within 5 business days of receipt of the response from the World Bank. The selection decision will be communicated to Preferred Proposers through the web-based platform.

The PMU will then notify unsuccessful Proposers of the outcome of their proposals within 5 business days.

In the event that any of the Preferred Proposers withdraw, negotiations fail, or conditions precedent to contracts' effectiveness are not fulfilled within the period specified in the proposal, the next highest scoring Proposer on the reserve list shall be invited to negotiate. Until the Proposers on this reserve list have been exhausted, the REA shall not issue a new RFP or initiate a fresh procurement process on the lot.

3.1.2.3. Grant Agreement Signing (Step 13)

The REA shall then negotiate with each Successful Proposer in order to enter into a Grant Agreement. The Grant Agreement commits the REA to providing the Successful Proposers with the subsidy amount specified in their winning proposal for each lot, provided there is evidence of successful connection.

Proposers should expect a bid security and a performance security required as part of the process. The bid security will ensure Proposers' ability to negotiate on the proposed terms. The performance security will ensure that Successful Proposers comply with project agreements. The bid security will be returned to the successful bidder upon signing of the Grant Agreement and the successful Proposers providing a performance security. If a Successful Proposer withdraws its proposal during the period of proposal validity or fails to enter into the Grant Agreement and furnish the performance security; its bid security may be forfeited.

3.1.2.4. Verification and Disbursement (Step 14)

The grant will be disbursed after the end users have been connected to the network and the Project Developer has provided proof of customer connection (metering data for the first three months of consumption).

The Project Developer need not submit proofs of customer connection for all customers in one submission and may instead submit them over time as connections are achieved. The grant will be disbursed according to the schedule on which proofs of customer connection is approved. However, submission of evidence of customer connection may not be made more frequently than once per month.

The REA will maintain a roster of consultants, selected according to terms of reference prepared by the REA in consultation with the World Bank, for design verification, installation verification, and spot checks to ensure installation compliance. If the project has not been commissioned (households not receiving power) within the time period noted in the Grant Agreement, performance security may be forfeited.

Project Developers that receive subsidies must ensure, as stipulated in the Grant Agreement, that the REA's independent verification consultants have access to inspect projects, including goods, works, sites, and construction. This includes inspection of physical assets and relevant documentation. The REA will follow up on any design and installation irregularities discovered through these independent verification exercises and seek remedial action from the Project Developer. If the REA concludes that the remedial action is inadequate, the performance security may be forfeited.

3.2. Component 1.2: Performance-Based Grant Program

This section describes the terms and conditions of the Performance-Based Grant (PBG) Program, the structure of the mini grid business including the grant arrangement, and an overview of the requirements.

3.2.1. Program Description

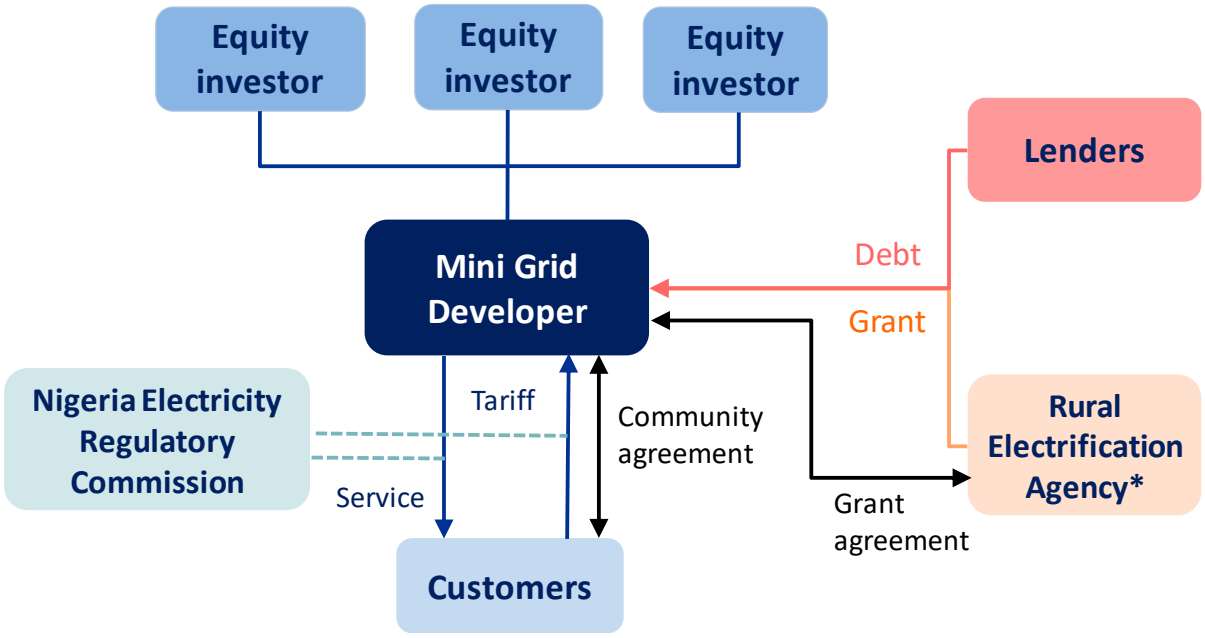
A PBG will be available for eligible projects on a rolling basis. Initially, the grant will be set at USD350 per new connection to offset part of the capital cost of mini grid projects. Price discovery from the competitive tender program is expected to provide a better understanding of prevailing market fundamentals, and the amount of USD350 per connection may be adjusted upwards or downwards, with the World Bank's No Objection.

The minimum grant amount eligible shall be USD10,000. and shall be calculated based on the number of new connections. Grant applications will be considered on a first-come first-served basis.

Mini Grid Business Structure under PBG Program

Figure 7 illustrates the structure of a mini grid business that has received a PBG, including the contractual arrangements between mini grid developer and other stakeholders.

Figure 7: Mini Grid Business Structure under the PBG Program



* Technical compliance involves coordination with NEMSA

The mini grid business structure is as follows:

- Mini Grid Applicants are at the center of the structure, interacting with all other parties. The Mini Grid Developer will be a single legal entity, or a Consortium, that signs a grant agreement with the REA
- Mini Grid Developers may form Special Purpose Vehicles (SPV), but this is not a requirement
- Customers are any customers targeted by the Mini Grid Developer, in the sites of its choice
- Equity investors will provide equity to the Mini Grid Developer
- Lenders will provide the debt portion of the Capital Expenses
- The Rural Electrification Agency will provide a fixed subsidy of USD350/connection

- The National Energy Regulatory Commission oversees tariff and service standards.

Overview of Requirements

Projects may be eligible for a PBG based on the following principles:

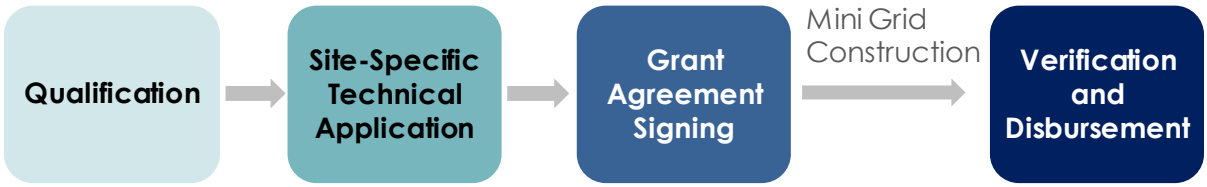
- The initial focus of the program is on solar hybrid systems. Other renewable energy technologies may at a later stage be accepted by the REA on a case-by-case basis
- Initially, only mini grid projects in unserved areas will be eligible. Mini grid projects in underserved areas may be considered for a PBG at a later stage.

An Applicant will be eligible to apply for additional PBGs if it has completed previous projects according to the terms of the Grant Agreement. Where this is not the case, the Applicant will not be considered for additional PBGs.

3.2.2. Performance-Based Grant Application and Approval Process

Applications for PBGs will be accepted on a rolling basis throughout the year once the program is active and until available funds are exhausted. Figure 8 gives an overview of the 4 phases of the PBG process.

Figure 8: Overview of PBG Process Application and Approval Process for Performance-Based Grants



The Application consists of a two-stage process:

- **Qualification stage**: at this stage, Applicants submit a Program Application. Applicants must demonstrate that they are eligible and qualified (both technically and financially) to enter the PBG Program. The Applicant must also submit a business plan detailing, among others, the company's business model and the company's corporate financial plan (see Section 3.2.2.1)
- **Site-specific technical application stage**: Qualified Applicants will be able to submit their grant application for specific sites (see Section 3.2.2.2).

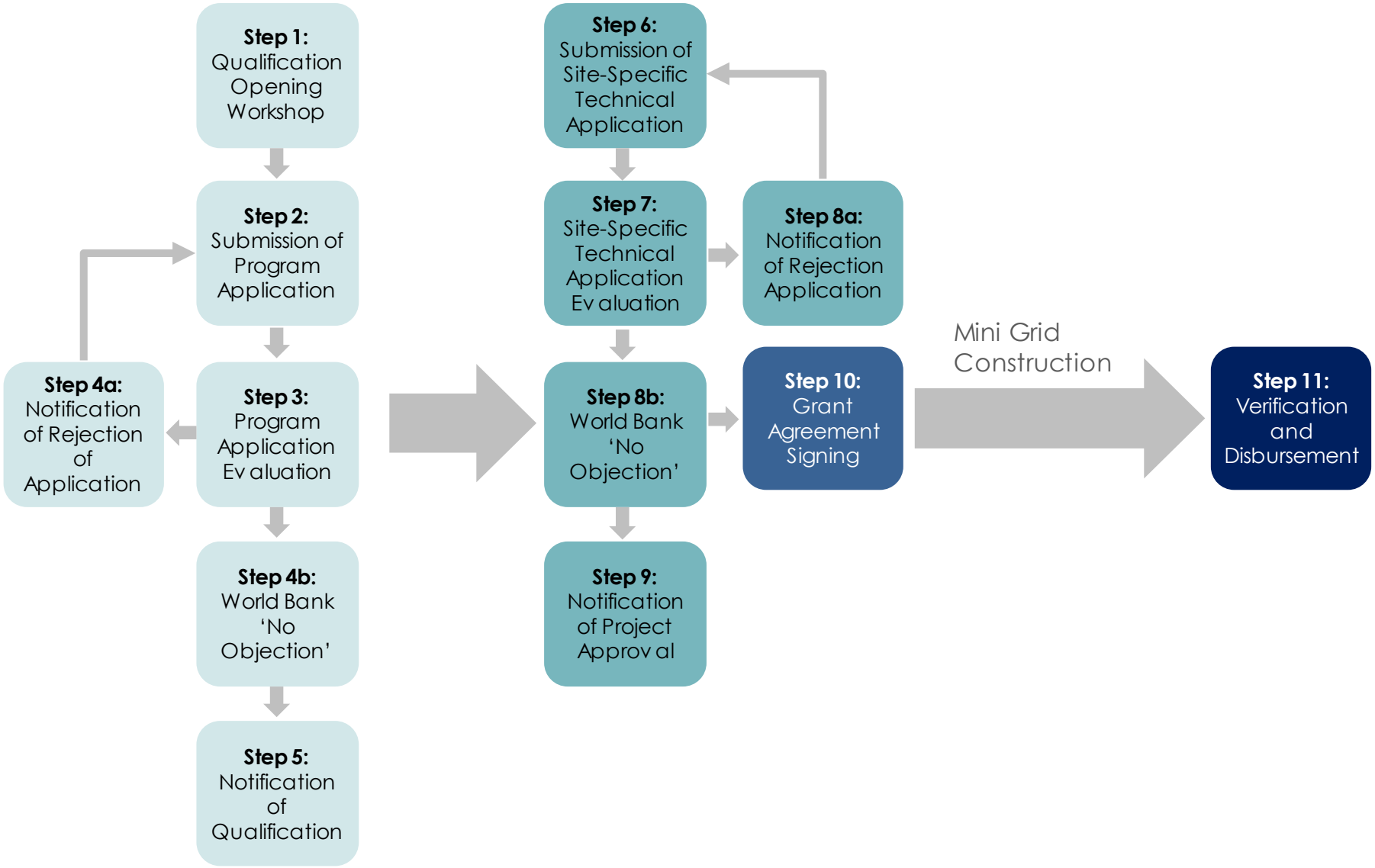
Once the Applicant's application has been approved, the process continues in two further stages:

- **Grant agreement signing**: the REA and the Applicant will sign a grant agreement (see Section 3.2.2.3)
- **Verification and disbursement**: once the grant agreement is signed, the grantee will build the mini grid. Grants will be disbursed upon verification that customers have been connected to the network and have been provided satisfactory service (see Section 3.2.2.4).

A detailed scheme of all the steps in the application and approval process is illustrated in Figure 9 below. Depending on the volume of applications, the process from submitting the Program Application to the Notification of Project Approval is expected to be completed within 75 business days.[3]

[3] This timeline may vary depending on the volume of applications

Figure 9: Detailed Application and Approval Process for Performance-Based Grants



3.2.2.1. Qualification Stage

Step 1: Qualification Opening Workshop

The REA will open the qualification stage on the web-based platform and hold a workshop to mark the opening of the PBG program. The objective of the workshop will be to present the PBG program, provide a training on the web-based platform, and provide a training on the environmental and social requirements of the program.

Step 2: Submission of Program Application

Applicants will complete and submit their PBG Program Application on the customized web-based platform. Applicants will need to upload all the required documentation on the platform.

Interested Applicants should first obtain login details to the web-based platform by filling in a form on REA's website at the following address: http://rea.gov.ng/rea-nep-performance-based-grant-program-registration/. Applicants will be provided a login to access REA's NEP Portal at the following address: https://www.odysseyenergysolutions.com/choose-your-portal

Qualification criteria

The qualification criteria are divided into five categories:

- Eligibility—pertaining to the nature and type of company and individuals that may enter the program
- E&S compliance—requirement to show compliance with World Bank and REA safeguards
- Technical capacity—relating to the experience of the Applicant
- Financial capacity—relating to the Applicant's capacity to get financing
- Business plan—Applicants will have to submit a business plan that complies in form and substance with the template.

Table 9 lists the eligibility and qualification criteria, along with the evidence that Applicants should provide to prove that they meet the criteria.

Table 9: Qualification criteria for the PBG

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
Eligibility	The Applicant must be either • A single legal entity, duly registered as a legal entity in Nigeria, having the capacity to enter into a contract under the laws of the Federal Republic of Nigeria or • A consortium that is incorporated as a legal entity in Nigeria, having the capacity to enter into a contract under the laws of the Federal Republic of Nigeria or • An unincorporated consortium whose members are jointly and severally liable	• For a single legal entity: – Articles of Incorporation or – Documents of Registration of the entity • For an incorporated consortium: Articles of Incorporation or Documents of Registration of the consortium, stating that the members are jointly and severally liable • For an unincorporated consortium: letter of intent to form a Consortium, stating that the members are jointly and severally liable	Pass/fail	Applicant
Eligibility	Applicant and individuals* who control it, or (in the case of a consortium) any of its members must be fit and proper, and compliant with Nigerian laws. This means that the Applicant: • Is not in receivership, or the subject of any form of insolvency or bankruptcy proceedings • Has not been the subject of	• Tax clearance certificate(s) for the last two (2) years • Certificate that the Applicant and (in the case of a Consortium), each Consortium Partner is up to date on its pensions, social security contribution under the relevant laws; or has fulfilled all the equivalent requirements in its country of incorporation	Pass/fail	Each member of a consortium, and each individual

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
	a judgment which has the force of 'res judicata' for fraud, corruption, involvement in a criminal organization, or any other illegal activity • Has not been blacklisted by any national government • Has not had any director who has been convicted in any country for any criminal offence relating to fraud or financial impropriety in any country • Has fulfilled all its obligations to pay taxes • For Applicants already incorporated in Nigeria: has fulfilled its requirements to pay pensions, and social security contributions under the relevant laws; or has fulfilled all the equivalent requirements in its country of incorporation	• Signed Application Submission Letter, declaring that the Applicant is fit and proper		
Eligibility	The Applicant has no conflict of interest	Signed application submission letter certifying that no any officer of the relevant committees of REA or REA Board member is a former or present director, shareholder, or has any pecuniary interest in the Applicant	Pass/fail	Each member of a consortium or single legal entity

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
Eligibility	The Applicant has not been declared ineligible by the World Bank and has not been excluded as a result of prohibition in the Federal Republic of Nigeria laws or official regulations against commercial relations with the Applicant's country, or by an act of compliance with UN Security Council resolution	Signed application submission letter, with self-certification and completed World Bank standard forms	Pass/fail	Each member of a consortium or single legal entity
E&S compliance	The Applicant must be compliant with the REA's and the World Bank's Environmental, Social, Health, and Safety (ESHS) standards	• Declaration that the Applicant has a clean track record on E&S compliance shown by no environmental or labor violation or fines since January 2016 • Completed Environmental and Social Management System (ESMS) Template	Pass/fail	Each member of a consortium or single legal entity
Technical capacity	Experience in developing mini grids	Evidence that the Applicant has designed and built at least 1 mini grids of at least 10kW* in generation capacity since January 2014, and that these mini grids are still in operation now*, shown by: • A description of the mini grid systems (size, generation technology, number of customers, location, year of COD, and annual gross generation) • References (names, contacts)	Pass/fail	All members of a consortium combined or single legal entity

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
Technical capacity	Experience in operating mini grids	Evidence that the Applicant has operated at least 1 mini grid* of at least 10kW in generation capacity since January 2014, and this mini grid is still in operation now*, shown by: • A description of the mini grid systems (size, generation technology, number of customers, location, year of COD, and annual gross generation) • References (names, contacts)	Pass/fail	All members of a consortium combined or single legal entity
Financial capacity	Total assets exceed total liabilities for the past two financial years	Financial statements* for the past two financial years	Pass/fail	Each member of a consortium or single legal entity
Financial capacity	Ability to secure equity	• Liquid assets of at least USD25,000 or its Nigerian Naira equivalent as at 31st December 2018, net of the Applicant's other commitments; **and** • Experience in raising equity, shown by having raised successfully at least USD25,000 or its Nigerian Naira equivalent in equity for at least one (1) project in infrastructure since January 2014. For this project, the Applicant should provide: – A brief description of the project and of the equity	Pass/fail	All members of a consortium combined or single legal entity

Category	Criterion	Evidence	How the evidence will be evaluated	Which entity must satisfy the criteria
		secured – References (names and contact information).		
Financial capacity	Ability to secure debt	Experience in raising debt, shown by having raised successfully at least USD75,000 or its Nigerian Naira equivalent in debt for at least one (1) project in infrastructure since January 2014. For this project, the Applicant should provide: – A brief description of the project and of the debt amount raised – References (names and contact information).	Pass/fail	All members of a consortium combined or single legal entity
Business Plan	The Applicant has a business plan	Business plan compliant with the template	Pass/fail	Applicant

*** Definitions**:

- 'Individual' is defined as anyone who is able to control through ownership or any other way the entity
- Financial statements: these should be audited financial statements, unless the entity is not required by Law to have audited financial statements
- For the purpose of evaluating Applicant's experience, 'mini grids' are defined as systems with:
  - Generation capacity between 10kW and 10MW, and
  - A network that distributes power to two or more customers
- Mini grid 'in operation now' is defined as:
  - The customers are served by the mini grid

- The customers are served by the main grid, if the main grid arrived in the community previously served by the mini grid and the assets were bought out by the utility or decommissioned

Step 3: Program Application Evaluation

The PMU will evaluate the Program Application within 20 days of submission of the Application. The PMU will follow these steps:

- **Notification of receipt**: After receiving the Program Application, the PMU will acknowledge receipt of the Application
- **Administrative review**: The PMU will first evaluate completeness of the documents received within 5 days of submission. The PMU may at its discretion ask Applicants for missing documents
- **Application evaluation**: The PMU will then evaluate the Program Application to verify eligibility and qualification of the Applicant within 15 days of the administrative review.

For the first batch of Applicants, the PMU will start evaluating the Applications within 10 business days of opening the Qualification stage. Thereafter, the PMU will evaluate Applications on a rolling-basis as these are submitted on the web-based platform.

Step 4a: Notification of Rejection of Application

The PMU will notify Applicants whose Program Application was not approved with 5 business days of the Evaluation. Such Applicants will have three options:

1. Decline to further pursue admission into the PBG program
2. Make modifications to their Program Application and resubmit the program Application
3. Challenge the assessment (see chapter 5 of the REA's Environmental and Social Management Framework, ESMF[4]).

Step 4b: World Bank Review and No Objection Letter

For Applications that were approved in Step 2, the PMU will submit a request for No Objection to the World Bank within 5 days of their evaluation. The World Bank will take one of the following two possible actions:

a) Issue a No Objection letter
b) Inform the REA that it cannot issue the No Objection Letter and clearly state the reasons.

The World Bank will respond to the request for No Objection within 10 business days.

[4] The ESMF is available at: http://rea.gov.ng/inc/uploads/2018/04/ENVIRONMENTAL-SOCIAL-MANAGEMENT-FRAMEWORK-FOR-NEP.pdf

Step 5: Notification of Qualification

The PMU will, within 5 business days of receipt of the response from the World Bank, notify Qualified Applicants that they are admitted into the PBG program and invite Qualified Applicants to submit a site-specific technical application.

3.2.2.2. Site-Specific Technical Application Stage

Step 6: Submission of the Site-Specific Technical Application

Once Qualified Applicants have been admitted into the performance-based grant program (Qualified Applicants), Applicants may submit their site-specific technical application for one or more projects at a time. The Site-Specific Application will be completed on the web-based platform. It should include:

1. Completed Site-Specific Analysis (site details, estimated number of customers)
2. Technical design of each project
3. Environmental and social screening information and risk classification for sites.

Applicants will be required to provide evidence that they comply with the regulation and the program requirements, including the following items (as will be detailed in the instructions for the Site-Specific Technical Application):

1. Confirmation that the Applicant has applied for NERC registration or permit
2. Proof of adequate insurance of project assets
3. Evidence of compliance with minimum technical requirements
   - Completed Environmental and Social site screening checklist
   - For category I sites, Environmental and Social Impact Assessment (ESIA), as well as RAPs and Livelihood Restoration Plans (LRPs), if applicable
   - For category II sites, Proof of payment from Ministry of Environment as evidence that the Applicant has submitted its Environmental and Social Management Plan to the Ministry of Environment for approval.

Overview of requirements

Each mini grid project must be technically viable in its design and may use conventional sources of energy. Mini grids should have solar or solar hybrid generation assets—in the latter case mini grids are allowed to use conventional sources of energy. The projects will be required to use certified

equipment. All distribution networks will have to be built in compliance with Nigeria's distribution code.

The full list of technical requirements and documents to be provided at the site-specific technical application stage will be uploaded on the web-based platform once the site-specific technical application stage is open.[5]

At a later stage, if a site-dependent technology such as wind or hydropower, is proposed resource availability will need to be demonstrated through a detailed energy resource assessment. If a biomass or biogas-based project is proposed, a supply chain analysis to establish resource availability will be required.

Step 7: Site-Specific Technical Application Evaluation

The PMU will evaluate the site-specific technical Applicants in three steps:

- **Administrative review**: the PMU will register the Application, acknowledge receipt of the application, and then evaluate the completeness of the Application within 5 days of submissions. The PMU may at its discretion ask Applicants for missing documents. Upon administrative review, the PMU should notify Applicants if their application has passed the administrative review or not
- **Technical Committee Review**: For Applications that have passed the administrative review, the Technical Review Committee will review the Site-Specific Technical Application and, if the proposed project meets all requirements, including those on environmental and social safeguards, recommend approval of the application to the Investment Committee. The Technical Committee shall review the Site-Specific Technical Application within 10 days of the administrative review
- **Investment Committee Approval**: The Investment Committee will evaluate the Site-Specific Technical Applications, and the PMU will notify Applicants of the Investment Committee's decision within 5 business days after notification of successful administrative review. The notification procedure for applications that are approved for the performance-based grant by the PMU are described in Step 8.

If there is doubt regarding a project's eligibility, Project Developers are encouraged to contact the PMU as soon as possible, to seek its opinion on eligibility and options to make the project eligible.

[5] http://www.ecowrex.org/system/files/repository/nerc_nigeria_gridcode_v0l1.pdf

If an Application does not meet all requirements, and this is not solved by obtaining additional information and/or further clarification, the Investment Committee will reject the performance-based grant application. The PMU will send an official internal memo to the project file indicating that the project does not and cannot meet all requirements. This memo expresses rejection of this project, and in the memo the PMU will provide detailed justification for arriving at this conclusion. The notification procedure for applications that are thus rejected are described in Step 6a.

Step 8a: Notification of Rejection of Application

If, after evaluation of the Site-Specific Technical Application, the Application does not pass the administrative review, the Technical Committee Review, or if the Investment Committee's decision is negative, REA will inform the Applicant accordingly and provide justification for rejection. The REA will inform the Applicant within 5 business days of its evaluation. Rejected Applicants have three options:

a) Decline to further pursue a performance-based grant for that particular project
b) Make modifications to their Site-Specific Technical Application or provide additional information as requested by the PMU, and resubmit the application
c) Challenge the assessment (see chapter 5 of the REA's Environmental and Social Management Framework, ESMF[6]).

Step 8b: Submission of Application for World Bank Review

If the project for which the application has been submitted meets all requirements, the REA will submit a request for No Objection to the World Bank via the web-based platform, within 5 days of its evaluation.

This is for each Applicant's first project. The subsequent packages will not require World Bank prior review and will instead be subject to post review by the World Bank. The PMU will submit the following package to the World Bank:

a) Request for No Objection Letter from the REA to the World Bank
b) Site-Specific Technical Application
c) Internal memo from the REA confirming that the project meets all requirements (Investment Committee approval of the grant application).

[6] The ESMF is available at: http://rea.gov.ng/inc/uploads/2018/04/ENVIRONMENTAL-SOCIAL-MANAGEMENT-FRAMEWORK-FOR-NEP.pdf

The REA will send the request for No Objection to the World Bank within 5 business days after the Investment Committee's approval of the grant application. In the case of Applicants whose applications have previously been approved, No Objection Letter from the World Bank is not required, and the REA will move directly to Step 9 below.

The World Bank will review the Site-Specific Technical Application submitted by the REA for No Objection, and will respond within 10 business days of receipt. The World Bank will take one of the following three possible actions:

a) Issue a No Objection letter
b) Issue a conditional No Objection Letter
c) Inform the REA that it cannot issue the No Objection Letter and clearly state the reasons.

For option b, the REA will make sure that the conditions for No Objection are met before approving the Application. For option c, the REA, in consultation with the Applicant, will assess what action can be taken to address the World Bank's concerns. If these can be addressed, a revised package can be re-submitted for review by the World Bank If these cannot be addressed, the REA will inform the Applicant and World Bank accordingly.

Step 9: Notification of Project Approval or Conditional Approval

Where a No Objection Letter from the World Bank is required, the REA will, within 5 business days of receipt of the response from the World Bank, inform the Applicant of the positive, negative, or conditional outcome and, as applicable, specify what additional processing is required before the application can be approved.

Where No Objection Letter from the World Bank is not required, the REA will inform the Applicant within 5 business days of the Investment Committee's approval of the performance-based grant application.

3.2.2.3. Grant Agreement Signing (Step 10)

Applicants whose site-specific technical application has been approved will then sign a Grant Agreement with the REA. The Grant Agreement will be standardized and non-negotiable. The Grant Agreement will govern the terms and conditions for disbursement of the performance-based grant to the project. Terms of the contract will include the following:

- The Grantee should commission the mini grids (build the mini grid and connect the first customers) within 12 months of contract signing

- The Grantee should complete its targeted connections within 9 months of mini grid commissioning. Connections made beyond this timeframe will not be eligible for grants.

3.2.2.4. Verification and Disbursement (Step 11)

Once the Grant Agreement has been signed, the Project Developer will build the mini grid and connect the customers. The performance-based grant will be disbursed after the end users have been connected to the network and the Project Developer has provided proof of customer connection (metering data for the first three months of consumption).

The Project Developer need not submit all proofs of customer connection for a mini grid in one submission and may instead submit them over time as connections are achieved. The performance-based grant will be disbursed according to the schedule on which satisfactory customer connections are verified, provided these are submitted 21 months after contract signing. However, submission of proofs of connection may not be made more frequently than once per month.

The REA will maintain a roster of consultants, selected according to terms of reference prepared by the REA with no objection from the World Bank, for design verification, installation verification and spot checks to ensure installation compliance. Project Developers that have received performance-based grants must ensure, as stipulated in the Grant Agreement, that the REA's independent verification consultants have access to inspect projects, including goods, works, sites and construction. This includes inspection of physical assets and relevant documentation. The REA will follow up on any design and installation irregularities discovered through these independent verification exercises and seek remedial action. If the remedial action is unsuccessful, the REA may suspend the Project Developer from the Program.

3.2.3. Pre-investment Grants

3.2.3.1. Program Description

Access to finance for upstream project development remains a barrier to the scaling up of mini grids. Accordingly, technical assistance in the form of grants for pre-investment and preparation activities will be made available to mini grid developers to mitigate the risk involved in the early stages of project development. This co-financing may be used towards the preparation of feasibility studies, business plans, and environmental and social safeguards assessments.

Projects that receive pre-investment grants for pre-investment work are eligible to subsequently apply for performance-based grants to co-finance the capital cost of the mini grid and may use the outputs of the pre-investment grant support as part of the application for a performance-based grant.

3.2.3.2. Eligible Applicants

Any private enterprise, NGO or community duly registered as a legal entity in Nigeria and having the capacity to enter into a contract under the laws of the Federal Republic of Nigeria is eligible, subject to the REA's assessment of technical, financial management and procurement capacity to implement the proposed subproject according to this Project Implementation Manual. Project Developers will be required to meet the following additional criteria to participate in this program.

- Must have access to or possess financial capability of not less than 50% of the total funds required to execute the pre-investment activities to completion; a reputable bank or financier would need to confirm creditworthiness of the project proponent
- Not be in receivership, the subject of any form of insolvency or bankruptcy proceedings
- Have fulfilled all its obligations to pay taxes, pensions and social security contributions under the relevant laws
- Not have any director who has been convicted in any country for any criminal offence relating to fraud or financial impropriety
- Accompany every bid with an affidavit confirming that all information presented in its bid are true and correct in all particulars; and:
  - Disclosing whether any officer of the relevant committees of REA or Board member is a former or present director, shareholder or has any pecuniary interest in the bidder
  - Affirming that it has not been the subject of a judgment which has the force of 'res judicata' for fraud, corruption, involvement in a criminal organization or any other illegal activity
  - Affirming that it has not been blacklisted by any national government
- Have submitted all the required documentation, properly filled and submitted prior to the deadline of the call as set by the REA

- The project proponent will be eligible to receive subsequent pre-investment grants if it has completed the preceding subprojects to the satisfaction of the REA, in accordance with the terms of the Grant Agreement.

3.2.3.3. Eligible Activities

Preparation of feasibility studies, business plans, and environmental and social safeguards assessments for mini grid projects with capacity of not more than 1MW as defined in the NERC Regulations for Mini Grids 2016 are eligible activities for pre-investment grants.

3.2.3.4. Eligible Expenditures

The proceeds of the Pre-investment Grant may only be applied towards the cost of consulting services from any independent consultants or consulting firms, including their travel costs and direct expenses in providing short to medium-term services under the terms of reference.

3.2.3.5. Ineligible Expenditures

The following expenses are not eligible to be financed through the Pre-investment Grant Program:

- Salaries and reimbursable costs of staff or long-term consultants of the applicant. However, these costs may be counted in the applicant's contribution to the total cost of the activity
- Salaries and expenses of government, and provincial government, officials;
- Expenses associated with routine business activities of the applicant
- Financing or acquisition of existing assets, including land, or refinancing of existing debts or accrued interest
- Other expenses not meeting the objectives of the NEP, as determined by the PMU.

3.2.3.6. Terms and Conditions of the Pre-investment Grants

The pre-investment grant cannot exceed 50 percent of costs of eligible activities or USD10,000 per mini grid project, whichever is lower. Project developers may submit separate applications for pre-investment work for each mini grid project or a single application for a portfolio of mini grids. Applications will be considered on a first-come first-served basis, and the grants will be provided in Nigerian Naira at the prevailing exchange rate on the date of submission.

3.2.3.7. Application Requirements

Applicants must provide an overview of the project concept, including location, technology and number of new rural businesses and households to be supplied with modern energy services. The Concept Note should follow the REA template and include a description of activities to be accomplished before bringing the project to financial close, and the details and cost estimates of work to be undertaken by consulting firms. Based on this information, the application should calculate the amount of the Pre-investment Grant requested. A Pre-investment Grant application should include the following:

1. Completed *Pre-investment Grant Application Form*
2. Concept Note for the mini grid project for which pre-investment work is to be carried out, co-financed by the Pre-investment Grant, including:
    a. Description of proposed pre-investment activities, including terms of reference for proposed consulting assignments
    b. List of services to be financed
    c. Detailed budget and financing plan
    d. Timetable for implementation
3. Confirmation of legal registration of Project Developer
4. Evidence of minimum procurement capacity.

3.2.3.8. Selection Criteria

If the pre-investment grant application is accompanied by all the required information to a satisfactory level of detail, and the applicant, the proposed activities and the proposed expenditures meet the eligibility criteria outlined in Section 3.3.2, 3.3.3 and 3.3.4, then the PMU will evaluate the *Pre-investment Grant Application Package* using the following criteria:

- Activities proposed for assistance are well-targeted and consistent with the applicant's development needs and business strategy
- Needs, proposed activities and required assistance are clearly described
- Implementation arrangements and schedule are feasible and likely to be effective
- Results and outcomes are time-bound, and stated in a form that can be monitored periodically and measured objectively
- The budget is sufficiently detailed and reasonable.

3.2.3.9. Selection Process

Once the Project Developer has submitted a *Pre-investment Grant Application Package*, the PMU will assess the project concept to ensure that it is aligned with the REA mandate and objectives, and that the proposed pre-investment activities are eligible for support. Following evaluation of the *Pre-investment Grant Application Package* according to the criteria enumerated in Section 3.3.8, approved proposals will be awarded a Pre-investment Grant that will be formalized in a Pre-investment Grant Agreement between the REA and the applicant. All rejection notifications will be provided to applicants in writing following consultative discussions on reasons for rejection. In either scenario, the REA will inform the applicant within 20 business days of the receipt of the *Pre-investment Grant Application Package*.

Upon signature of the contract between the REA and the Project Developer, the REA will forward all key documents and memos to the World Bank for post-review.

3.2.3.10. Verification and Disbursement

The Pre-investment Grant is disbursed in a single installment after, as agreed in the Pre-investment Grant Agreement, a completion report acceptable to the REA is submitted, together with supporting evidence of completion and achievement of agreed activities, such as the key deliverables from the activities financed with the Pre-investment Grant (e.g., feasibility studies, business plans, and environmental and social safeguards assessments).

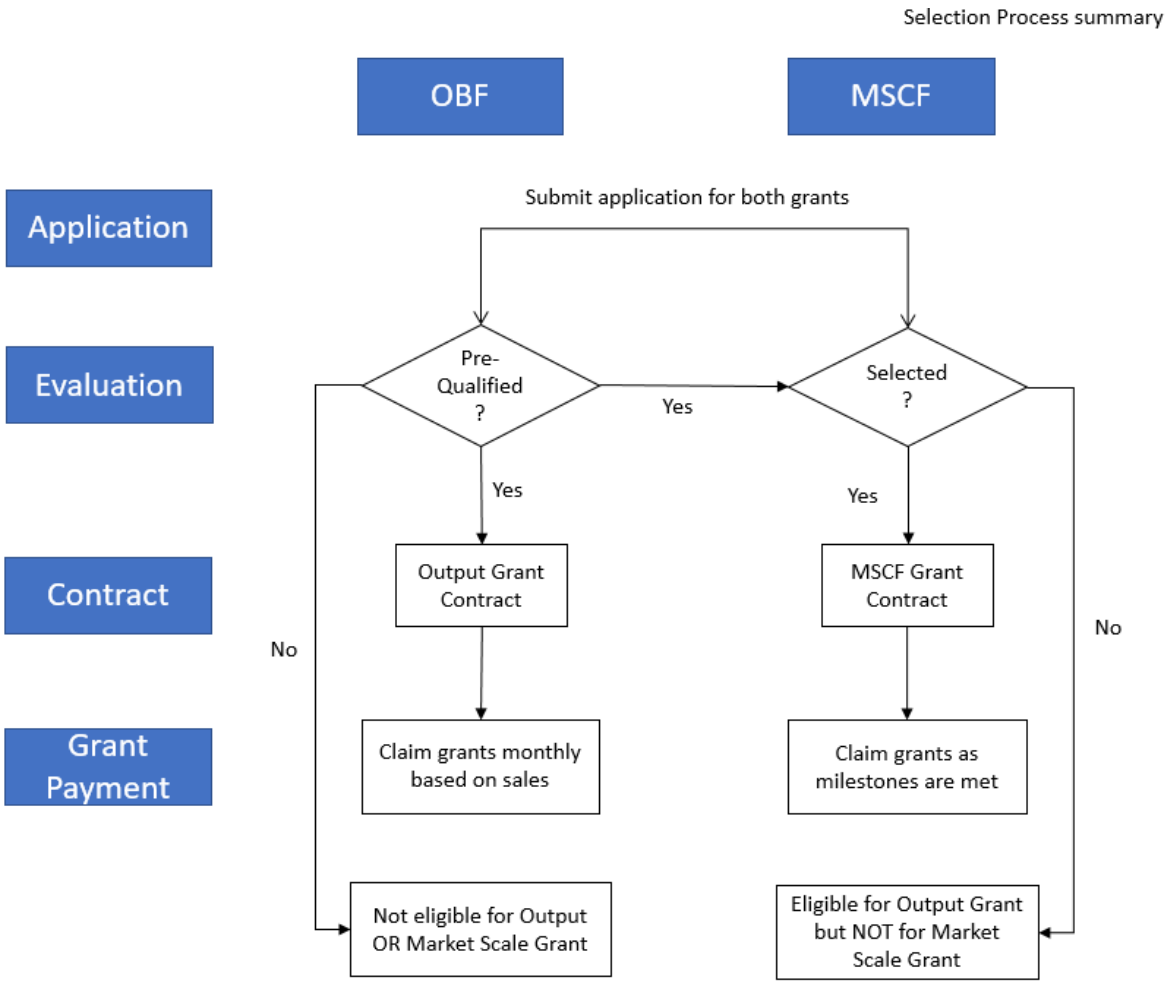
Component 2: Standalone Solar Systems

Overview of Grant Application and Evaluation Process

Admission to participate in the Output Based Fund (OBF) requires that both the SHS products and company of the applicant be approved through the Grant Administrator's pre-qualification process. Companies that are pre-qualified to access the OBF may then be invited to apply for the Market Scale-up Challenge Fund (MSCF) if they have noted this in the application to the program and meet the minimum criteria.

The main evaluation steps in the process are shown in the diagram below and are described in the following sections.

Figure 10: Evaluation Steps



3.3. Component 2.1: Market Scale-Up Challenge Fund (MSCF)

3.3.1. Design of the Market Scale-Up Challenge Fund

The Market Scale-up Challenge Fund (MSCF) offers up-front grants to a small number of strong and capable solar providers, paid against robust business plan milestones and co-funding, to accelerate their capacity to reach and serve Nigerian households and small enterprises at scale. The purpose of the grants is to reduce the risk to investors and be used to provide additional direct working capital to enable faster investment in the inventory and expanding distribution.

The MSCF will target a few highly capable companies in these categories:

- **Experienced**: The few companies that already possess - to the strongest level - all of the capabilities required to rapidly up-scale the market. These will tend to be experienced firms that have succeeded at scale in SHS sales in other markets internationally. These companies would be widely recognized as accomplished companies in the SHS business
- **Emerging**: The select companies that can demonstrate convincingly that they possess most of the capabilities required to achieve massive scale and are well positioned to possess all of the capabilities quickly. These will tend to be the few best local Nigerian start-ups and new entrants to the SHS market or companies at early stage of proving a business model or innovation that might significantly overcome market barriers not already being resolved. These companies, which are currently at an emerging stage, would generally be recognized as potential future 'experienced' companies of the SHS business.

The MSCF is not aimed at helping to grow smaller, lower potential companies that might hold such ambitions but do not yet possess the capacity to achieve it in a comprehensive way.

Budget: The MSCF will receive a much smaller portion of the budget than is allocated to the Output Based Fund. However, this budget is subject to annual reviews.

Robust evaluation process: In addition to the Pre-Qualification criteria applied to the Output Based Grants described below, access to the Market Scale-up Challenge Grants will require strong evidence that the applicant possesses all the capabilities necessary to scale rapidly. Additional criteria will emphasize a robust business plan of international standards; a senior management team that is capable across all key disciplines, including consumer marketing, consumer finance, IT, logistics, financial management, business process

management; commitment to high sales targets or rapid growth in monthly sales; and a credible pathway to mobilizing the substantial capital required to grow. Only companies that demonstrate this higher level of capacity will be eligible for a full evaluation under the Market Scale-up Challenge Grants.

Phased disbursement against milestones: Market Scale-up Challenge Grant amounts awarded will be paid in disbursement typically phased over several quarters. Each portion of the grant will be disbursed to the grantee only after the grantee has met the Milestones agreed to in the Grant Agreement. Milestones will include actions to be taken by the grantee to implement the plan, and may include:

- Staff recruitment activities
- Staff training/capacity building
- Marketing campaigns
- Acquisition of inventory
- Regional expansion activities
- Product research and testing / Piloting of new products
- Building new internal teams (call center, M&E, product research)
- Partnership development (telecoms, MFIs, banks).

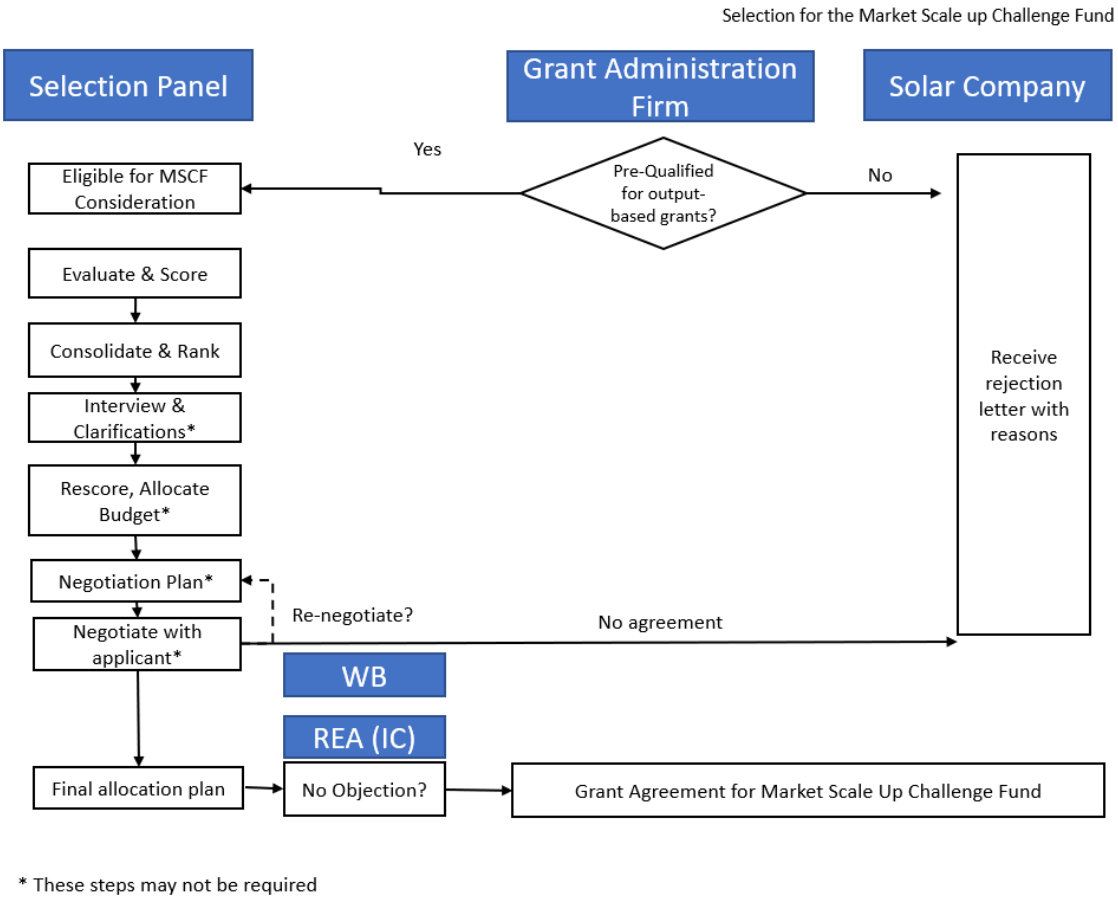
Additional to Output Based Grants: The few solar providers that receive grants from the Market Scale-up Challenge Fund remain eligible to claim the Output Based Grants as well.

Phasing: Applications will be submitted by the grantees each year to re-validation the need for support and the business model.

3.3.2. Selection Process Overview

This section describes the steps for selecting which companies will be awarded a Market Scale-up Challenge Grant.

Figure 11: Steps for selection of firms



3.3.3. Application Process and Scoring

Overview

A separate application submission process will be used to apply for the Output Based Fund and the Market Scale-up Challenge Fund. For prequalification (OBF application) please see section 3.4.5.

Applying for MSCF is only possible once the company has met the prequalification criteria (through the OBF application). The companies which expressed interest in MSCF will then receive an invitation from REA to apply for it granted they fulfill the core criteria described further below. The invitation packet will describe the grant opportunity; provide guidance on how to apply, what is required to qualify, and how applications will be evaluated.

The invitation document pack includes: (i) the information document; and (ii) the link to the online application form. The Grants Administrator will prepare these documents. The information package will be integrated in REA's platform that is supported by Software management.

The application process will open every 12 months when any additional solar companies that have gone through the prequalification (OBF) process and show promising scale up potential can be invited to apply. In case of

unsatisfactory performance by the grantees REA PMU may decide to open the process before the 12-month period for other potential entrants to apply.

Structure of the Application Form and Relevance of Each Section

The following is a description of the sections of the Invitation Document and Application Form that are relevant for the Market Scale-up Challenge Fund.

Table 10: Invitation Document and Application Forms for the Market Scale-Up Challenge Fund

Section	Focus	Relevance
Market Scale-up Challenge Fund Grant Application		
Summary	Amount of grant requested, forecast outcomes, co-funding amount	A weighted score will be developed for each application Applications scoring less than [70%] will be ineligible Applications scoring above [70%] will be eligible to be considered for a MSC grant
Business Plan	Can the applicant develop and present a business plan that demonstrates a robust understanding of the SHS market, the selected business model, international standards, and Nigerian market issues?	
Implementation Plan	Evidence that the steps needed to implement the strategy are understood and translated into a complete, detailed, and time-bound action plan	
Output targets	Does the applicant forecast sufficient sales to be meaningful in scaling the Nigerian market? Are the targets realistic against the strategy, skills, financial resources, and track record?	
Financial Plan	5-year financial plan for the business as proposed	
Funding Plan	Coherent story for how the required funding would be secured, including a strategy and plan for achieving this	
Grant leverage	How much co-funding will be provided by the applicant from other sources in parallel with the grant?	
Track Record	Is there evidence that the company and its key people have delivered success in relevant markets or fields?	
Risk management	Does the applicant understand the risks to the business plan and have realistic mitigation plans in place? Additional points for stronger mitigation of Environmental or Social risks. For more detail please see section 7 on	

	Environment and Social Safeguards	
E&S Risk Management	Meets or exceeds the minimum standard (functioning ESMS in line with REA requirements) criteria	A single ESMS agreement will be required as part of the first step of applying for the grants (see the OBF section 3.4) and will also be included in the grant agreement signed with the grantees.

The Invitation also describes the weighted scoring, as illustrated in the table below.

F: Market Scale-up Challenge Fund Grant Application		
Section	**Weighting**	**Scoring Threshold**
Summary	Mandatory	Complete
Business Plan	20%	70% minimum to pass
Implementation Plan	20%	
Output targets	10%	
Financial Plan	10%	
Funding Plan	10%	
Grant leverage	10%	
Track Record	10%	
Risk management	10%	
	100%	

A detailed scoring template is available but will be reviewed by the PMU and the Grants Administrator before it is final. It describes the scores and weighting for each question in the Application.

Scoring for Experienced and Emerging Companies

Each eligible company will be evaluated for both the Experienced and Emerging categories. Companies are first evaluated for the Experienced category. If the Company does not qualify, they will be considered for the Emerging category.

Each of the Experienced and Emerging categories will be evaluated using the same application form and scoring template. The difference is that scoring for the Emerging category will include an adjustment to recognize the absence of a proven track record.

The main difference between an Experienced and an Emerging applicant is their track record, and history of and progress in mobilizing funding. Track Record and Funding Plan account for 20% of the evaluation score. These

scores will be adjusted. An Emerging company is expected to perform strongly on all other evaluation criteria.

The scoring for the Emerging category will adjust the scores for each of the Track Record and the Funding Plan sections as follows:

- If the evaluated score is 10, there is no adjustment
- If the evaluated score is 5 or less, add 5 more points
- If the evaluated score is more than 5 but less than 10, add the number of additional points necessary to bring the score to 10.

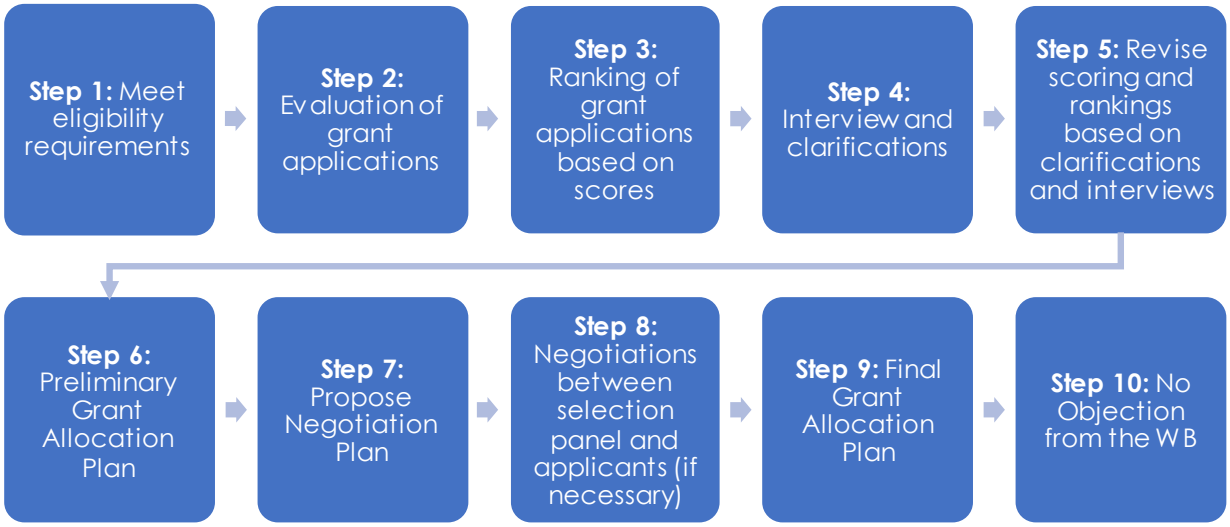
To be eligible for the MSC grant in the Emerging category, the applicant's adjusted total score must meet the minimum of 70%.

This approach allows applicants in the Emerging category to avoid a penalty for their lack of track record.

3.3.4. Evaluation Process

An overview of the evaluation process for the MSCF is illustrated in the figure below.

Figure 12: Evaluation Process for the MSCF



Step 1: Eligibility

Companies will be evaluated for the Market Scale-up Challenge Grant if they:

1. Have been pre-qualified for the Output Based Grant, AND
2. Have completed the section of the application form 'Section X: Market Scale-up Challenge Application Form' after receiving the invitation to apply

The Grant Administration firm shall list all those applicants that are eligible, and provide the list and the Site-Specific Technical Applications to the Selection Panel.

Step 2: Evaluate and Score

Each member of the Selection Panel will evaluate and score each MSC grant application individually. Each shall record their scores and comments in the evaluation template.

Qualitative Review	Each evaluator independently reviews each application. They record against every item in the application any observations or comments
Scoring	Each evaluator independently scores each application. They record against every item in the Scoring Template their score for that application
Clarifications/ Revisions	The review team may seek clarifications or revisions from some applicants. This is likely to happen when the overall application seems to have strong prospects but some aspect of it – that might be readily improved – is holding it back Evaluators will note the issues for which they seek clarification
Recommendation	Each evaluator shall note an overall preliminary score and recommendation

Step 3: Consolidate and Rank

The evaluations from each team member will be consolidated.

- If all evaluators score an applicant below the minimum required score for both Experienced and Emerging categories, then the application for MSCF is rejected
- Those applications scored by all evaluators as above the minimum score – in either the Experienced or Emerging categories – proceed to the next step
- If the evaluations are mixed, then the Selection Panel will be required to discuss the differences, and decide whether to proceed further
- Applicants shall then be ranked in order of the preliminary scores for both the Experienced and Emerging categories, using evaluation template.

Step 4: Interview and Clarifications

The Selection Panel may request clarification on applications and/or interview key personnel of applicants if it is considered necessary.

Step 5: Revised Scoring and Ranking

After completing clarifications and interviews, evaluators will revise scores, consolidate and rank them in order of highest to lowest score, and update any comments.

Step 6: Preliminary Grant Allocation Plan

In principle, the grant budget should be allocated in order from highest to lowest scoring applications until the budget is fully allocated. In addition, the grant budget would be apportioned between the Experienced and the Emerging categories, with the great majority allocated to the Experienced category. In practice, some flexibility around these simple rules can enable a better overall outcome and value.

If many applications are very strong and have similar scores, then an alternative is to offer smaller grant amounts, but to more companies. If there is a strong pool of applications in the Experienced category, then best value may be achieved by allocating less to the Emerging category, and vice versa.

The output of this process will be a list of applicants, their score, the grant amount proposed, and any items that would require change or negotiation from the application.

The Grant Allocation Plan also considers the phasing of the payment of grantors to grantees. The full grant amount will be disbursed in several tranches to grantees. The default would be 4 disbursements of 25% each: #1 on signing; #2 after 3 months; #3 after 6 months; #4 after 9 months. The timing and amounts may be modified to best align with the submitted business plan and significant milestones.

Step 7: Negotiation Plan

The Chairman of the Selection Panel shall develop - if necessary, with support from the panel - a plan for proposed changes to be negotiated in applications. It will follow from the analysis in the preliminary grant allocation plan, and may include changes in grant amounts, business plans, co-funding requirements, or output targets.

Step 8: Negotiate

If negotiation is necessary, the Chairman of the Selection Panel, together with at least one or more members of the Selection Panel, shall conduct negotiations with applicants as per the Negotiation Plan. This step may be iterative since more than one negotiation session may need to take place

The minutes of the negotiations shall be captured and recorded together with the application documentation.

Step 9: Final Grant Allocation Plan

Following negotiations, the SP will revise the Allocation Plan if needed to balance the grant budget.

The Chairman of the Selection Panel shall develop a final plan for awarding the current grant budget. This plan will aim to deliver the greatest outcome from the funds available, allocating generally in order of the highest scoring applicants down.

Step 10: No Objection

The Chairman of the Selection Panel shall present the grant allocation plan to the Investment Committee (IC) for approval. Finally, the IC will seek a "No Objection from the World Bank on the selection process.

When both the IC and the World Bank confirm, a Grant Agreement shall be signed between the REA and the firms. The Grants Administrator, who will help in the drafting of the Grant Agreement, will facilitate the process. The No Objection on a payment approval can be given for an entire year of tranche payments, but further consultation during the year can take place as necessary.

3.3.5. Contracting Procedure

When both the REA and the World Bank confirm the No Objection, the Grant Administration Firm will prepare the Grant Agreement for the Market Scale-up Challenge Fund Grants on behalf of the REA. Parties to the contract will be the REA-PMU and the Grantee.

The Grant Agreement for MSCF will be additional to the Grant Agreement signed between the solar company and REA-PMU when the company has successfully qualified for OBF, *or* it will be signed as an addendum to the OBF Grant Agreement.

3.3.6. Verification

Verification of performance of the Market Scale-up Challenge Fund Grantees is applied approximately one year after the award of the grant. It is built around the verification of the quarterly reports provided by the grantee and led by REA-PMU Monitoring & Evaluation staff.

The grantee provides three reports: Milestones; Action Plan; Grant Expenditure.

The verification test that is then conducted focuses on whether the reports submitted are reasonably representative of actual performance. 'Reasonably representative' is used as the test because the grant represents

only a small portion of the total funds being spent by the grantee – it is mostly their own funds.

Milestone Report

In most cases, the main indicator on the Milestone Report will be the number of systems placed with customers (already monitored under the OBF). Other milestones agreed on as part of the business plan implementation may include traceable indicators, such as:

- Staff recruitment activities
- Staff Training/Capacity Building
- Marketing Campaigns
- Acquisition of Inventory
- Regional Expansion Activities
- Product Research and Testing/Piloting of New Products
- Building New Internal Teams (call center, M&E, product research)
- Partnership Development (telecoms, MFIs, banks).

Action Plan

The Action Plan describes in detail what the applicant will do, and when they will do it to implement the plan. It is an important part of the evaluation for the award of the grant, and implementation of the actions is required for the payment of grant amounts to the applicant.

***Completeness*:** Every important element of the plan should be reflected in the Action Plan.

***Measurable / Quantified*:** Target actions must be quantified and measurable.

***Start / End dates*:** Each action requires start and end dates.

***Progress steps*:** Activities that span more than one quarter must be broken down into measurable progress steps within each quarter.

Grant Expenditure

The verification will check that invoices or other commercial documents are provided as evidence of the main expenditures stated.

Clarifications

In the event of concerns or gaps in verification, the following steps will apply:

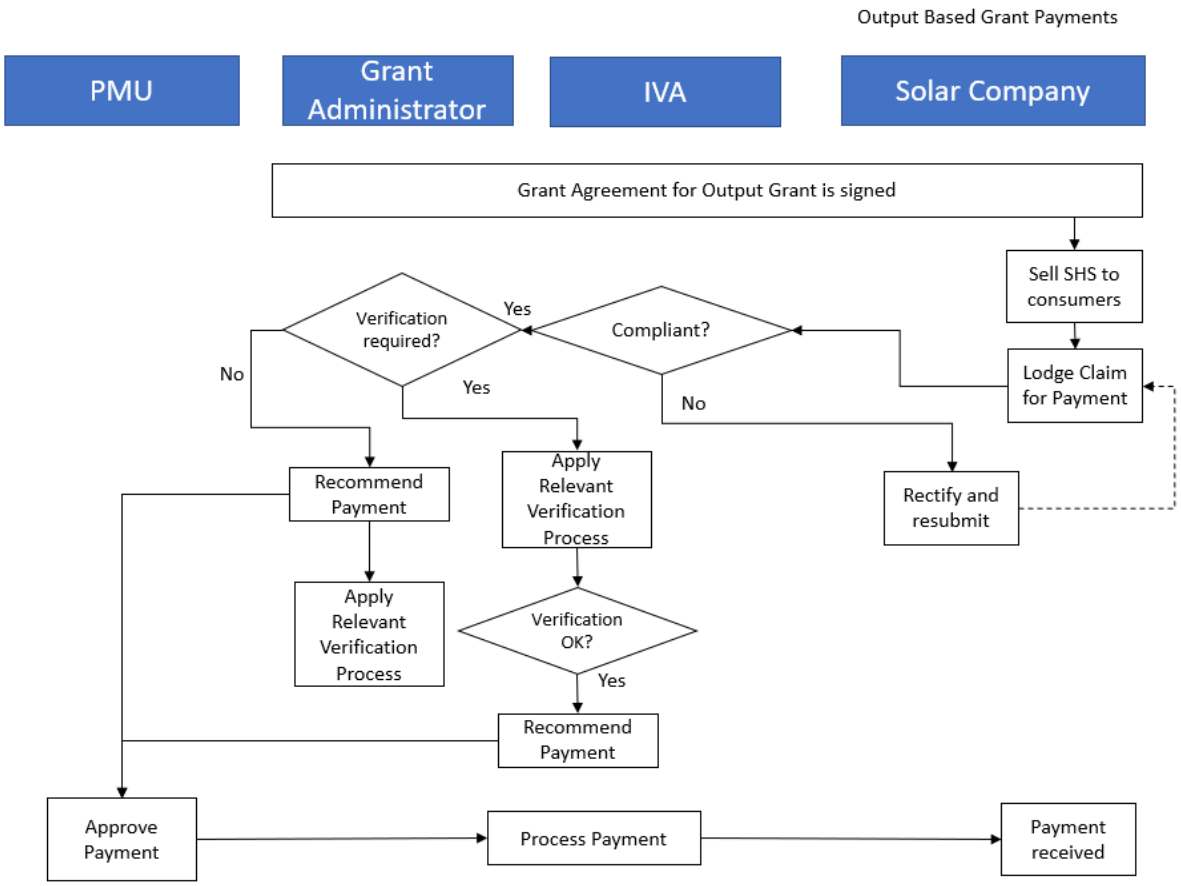
1. Request clarification, missing documents or evidence
2. If unresolved, arrange an interview with the grantee management

3. If still unresolved, consider an audit.

3.3.7. Payment to the Grantees

A simplified flow of the payment process is illustrated below:

Figure 13: Flow of Payment Process



Step 1: Submit Quarterly Report

Recipients of the Market Scale-up Challenge Fund Grant shall submit a detailed report on performance and progress against the agreed plan at the end of each quarter, as follows:

Period Reported	Submission Deadline
January – March	Last working day of April
April – June	Last working day of July
July - September	Last working day of October
October - December	Last working day of January

Each report shall report progress against the approved business plan provided in the Application and agreed in the Grant Agreement. The report

shall provide a commentary on progress and challenges. It will include the following, all updated to reflect the status against the plan:

Report	Description
Milestone Report	Provides actual performance versus forecast for several indicators, as self-reported by the grantee. The indicators may vary by grantee and business plan
Grant Expenditure Report	Describes the actual expenditure of grant funds by expense item, amount and period. Grantees are to submit Grant Expenditure reports until they have completely exhausted the disbursed grant
Supporting documents	Grantees submit evidentiary documents to support the milestone and the grant expenditure reports. These can include customer details, purchase, purchase orders for stock, receipts for expenses, etc.
Action Plan Report	Describes actual progress against the time-bound action plan.

Step 2: Submit Invoice for Grant

The grantee shall submit an invoice with the quarterly report for the next tranche of grant disbursement.

Step 3: Compliance

The Grant Administration firm shall check that the Claim is compliant with the claim instructions. Non-compliant claims shall be returned to the Grantee to rectify and resubmit.

To be compliant, each Claim must meet the following requirements:

- The claim includes a complete report on Milestones, a Grant Expenditure Report, Supporting Evidence, and Action Plan
- All required fields on the Claim Form and each other document are complete and valid.

Step 4: Evaluate Claim

Payment of a significant portion of the Market Scale-up Challenge Fund Grants is subject to the grantee meeting early milestones in their business plan.

Next tranche payment approvals will be evaluated against the agreed Action Plan. Payment can be made if the Action Plan is at least 80% on track; sales output is at least 50%, and evidence of the expenditure of grant funds is robust. The Grantee does not need to have spent the entire previous grant amount, but what has been spent should be well-evidenced, and not substantially behind the original plan.

If a recipient fails in a significant way to meet a milestone, then their grant payment for that period and later periods may be cancelled or reduced. Given the uncertain nature of the developing market, in general if a grantee achieves around 50% of the main output targets or is robustly delivering their action plan, then the full grant tranche will be disbursed.

Step 5: Recommendations

The Grants Administrator provides a summary report for the Selection Panel recommending the disbursements to be made – or withheld – and reasons for the recommendations. The Selection Panel reviews the recommendations and may accept or refine them in consultation with the Grants Administrator.

If the Grantee fails to meet the progress requirements for payment, the Selection Panel will need to decide whether the payment is to be forfeited outright, or whether an extension of time will be allowed for the grantee to achieve the target level of performance.

Step 6: Approve Payment

The Selection Panel shall present their decision to the Investment Committee to be approved.

Step 7: Process Payment

The PMU will process the payment to the grantee within 3 business days in the event that all documentation is complete and correct. Where there is any issue with documentation, documents will be returned to the applicant within 24 hours.

3.4. Component 2.2: Output Based Fund (OBF)

3.4.1. Design of the Output Based Fund

The Output Based Fund (OBF) offers small incentive payments, referred to as Output Based Grants (OBG), to eligible solar providers for each eligible SHS installed.

Budget: The OBF will receive the largest portion of the budget for the SHS component.

The purpose of the Output Based Grants: To enable capable solar providers to reach and serve larger numbers of customers more rapidly.

Rationale: Expanding reach to consumers is costly. It requires significant investment in soft infrastructure—people, training, advertising, increased working capital, processes, logistics etc. Curtailing a portion of those costs enables capable solar providers to reach and serve larger numbers of customers with SHS more rapidly. Providing the grant against each system

after installation means that the government knows what it is getting for its money, and automatically directs the grant proportionally towards those solar providers that are proving most successful in serving more customers.

Pre-qualification of eligible SHS products: Only pre-qualified SHS companies will be eligible to attract Output Based Grant funds. To be eligible, each SHS company must have either: (i) a current Certificate of compliance from Lighting Global against either the International Electro-technical Commission (IEC) or Lighting Global standards; or (ii) pass a separate evaluation for quality assurance of the technology. The latter would rely upon viewing a complete set of certifications of components against international standards and of manufacturers against the standards of the International Organization for Standardization (ISO).

Pre-qualification of eligible solar providers: Only credible SHS providers will be eligible to access Output Based Grants. To become eligible, they must pass a robust pre-qualification. The aim of the pre-qualification for Output Based Grants is that the applicant has all the capabilities needed to deliver quality equipment, service and after sales service to customers and has the internal integrity and rigor to cope with the reporting and audit requirements attached to the grant. The pre-qualification will focus on technical standards of the solar PV products, business integrity, competence in financial administration, legal compliance, technical delivery, warranty and its delivery. The Output Based Grant pre-qualification places less emphasis than the Market Scale-up Challenge Grants on evidence of the applicant's ability to scale. This enables new entrants and Nigerian start-ups to begin in a smaller way with little risk for the program. Some of these participants may then become large, capable and eligible for the MCSF down the line.

Eligibility to claim an Output Based Grant: An eligible solar provider may request payment of an Output Based Grant amount after an eligible SHS is installed with a customer.

Output Based Grant Unit Rate: The Output Based Grant will be paid as a pre-defined amount per system (Unit Rate) for each system installed. SHS will be categorized into several Tiers based on capacity and service. Within each Tier of SHS, a single unit rate of Output Based Grant will be set to be paid against all systems. The grant amount per system (Unit Rate) will vary across several categories of solar product.

Value of the Unit Rate Output Based Grant: Averaged across the portfolio of SHS, the Output Based Grant amount would initially be in the range of 15-20 percent of the nominal retail price of the SHS. In practice, with a variety of

SHSs in a common Tier, the portion of the retail price represented by the Unit Rate will vary between SHSs.

Grant reduction over time: The Unit Rate paid per system will reduce over the life of the program, to a nominal level during the final period of the program. The Unit Rates will be reviewed from time to time.

Business model neutral: All business models are eligible. The Output Based Grant amount is the same whether the SHS is provided to the customer as a cash sale, loan from a bank or micro-bank, integrated PAYG, pure PPA or operating lease, or some other variant of these basic models.

Flexibility in use of grant: Solar providers would decide how best to use the grant funds received. The Output Based Grants will form only a small portion of the revenue and expenditure: customers will pay commercial prices and solar providers will invest much more of their own funds than they receive in grants. It is anticipated that in early stages it would be taken as a gross margin and spent on business growth (accelerate the expansion of their sales, logistics and after sales capability, increase advertising, etc.). If there is significant application of grants to reduce price (and that ability is limited anyway by the small grant amounts) then Unit Rates may be reviewed down. The performance of the grantees can be tracked via the Independent Verification Agency efforts carried out by a firm contracted solely for this purpose.

NOT a subsidy on the customer price: Importantly, the Output Based Grant is not a subsidy on the end-user price. The Independent Verification Agency will verify whether the grants are being used to directly subsidize the cost to the consumer.

Phasing: An initial public invitation for applications will be conducted. Companies may apply during the initial window or at any time after that on a rolling basis.

System Size: The smallest system that would attract an Output Based Grant shall have a minimum generation capacity of 6Wp and a minimum provision of service of 3 lamps and an outlet for phone charging.

3.4.2. Review of the Grant Design Details

Details in the design of the grant offering shall be reviewed by the REA at least once each year with the design for the following period to receive a No Objection from the World Bank.

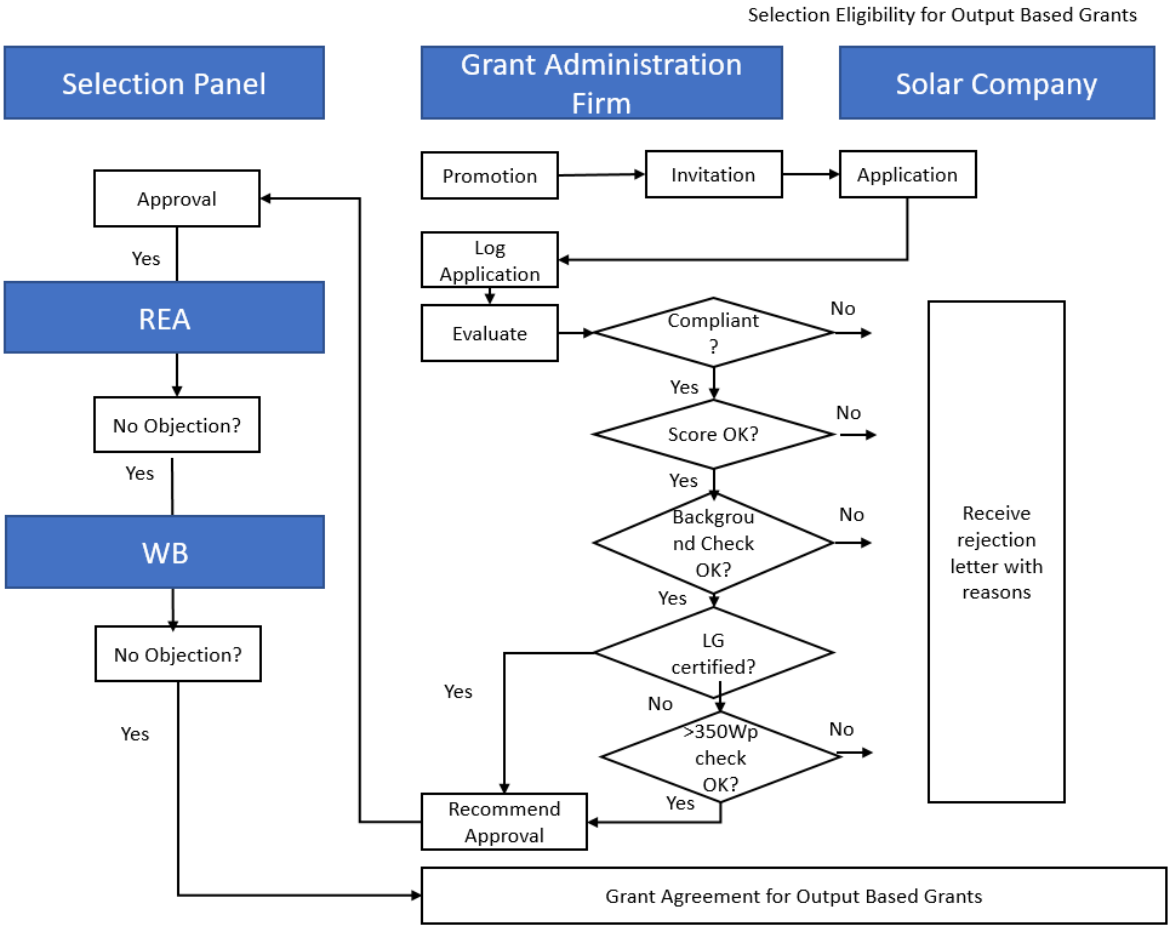
Such a review will reflect the feedback from the Grants Administrator Firm, the participating solar companies, market intelligence, and performance

and lessons from the prior operation of the funds. One of the areas requiring careful review shall be the amount of grant per system under the OBF.

3.4.3. Selection Process Overview

This section describes the steps for selecting which companies will be eligible to access Output Based Grants.

Figure 14: Steps for selecting companies



3.4.4. Promotion of the Grant Opportunity

Effective outreach to the most capable companies in the private market for SHS is essential to success. This will include:

- Advertisement on the REA website
- Advertisement in national and regional newspapers (8 weeks before applications close)
- Direct email advice to companies known to have capability to scale in the market (Nigerian and international) (8 weeks before applications close)

- Workshop presentations in Lagos and Abuja to enable interested parties to ask questions (4 weeks before applications close)
- During this period Invitations to Apply (including the Application Form) will be provided on request
- All companies sent an Invitation and Application will be logged in a register together with their contact details.

In relation to the MSCF, there may also be one-on-one discussions with individual companies seeking to better understand this more complex component. Such discussions will always be conducted by at least two members of the Selection Panel, with discussion points written down and shared with the Selection Panel. In the event of questions arising that may be of wider relevance, these will be shared with all companies that have received an Invitation.

Feedback received in the Workshops and in individual company meetings may influence refinements in the final design of the grant offering. In the event any alterations are made, all recipients of the Invitation shall be notified.

	ACTIVITIES
1	Promotion of the opportunity
2	Invitation to apply
3	Application
4	Log application
5	Evaluation
6	Compliance review
7	Scoring
8	Background check/Due Diligence
11	Recommended approval

3.4.5. Application Process and Scoring

Overview

A separate application process is used to apply for the Output Based Grants and the Market Scale-up Challenge Grants. The advertisement for the opportunity will contain a link that solar companies can use to learn more about the program, the application process, and request log in credentials to the online application provided they meet basic criteria included on the landing page.

Upon submission of basic company data (such as proof that the firm is registered and in the business of solar home systems) the applicant will receive login credentials through which they can access the Site-Specific Technical Application, which they can complete and submit for review. The application for the OBF will be on a rolling basis and be evaluated by the Grant Administrator within 4 weeks from the time of application.

Structure of the Application Form and Relevance of Each Section

Following is a description of the sections of the Invitation and Application that are relevant to pre-qualification for the OBF.

Section	Focus	Relevance
Pre-Qualification for Output Based Grant		
Company	Identify company, governance structures, key people. Confirm regulatory compliance and financial standing	Mandatory for all applicants. Applicants that fail ANY section are not eligible to receive grant funds. Applicants that satisfy EVERY section are eligible: • to claim Output Based Grants, and • to be evaluated for a Market Scale-up Challenge Grant
Customer Tracking	Evidence of the ability to meet the requirement to identify, track and report customers and SHS	
Customer Services	Evidence of the ability to effectively provide pre- and after- sales service to those customers that are acquired, including easy and practical warranty service	
Operational Scale	Evidence of the ability to achieve the minimum required level of sales	
Skills and Experience	Relevant experience of company and key people for building scale in the private SHS market	
Product	Identify SHS products, verify Lighting Global quality certifications (from independent laboratories)	
Environmental and Social Risk	Evidence that environmental and social management system is established and	

Section	Focus	Relevance
Management	functioning, and risks are mitigated including proper waste management plan (see ESMS section below for the full information)	
Background Checks	Consent to conduct background checks on the applicant company, associated companies, and key individuals including	
Declarations	Declarations to comply with key terms. Consent for background checks on company and key people	

The Invitation should also describe the weighted scoring. It is important to know that in this evaluation for OBF, the firms are not ranked but rather admitted or rejected subject to either passing or not passing the minimum score, depending on the criteria below. The detailed set of criteria and the scoring system are included in the evaluation form.

Pre-Qualification for Output Based Grant		
Section	**Requirement/Weighting**	**Scoring Threshold**
A: Company		
Company Details	Mandatory	Complete and compliant
Value Chain and Product Tracking	Mandatory	70% minimum
Customer Service	Mandatory	70% minimum
Financial Resources	Mandatory	70% minimum
Operational Scale	Mandatory	70% minimum
Skills and Experience	Mandatory	70% minimum
B: Product eligibility	Mandatory	Approved by evaluation Team
C: Environmental & Social (E&S) Management	Mandatory	Meets or exceeds the minimum standard (functioning ESMS in line with REA requirements; please see below for details))
D: Acceptance of other terms for the grant (regulatory, auditing, etc.)	Mandatory	Complete and compliant
E: Background Checks	Mandatory	Complete consent and identifications. Satisfactory

		check results

Applicable E&S requirements:

1. Regulatory, Administrative and Legal Framework of Nigeria, including federal, state, and local legislation, as well as international treaties, acts and conventions
2. Exclusion criteria

SHS companies will not be supported if they are involved in the following:

- Production or activities involving forced labor7
- Production or activities involving child labor8
- Cross-border trade in waste and waste products, unless compliant to the Basel Convention and the underlying regulations.9

E&S Qualification Criteria

- Have a good E&S track record, meaning no E&S related fines, violation record, litigation, or pending litigations in the past three years
- Have an institutional Environmental and Social Management System that meets REA's requirements consisting of:
  - Human Resources Policy
  - Occupational Safety & Health Policy/ Guideline
  - Battery Collection/Recycling Policy
- Have the organizational capacity to implement such ESMS
- Be willing to participate in E&S capacity building activates hosted by REA should REA deem necessary.

3.4.6. Evaluation Process

The Pre-qualification process results in a successful applicant being offered a Grant Agreement under which they can then access the Output Based Grants. Pre-qualification also means an applicant may be eligible to apply for the Market Scale-up Challenge Fund if they have expressed interest and

[7] Forced labor means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.
[8] Employees may only be taken if they are at least 15 years old, as defined in the ILO Minimum Age Convention (C138, Art. 2), and ratified by Nigeria in 2002. Children under the age of 18 will not be employed in hazardous work. Children will not be employed in any manner that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.
[9] World Banks Safeguard policies, including World Bank Group Environmental, Health, and Safety Guidelines

demonstrated ambition to submit an additional detailed application for MSCF.

Step 1: Submit Application

Applicants shall submit applications to the Grant Administration Firm on a rolling basis for OBF but before the closing date for MSCF.

REA is developing a platform with Software management in order for applications to be submitted electronically.

Step 2: Register and Log Application

All applications will be logged and registered automatically as they are received. The online system for submission of applications will be Software management. Log in credentials and step-by-step instructions on how to apply will be sent to each firm that responds to the Expression of Interest with basic documentation.

Step 3: Compliance Check

A preliminary check will be conducted to confirm that all mandatory requirements of the application have been met. If all requirements have been met, then the full evaluation can proceed. If not, the application is rejected.

Step 4: SHS Quality Assurance

1. SHSs with current Lighting Global Certifications are eligible. If a current certificate is presented, then the next step can be skipped
2. SHS of 6-15Wp MUST have a current LG certificate to the IEC standard
3. SHS between 15 Wp and 350 Wp may either have an LG certificate for the relevant LG standard (not adopted by IEC) or must complete the technical review (included as a separate document checklist in the online application process)
4. SHS larger than about 350 Wp are outside the range of LG certification and MUST complete the technical review
5. Quality Verification Technical Review: The expert will check that all components have relevant international certifications and the manufacturers have relevant ISO and IEC certifications. For systems requiring technical installation, the technical capability of the solar provider/ installer will also be evaluated. The required documents will be detailed in the technical review document checklist for quality verification.
6. The physical inspection will eventually be conducted by a third-party expert in stand-alone PV systems with international experience in the design, installation and operation of large numbers of systems in private

sector settings, sub-contracted by the REA, subject to a No Objection from the World Bank.

Step 5: Score Applications

Each member of the Evaluation Panel shall evaluate and score each application individually. Members shall record their scores and comments in the evaluation template.

For each application, each evaluator will then use the detailed template to develop scores for each section (as per the weighted scoring matrix above). For each application, each evaluator will then produce a single score.

Step 6: Consolidate Evaluations

The evaluations from each team member will be consolidated.

1. If all evaluators rate an applicant as non-compliant, then they shall not be processed further. A rejection letter should be sent to the company to notify them that their application was unsuccessful [reference to the rejection letter]
2. If all evaluators rate an applicant above 70%, and they also pass all the other pass/fail criteria, then the evaluation can proceed to the background check
3. If the evaluations are mixed, then the differences will be discussed, and a final decision should be made.

Step 7: Background Checks

If the company is successful in the application and selection process, background checks should be conducted on the company, the contact person, and other key people in the company.

Background checks are to be conducted by a third-party service provider engaged by REA-PMU with access to international and Nigerian databases, including criminal and civil legal actions.

Step 8: SHS Tier

SHS companies that pass Quality Assurance shall be allocated to one of the following Tiers, to determine the level of the Output Based Grant that would be applicable. The proposed grant amounts per system may be revised in due course upon evaluation of the design and support thresholds.

SE4ALL		*Tier 1*		*Tier 3*	*Tier 3*	*Tier 4*	*Tier 5*
Product Tiers		**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
Nominal Capacity (minimum)	Wp	6	15	50	200	800	2000
Daily Capacity	Wh	24	60	200	1000	3400	8200
Minimum Service		Min 3 lamps, possible 2,000 lumen hours per day, phone charging	Min 3 lamps, phone charging, air circulation possible	Electrical, lighting, air circulation, television, and phone charging are possible			
Availability (day)	hrs	4	4	4	8	16	23
Availability (evening)	hrs	2	2	2	3	4	4
Nominal Retail Price	USD	80	125	250	800	3,200	8,000
Grant	%	20%	20%	20%	15%	10%	5%
Grant Amount	**USD**	**16**	**25**	**50**	**120**	**320**	**400**

Step 9: Recommendation

Upon screening, review and evaluation of the firms, The Grants Administrator shall provide a list of the firms to the Selection Panel in a summarized and collated form, with recommendations for each one.

The recommendation for each applicant and for each of their SHS shall be one of the following:

1. Pre-qualified
2. Not Pre-qualified
3. Guidance Required

Step 10: Approval

The Selection Panel will review the recommendations, amend or clarify as needed, and create a final list of approved applications to be pre-qualified for OBF.

Step 11: No Objection

The Investment Committee within the REA and the IDA will receive the recommended selection of the pre-qualified applicants, to provide a No Objection.

3.4.7. Verification

An Independent Verification Agency (IVA) will be engaged by REA-PMU to carry out the verifications of claims submitted by the participating solar companies. The IVA will determine the precise methodology of verifications but below are some suggested audit levels that the IVA could operate.

Table 11: Example of audit levels

Audit Level	Name	When to apply
Audit Level 1	Telephone sample	All grantees on their first claim. Any time the grant amount per unit is being changed, then apply to all grantees in the final claim period before the rate change
Audit Level 2	Field sample	Apply if, during a Level 1 audit, more than 10% of the customer telephone numbers called cannot be contacted
Audit Level 3	Grantee process / systems audit	Apply if a Level 2 audit fails
Audit Level 4	Full customer audit	If there is evidence of, or concern about, a significant lack of integrity in the claims data of a grantee

Level 1: Telephone Sample

From the list of customers provided by the Grantee in the claim, the Independent Verification Agency will select a random sample to audit.

The size of the sample may vary. The initial sample should consist of a minimum of 10% of the customers or 100 customers – whichever is the largest.

Timing of the audit: Once a grantee has been audited once, the process will vary in the subsequent round(s) depending upon the results of the audit.

First Claim: First complete a satisfactory audit, then approve the payment of the grant claim.

Second Claim: If the most recent Level 1 and/or Level 2 audit was confirmed with 98% or better responses validated, then for subsequent claims from that grantee, the claim can be paid first, and the audit can be done AFTER the claim.

If a grantee fails a Level 1 and/or 2 audit (less than 98%) then for their next claim, the audit will be done BEFORE payment of the claim.

Level 2: Field Sample

Some customers may provide a telephone number for a phone that is often beyond service range. Some may use the phone only when on occasion moving away from the home to a more populated area.

This means that some grantees fail a Level 1 Audit. A Level 2 Audit would then be applied. This cost is higher as it requires people to go into the field.

The random sample of customers in Level 1 may be widely scattered. To reduce the cost of the Level 2 Audit, a second selection of customers would be taken, all within a smaller geographic area. It is therefore recommended to first repeat the Level 1 audit on that sample, and, if needed, then conduct the Level 2 audit.

The Auditor will visit the village, using the address/GPS co-ordinates and verify that the customer has the solar system as reported.

Level 3: Grantee Process / Systems Audit

The full process audit would involve the following steps:

1. Interview with grantee management, seeking to identify underlying reasons for the failed Level 2 audit. There may be a simple explanation or error

2. A more detailed review of the grantee's process or systems might be warranted, to either confirm the assumed cause of the problem, or to identify it. This might involve following the paper trail for the failed customers back to source or checking processing steps.

Depending upon the cause of the problem, a varied audit plan might be developed or imposed for that grantee. Alternatively, once identified, the problem may be resolved.

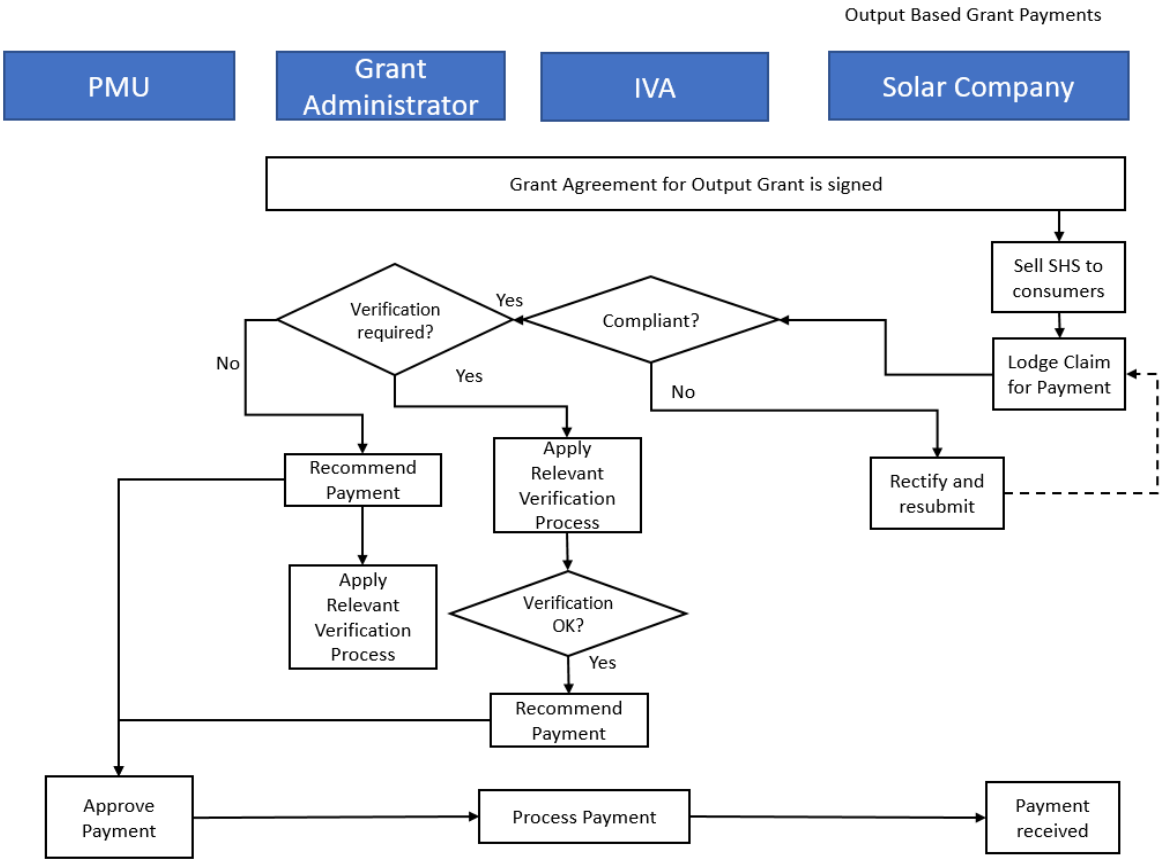
Level 4: Full Customer Audit

A full audit of customer claims might be imposed if the integrity of the claims provided has been poor. This would be done in contemplation of either validating the claims or potentially seeking repayment of past claims.

3.4.8. Payment to the Grantees

A simplified summary of the payment process for Output Based Grants is below.

Figure 15: Summary of Payment Process



3.4.9. Output Based Grant Amounts

Output Based Grants are paid as a fixed amount of Naira per system based on an USD-equivalent, based on the Level to which the system was allocated during pre-qualification. The grant amounts will be updated each year for inflation.

The initial grant amounts are as follows listed in Table 12[10]:

10 Grant amounts may be revised in due course as part of the design and threshold support review process.

Table 12: Initial Grant Amounts for the Output Based Grants

System Type	Min. Wp	USD equivalent per system[11]	Percent of system cost
Level 1	6	16	20%
Level 2	15	25	20%
Level 3	50	50	20%
Level 4	200	120	15%
Level 5	800	320	10%
Level 6	2000	400	5%

3.4.9.1. Grant Payment Process: Output Based Grants

Step 1: Submit Grant Claim

Claims for payment of Output Based Grants may be submitted by Grantees once each month. Claims submitted between the 1st and the 15th of that month will be processed the same month otherwise the claim will be processed the following month.

The Claims log will include a standard report format showing a summary of the number of systems by type, and a detailed database for every system / customer with full details for audit and verification to be carried out including the system model, serial number, and full customer details. The Claims log will be completed and submitted online.

Step 2: Compliance

The Grants Administrator firm will be able to access the claims logged by the providers in the Software management portal and check that the claim is compliant. Non-compliant claims will be returned to the Grantee to rectify and resubmit.

To be compliant, each Claim must meet the following requirements:

- Only systems sold prior to the last day of the previous month are claimed
- Only systems sold in the previous 3 months are claimed
- Only systems that are pre-qualified are claimed
- The correct amount of grant is claimed for each system
- The total claim amount is calculated correctly

11 Grant amount will be converted to Naira at the time of the award corresponding to the USD equivalent amount.

- The claim meets the minimum claim size threshold (currently at least 150 units per month).

Step 3: Verification Process

Rules for determining the type and timing of audit required are described in the Verification and Monitoring of Grantee Performance section.

If an audit step is needed before making the payment, then an audit from the Independent Verification Agency should be requested. Once audit has been prepared and received by the Grants Administrator, proceed to Step 4: Recommend Payment.

Step 4: Recommend Payment

The Grant Administration firm will prepare payment advice notes every week based on the review of verified claims submitted by the IVA. All grant claims that are ready to be paid (i.e. not still in an audit process) will be provided to the PMU.

Step 5: Process Payment

The PMU will review the claims and the related audit evidence and trigger the payment within 72 hours of receipt. Consistent failure to disburse the grant amount to firms in less than 72 hours of receipt will affect the project outcomes and will be subject to a revision of the disbursement arrangements.

3.5. Component 2.2: Output Based Fund (OBF)

3.5.1. Design of the Output Based Fund

The Output Based Fund (OBF) offers small incentive payments, referred to as Output Based Grants (OBG), to eligible solar providers for each eligible SHS installed.

Budget: The OBF will receive the largest portion of the budget for the SHS component.

The purpose of the Output Based Grants: To enable capable solar providers to reach and serve larger numbers of customers more rapidly.

Rationale: Expanding reach to consumers is costly. It requires significant investment in soft infrastructure—people, training, advertising, increased working capital, processes, logistics etc. Curtailing a portion of those costs enables capable solar providers to more reach and serve larger numbers of customers with SHS more rapidly. Providing the grant against each system after installation means that the government knows what it is getting for its money, and automatically directs the grant proportionally towards those solar providers that are proving most successful in serving more customers.

Pre-qualification of eligible SHS: Only pre-qualified SHS companies will be eligible to attract Output Based Grant funds. To be eligible, each SHS company must have either: (i) a current Certificate of compliance from Lighting Global against either the International Electro-technical Commission (IEC) or Lighting Global standards; or (ii) pass a separate evaluation for quality assurance of the technology, which would rely upon viewing a complete set of certifications of components against international standards and of manufacturers against the standards of the International Organization for Standardization (ISO).

Pre-qualification of eligible solar providers: Only credible SHS providers will be eligible to access Output Based Grants. To become eligible, they must pass a robust pre-qualification. The aim of the pre-qualification for Output Based Grants is that the applicant has all the capabilities needed to deliver quality equipment, service and after sales service to customers and has the internal integrity and rigor to cope with the reporting and audit requirements attached to the grant. The pre-qualification will focus on technical standards of the solar PV products, business integrity, competence in financial administration, legal compliance, technical delivery, warranty and its delivery. The Output Based Grant pre-qualification places less emphasis than the Market Scale-up Challenge Grants on evidence of the applicant's ability to scale. This enables new entrants and Nigerian start-ups to begin in a smaller way with little risk for the program. Some of these participants may then become large and capable and eligible for the MCSF down the line.

Eligibility to claim an Output Based Grant: An eligible solar provider may request payment of an Output Based Grant amount after an eligible SHS is installed with a customer.

Output Based Grant Unit Rate: The Output Based Grant will be paid as a pre-defined amount per system (Unit Rate) for each system installed. SHS will be categorized into several Tiers based on capacity and service. Within each Tier of SHS, a single unit rate of Output Based Grant will be set to be paid against all systems. The grant amount per system (Unit Rate) will vary across several categories of solar product.

Value of the Unit Rate Output Based Grant: Averaged across the portfolio of SHS, the Output Based Grant amount would be initially in the range of 15-20% of the nominal retail price of the SHS. In practice, with a variety of SHSs in a common Tier, the portion of the retail price represented by the Unit Rate will vary between SHSs.

Grant reduction over time: The Unit Rate paid per system will reduce over the life of the program, to a nominal level during the final period of the program. The Unit Rates will be reviewed from time to time.

Business model neutral: All business models are eligible. The Output Based Grant amount is the same whether the SHS is provided to the customer as a cash sale, loan from a bank or micro-bank, integrated PAYG, pure PPA or operating lease, or some other variant of these basic models.

Flexibility in use of grant: Solar providers would decide how best to use the grant funds received. The Output Based Grants will form only a small portion of the revenues and expenditures: customers will pay commercial prices and solar providers will invest much more of their own funds than they receive in grants. It is anticipated that in early stages it would be taken as a gross margin and spent on business growth (accelerate the expansion of their sales, logistics and after sales capability, increase advertising, etc). If there is significant application of grants to reduce price (and that ability is limited anyway by the small grant amounts) then Unit Rates may be reviewed down. The performance of the grantees can be tracked via the Independent Verification Agency efforts carried out by a firm contracted solely for this purpose.

NOT a subsidy on the customer price: Importantly, the Output Based Grant is not a subsidy on the end-user price. The Independent Verification Agency will verify whether the grants are being used to directly subsidize the cost to the consumer.

Phasing: An initial public invitation for applications will be conducted. Companies may apply during the initial window or at any time after that on a rolling basis.

System Size: The smallest system that would attract an Output Based Grant shall have a minimum generation capacity of 6Wp and a minimum provision of service of 3 lamps and an outlet for phone charging.

3.5.2. Review of the Grant Design Details

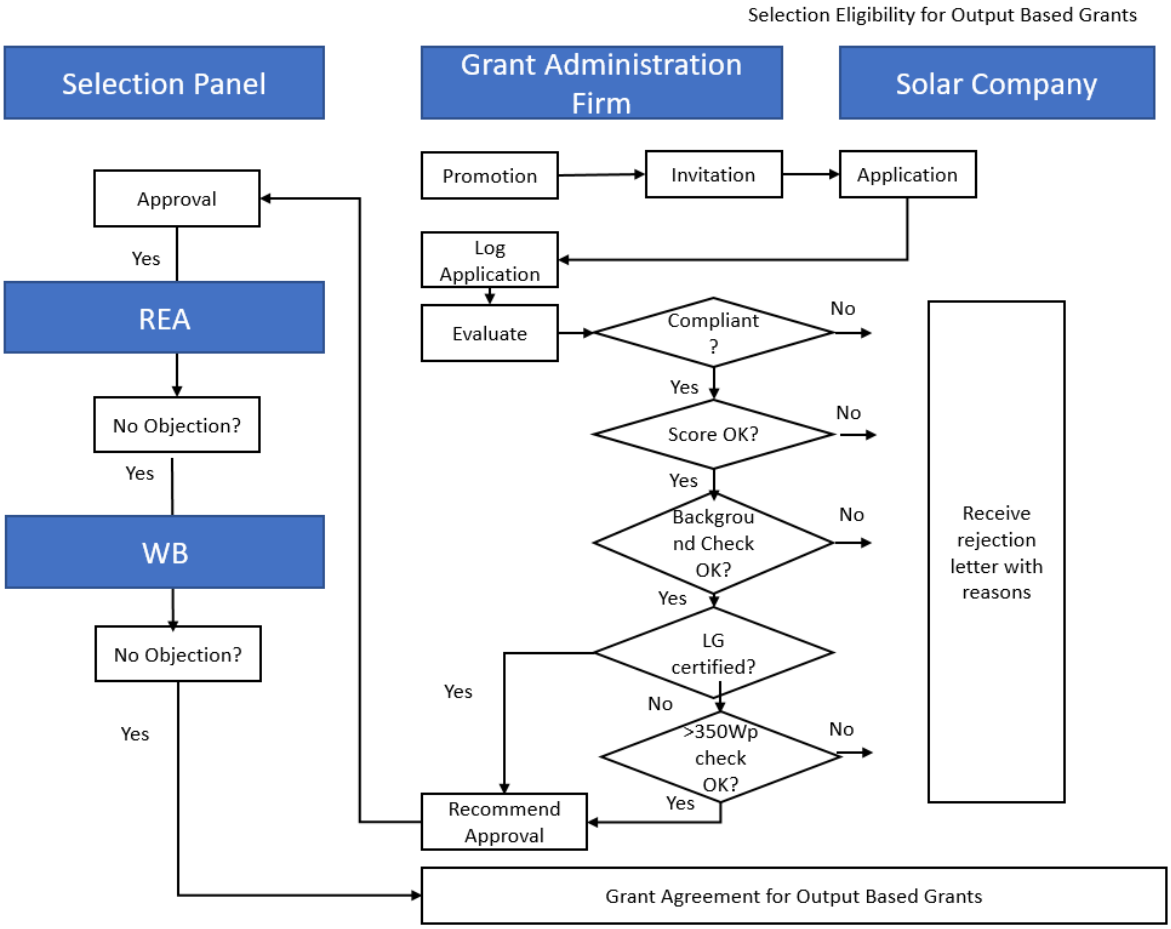
Details in the design of the grant offering shall be reviewed by the REA at least once each year with the design for the following period to receive a No Objection from the World Bank.

Such a review will reflect the feedback from the Grants Administrator Firm, the participating solar companies, market intelligence, and performance and lessons from the prior operation of the funds. One of the areas requiring careful review shall be the amount of grant per system under the OBF.

3.5.3. Selection Process Overview

This section describes the steps for selecting which companies will be eligible to access Output Based Grants.

Figure 16: Steps for selecting companies



3.5.4. Promotion of the Grant Opportunity

Effective outreach to the most capable companies in the private market for SHS is essential to success. This will include:

- Advertisement on the REA website
- Advertisement in national and regional newspapers (8 weeks before applications close)
- Direct email advice to companies known to have capability to scale in the market (Nigerian and international) (8 weeks before applications close)
- Workshop presentations in Lagos and Abuja to enable interested parties to ask questions (4 weeks before applications close)

- During this period Invitations to Apply (including the Application Form) will be provided on request
- All companies sent an Invitation and Application will be logged in a register together with their contact details.

In relation to the MSCF, there may also be one-on-one discussions with individual companies seeking to better understand this more complex component. Such discussions will always be conducted by at least two members of the Selection Panel, with discussion points written down and shared with the Selection Panel. In the event of questions arising that may be of wider relevance, these will be shared with all companies that have received an Invitation.

Feedback received in the Workshops and in individual company meetings may influence refinements in the final design of the grant offering. In the event any alterations are made, all recipients of the Invitation shall be notified.

	ACTIVITIES
1	Promotion of the opportunity
2	Invitation to apply
3	Application
4	Log application
5	Evaluation
6	Compliance review
7	Scoring
8	Background check / Due Diligence
11	Recommended approval

3.5.5. Application Form Structure and Scoring

Overview

A single Application Form is used to apply for the Output Based Grants and the Market Scale-up Challenge Grants. The Invitation document pack

describes the grant opportunity, provides guidance on how to apply, what is required to qualify, and how applications will be evaluated.

The invitation pack includes: (i) the Invitation Document; and (ii) the Application Form. This will be prepared by the Grants Administrator. These documents will also be integrated in REA's NEP Platform power by Software management software.

Structure of the Application Form and Relevance of Each Section

Following is a description of the sections of the Invitation and Application that are relevant to pre-qualification for the OBF.

Section	Focus	Relevance
Pre-Qualification for Output Based Grant		
Company	Identify company, governance structures, key people. Confirm regulatory compliance and financial standing	Mandatory for all applicants. Applicants that fail ANY section are not eligible to receive grant funds. Applicants that satisfy EVERY section are eligible: • to claim Output Based Grants, and • to be evaluated for a Market Scale-up Challenge Grant.
Customer Tracking	Evidence of the ability to meet the requirement to identify, track and report customers and SHS	
Customer Services	Evidence of the ability to effectively provide pre- and after- sales service to those customers that are acquired, including easy and practical warranty service	
Operational scale	Evidence of the ability to achieve the minimum required level of sales	
Skills and experience	Relevant experience of company and key people for building scale in the private SHS market	
Product	Identify SHS products, verify Lighting Global quality certifications (from independent laboratories)	
Environmental and Social Risk Management	Evidence that environmental and social management system is established and functioning, and risks are mitigated including proper waste management plan (see ESMS section below for the full information)	
Background Checks	Consent to conduct background checks on the applicant company, associated companies, and key individuals including gender related background checks	

Declarations	Declarations to comply with key terms. Consent for background checks on company and key people.	

The Invitation should also describe the weighted scoring. It is important to know that in this evaluation for OBF, the firms are not ranked but rather admitted or rejected subject to either passing or not passing the minimum score, depending on the criteria below. The detailed set of criteria and the scoring system are included in the evaluation form.

Pre-Qualification for Output Based Grant		
Section	**Requirement/Weighting**	**Scoring Threshold**
A: Company		
Company Details	Mandatory	Complete and compliant
Value Chain & Product Tracking	Mandatory	70% minimum
Customer Service	Mandatory	70% minimum
Financial Resources	Mandatory	70% minimum
Operational scale	Mandatory	70% minimum
Skills and experience	Mandatory	70% minimum
B: Product eligibility	Mandatory	Approved by evaluation Team
C: Environmental & Social (E&S) Management	Mandatory	Meets or exceeds the minimum standard (functioning ESMS in line with REA requirements; please see below for details)
D: Acceptance of other terms for the grant (regulatory, auditing, etc.)	Mandatory	Complete and compliant
E: Background Checks	Mandatory	Complete consent and identifications. Satisfactory check results.

Applicable E&S requirements:

1. Regulatory, Administrative and Legal Framework of Nigeria, including federal, state, and local legislation, as well as international treaties, acts and conventions
2. Exclusion criteria

SHS companies will not be supported if they are involved in the following:

- Production or activities involving forced labor[12]
- Production or activities involving child labor13
- Cross-border trade in waste and waste products, unless compliant to the Basel Convention and the underlying regulations.[14]

E&S Qualification Criteria

- Have a good E&S track record, meaning no E&S related fines, violation record, litigation, or pending litigations in the past three years
- Have an institutional Environmental and Social Management System that meets REA's requirements consisting of:
  - Human Resources Policy
  - Occupational Safety & Health Policy/ Guideline
  - Battery Collection/Recycling Policy
- Have the organizational capacity to implement such ESMS; and
- Be willing to participate in E&S capacity building activates hosted by REA should REA deem necessary.

3.5.6. Evaluation Process

The Pre-qualification process results in a successful applicant being offered a Grant Agreement under which they can then access the Output Based Grants. Pre-qualification also means an applicant is eligible to apply for the Market Scale-up Challenge Fund if they have elected to submit a more detailed application for this fund.

Step 1: Submit Application

Applicants shall submit applications to the Grant Administration Firm before the closing date.

REA is developing a platform with software management in order for applications to be submitted electronically.

[12] Forced labor means all work or service, not voluntarily performed, that is extracted from an individual under threat of force or penalty.
[13] Employees may only be taken if they are at least 15 years old, as defined in the ILO Minimum Age Convention (C138, Art. 2), and ratified by Nigeria in 2002. Children under the age of 18 will not be employed in hazardous work. Children will not be employed in any manner that is economically exploitive, or is likely to be hazardous to, or to interfere with, the child's education, or to be harmful to the child's health, or physical, mental, spiritual, moral, or social development.
[14] World Banks Safeguard policies, including World Bank Group Environmental, Health, and Safety Guidelines

Step 2: Register and Log Application

All applications will be logged and registered automatically as they are received. The online system for submission of applications will be software management. Login credentials and step-by-step instructions on how to apply will be sent to each firm that responds to the Expression of Interest with basic documentation.

Step 3: Compliance Check

A preliminary check will be conducted to confirm that all mandatory requirements of the application have been met. If all requirements have been met, then the full evaluation can proceed. If not, the application is rejected.

Step 4: SHS Quality Assurance

1. SHSs with current Lighting Global Certifications are eligible. If a current certificate is presented, then the next step can be skipped
2. SHS of 10Wp or smaller MUST have a current LG certificate to the IEC standard
3. SHS between 10 Wp and 350 Wp may either have an LG certificate for the relevant LG standard (not adopted by IEC) or must complete the technical review
4. SHS larger than about 350 Wp are outside the range of LG certification and MUST complete the technical review
5. TECHNICAL REVIEW: The expert will check that all components have relevant international certifications and the manufacturers have relevant ISO certification. For systems requiring technical installation, the technical capability of the solar provider/ installer will also be evaluated
6. The check will be conducted by a third-party expert in stand-alone PV systems with international experience in the design, installation and operation of large numbers of systems in private sector settings, sub-contracted by the REA, subject to a No Objection from IDA.

Step 5: Score Applications

Each member of the Evaluation Panel shall evaluate and score each application individually. Members shall record their scores and comments in the evaluation template.

For each application, each evaluator will then use the detailed template to develop scores for each section (as per the weighted scoring matrix above). For each application, each evaluator will then produce a single score.

Step 6: Consolidate Evaluations

The evaluations from each team member will be consolidated.

4. If all evaluators rate an applicant as non-compliant, then they shall not be processed further. A rejection letter should be sent to the company to notify them that their application was unsuccessful [reference to the rejection letter].
5. If all evaluators rate an applicant above 70%, and they also pass all the other pass/fail criteria, then the evaluation can proceed to the background check.
6. If the evaluations are mixed, then the differences shall be discussed, and a final decision should be made.

Step 7: Background Checks

If the company is successful in the application and selection process, background checks should be conducted on the company, the contact person, and other key people in the company.

Background checks are to be conducted by a third-party service provider with access to international and Nigerian databases, including criminal and civil legal actions.

Step 8: SHS Tier

SHS companies that pass Quality Assurance shall be allocated to one of the following Tiers, to determine the level of the Output Based Grant that would be applicable.

SE4ALL	*Tier 1*		*Tier 2*	*Tier 3*	*Tier 4*	*Tier 5*
Product Tiers	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	
Minimum Capacity (Wp)	6	15	50	200	800	2000
	24	60	200	1000	3400	8200
	Min 3 lamps, possible 2,000 lumen hours per day, phone charging	Min 3 lamps, phone charging, air circulation possible	Electrical, lighting, air circulation, television, and phone charging are possible			
Minimum Duration (hours)	4	4	4	8	16	23
	2	2	2	3	4	4
Grant Amount (Naira)	**5,760**	**9,000**	**18,000**	**43,200**	**115,200**	**144,000**
Retail Price (USD)	80	125	250	800	3,200	8,000
	125	250	800	10,000	8,000	20,000
	93.5	162.5	415	3560		
Grant	20%	20%	20%	15%	10%	5%
Grant Amount (USD)	**16**	**25**	**50**	**120**	**320**	**400**

Step 9: Recommendation

Upon the screening, review and evaluation of the firms, The Grants Administrator shall provide a list of the firms to the Selection Panel in a summarized and collated form, with recommendations for each one.

The recommendation for each applicant and for each of their SHS shall be one of these:

4. Pre-Qualified
5. Not Pre-Qualified
6. Guidance Required

Step 10: Approval

The Selection Panel shall review the recommendations, amend or clarify as needed, and create a final list of approved applications to be pre-qualified for OBF.

Step 11: No Objection

The Investment Committee within the REA and the IDA will receive the recommended selection of the pre-qualified applicants, to provide a No Objection.

3.5.7. Verification

Table 13: Example of audit levels

Audit Level	Name	When to apply
Audit Level 1	Telephone sample	All grantees on their first claim. Any time the grant amount per unit is being changed, then apply to all grantees in the final claim period before the rate change
Audit Level 2	Field sample	Apply if, during a Level 1 audit, more than 10% of the customer telephone numbers called cannot be contacted
Audit Level 3	Grantee process / systems audit	Apply if a Level 2 audit fails
Audit Level 4	Full customer audit	If there is evidence of, or concern about, a significant lack of integrity in the claims data of a grantee

Level 1: Telephone Sample

From the list of customers provided by the Grantee in the claim, the Independent Verification Agency will select a random sample to audit.

The size of the sample may vary. The initial sample should consist of a minimum of 10% of the customers or 100 customers – whichever is the largest.

Timing of the audit: Once a grantee has been audited once, the process will vary in the subsequent round(s) depending upon the results of the audit.

First Claim: First complete a satisfactory audit, then approve the payment of the grant claim.

Second Claim: If the most recent Level 1 and/or Level 2 audit was confirmed with 98% or better responses validated, then for subsequent claims from that grantee, the claim can be paid first, and the audit then done AFTER the claim.

If a grantee fails a Level 1 and/or 2 audit (less than 98%) then for their next claim, the audit will be done BEFORE payment of the claim.

Level 2: Field Sample

Some customers may provide a telephone number for a phone that is often beyond service range. Some may use the phone only when on occasion moving away from the home to a more populated area.

This means that some grantees fail a Level 1 Audit. A Level 2 Audit would then be applied. This cost is higher as it requires people to go into the field.

The random sample of customers in Level 1 may be widely scattered. To reduce the cost of the Level 2 Audit, a second selection of customers would be taken, all within a smaller geographic area. It is therefore recommended to first repeat the Level 1 audit on that sample, and, if needed, then conduct the Level 2 audit.

The Auditor will visit the village, using the address/GPS co-ordinates and verify that the customer has the solar system as reported.

Level 3: Grantee Process / Systems Audit

The full process audit would involve the following steps:

1. Interview with grantee management, seeking to identify underlying reasons for the failed Level 2 audit. There may be a simple explanation or error.

2. A more detailed review of the grantee's process or systems might be warranted, to either confirm the assumed cause of the problem, or to identify it. This might involve following the paper trail for the failed customers back to source, or checking processing steps.

Depending upon the cause of the problem, a varied audit plan might be developed or imposed for that grantee. Alternatively, once identified, the problem may be resolved.

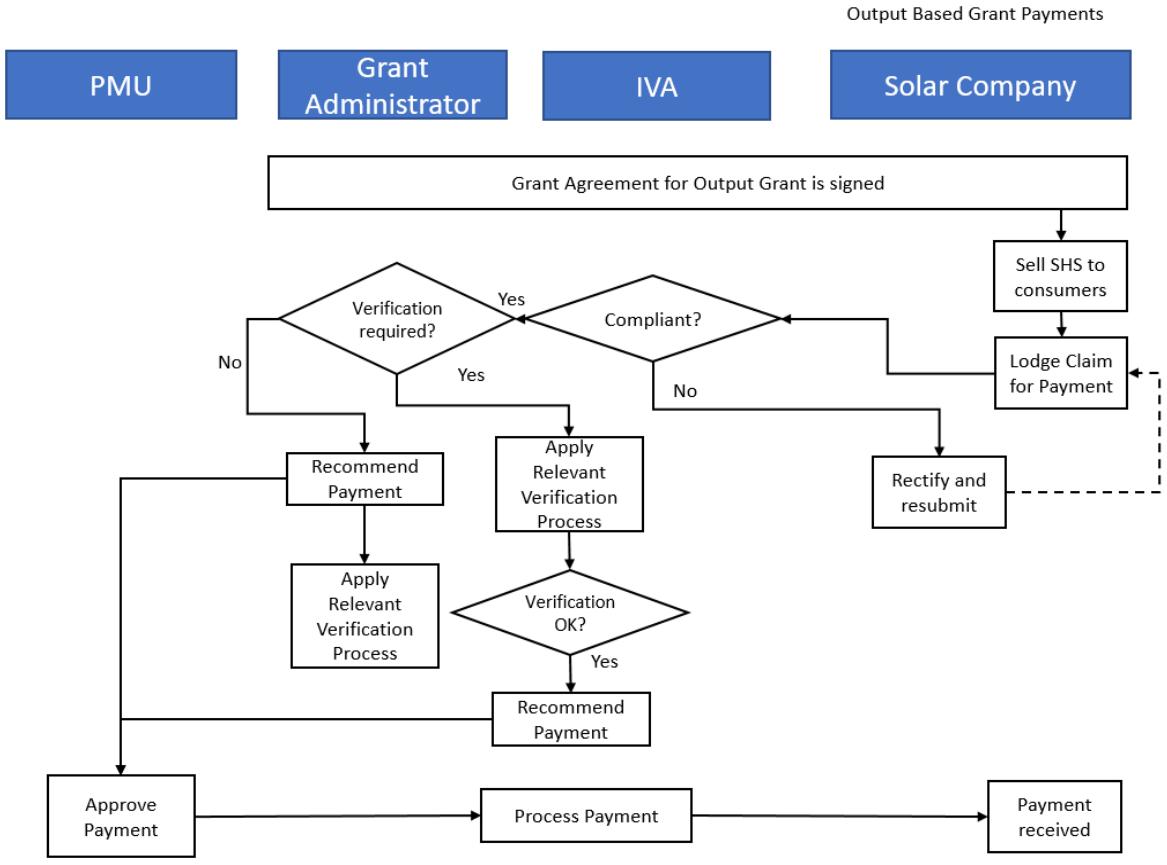
Level 4: Full Customer Audit

A full audit of customer claims might be imposed if the integrity of the claims provided has been poor. This would be done in contemplation of either validating the claims or potentially seeking repayment of past claims.

3.5.8. Payment to the Grantees

A simplified summary of the payment process for Output Based Grants is below.

Figure 17: Summary of Payment Process



3.5.9. Output Based Grant Amounts

Output Based Grants are paid as a fixed amount of Naira per system based on an USD-equivalent, based on the Level to which the system was allocated during pre-qualification. The grant amounts will be updated each year for inflation.

The initial grant amounts are as follows:

System Type	Min. Wp	USD equivalent per system[15]	Percent of system cost
Level 1	6	16	20%
Level 1	15	25	20%
Level 2	50	50	20%
Level 3	200	120	20%
Level 4	800	320	10%
Level 5	2000	400	5%

3.5.9.1. Grant Payment Process: Output Based Grants

Step 1: Submit Grant Claim

Claims for payment of Output Based Grants may be submitted by Grantees once each month. Claims submitted between the 1st and the 15th of that month will be processed the same month otherwise the claim will be processed the following month.

The Claims log will include a standard report format showing a summary of the number of systems by type, and a detailed database for every system / customer with full details for audit and verification to be carried out including the system model, serial number, and full customer details. The Claims log will be completed and submitted online.

Step 2: Compliance

The Grants Administrator firm will be able to access the claims logged by the providers in the Software management portal and check that the claim is compliant. Non-compliant claims will be returned to the Grantee to rectify and resubmit.

To be compliant, each Claim must meet the following requirements:

- Only systems sold prior to the last day of the previous month are claimed
- Only systems sold in the previous 3 months are claimed
- Only systems that are pre-qualified are claimed
- The correct amount of grant is claimed for each system
- The total claim amount is calculated correctly
- The claim meets the minimum claim size threshold.

15 Grant amount will be converted to Naira at the time of the award corresponding to the USD equivalent amount.

Step 3: Verification Process

Rules for determining the type and timing of audit required are described in the Verification and Monitoring of the Grantee Performance section.

If an audit step is needed before making the payment, then an audit from the Independent Verification Agency should be requested. Once audit has been prepared and received by the Grants Administrator, proceed to Step 4: Recommend Payment.

Step 4: Recommend Payment

The Grant Administration firm shall prepare payment advice notes every week, which will include all grant claims that are ready to be paid (i.e. not still in an audit process) and provide this to the PMU.

Step 5: Process Payment

The PMU shall review the claims and the related audit evidence and trigger the payment within 72 hours of receipt. Consistent failure to disburse the grant amount to firms in less than 72 hours of receipt will affect the project outcomes and will be subject to a revision of the disbursement arrangements.

Component 3: Energizing Education

3.6. Component 3: Energizing Education

3.6.1. Program Description

The overall objective of the Federal Government of Nigeria's (FGN) Energizing Education Program (EEP) is to provide reliable, affordable and sustainable power to 37 Federal Universities and 7 Teaching Hospitals through solar hybrid and gas-fired power plant solutions and the rehabilitation of existing distribution infrastructure. The EEP also seeks to install street lights for improved security within the beneficiary universities' campuses and construct training centers for the provision of training in renewables for existing students.

Phase 1 of the EEP (9 Federal Universities and 1 Teaching Hospital) is currently being implemented by REA with exclusively FGN's funds. Phase II of the EEP (7 Federal Universities and 2 Teaching Hospitals), which includes the provision of solar hybrid power plants for all beneficiary institutions, will also be implemented by the REA, but funded under the Nigerian Electrification Project (NEP).

The design of the main activities to be carried out towards implementing Phase II of the EEP has been guided by World Bank processes as well as the main lessons learned from the implementation experience under Phase I.

The EEP Component is structured into the following categories to ensure a smooth implementation process:

1. **Pre-design Stage:** This involves the use of in-house engineers to conduct predesign activities by visiting the selected seven Federal Universities and 2 Teaching Hospitals to conduct energy demand audits and baseline customer surveys, in order to: determine the state of the existing power distribution network and streetlighting; evaluate the quality and reliability of electricity services provided currently to the educational and medical facilities; assess the current consumption patterns and costs of self-generation; and determine the availability of land for the construction of the Captive Independent Power Plants and the training centers.

2. **Front End Engineering Design (FEED):** This will be done by a suitable procured consulting firms after obtaining inputs from the Pre-design stage. The purpose of conducting the FEED is to provide preliminary feasibility studies on the available energy sources and provide proposed initial capacities for the Power plants from the energy demand audits. The main deliverable at this stage will be:

    a. Technical and Financial Pre-Feasibility Study

    b. Detailed designs, including drawings, Bill of Quantities (BOQ) / Bill of Measurement and Evaluation (BEME) and cost estimations

    c. Provision of Bidding Documents and report on existing distribution network / streetlight infrastructure and equipment

    d. Architectural / Structural design for the Workshop and Training Centre, including recommendations of equipment for electrical and mechanical training

    e. Detailed Project Report (DPR)and Energy Efficiency Plan and equipment specifications.

3. **Conduct Environmental and Social Impact Assessment, including Resettlement and Livelihood Restoration Planning:** This process must include E&S impact assessment and development of adequate mitigation and monitoring plans and measures. Where it is established through E&S impact screening that impacts include impacts on assets, access to assets, or livelihoods of communities or other affected parties, a Resettlement Action Plan (RAP) and / or Livelihood

Restoration Plan (LRP) must be prepared and implemented prior to the start of any construction works.

4. **Develop Standard Bidding documents (SBDs):** This process is subsequent to the provision of approved design documents and Equipment specifications by the FEEDS consultant, who will also prepare a BOQ and a BEME, which will form part of the tender process for selection of Contractors that will build the power plants under an Engineering, Procurement and Construction (EPC) contract. SBDs must include adequate environmental and social risk management provisions in line with the ESIA, including labour management plan.

5. **Sign A Memorandum of Understanding (MOU)**: A MoU will be developed and executed between the beneficiary Phase II universities, Teaching Hospitals and the REA to incorporate the roles and responsibilities of all parties throughout the implementation of EEP Phase II and thereafter. REA, in collaboration with the NUC, shall be responsible for facilitating this activity

6. **Secure Permits and Approvals**: In order to ensure compliance with governing legislation in implementing the EEP, it is important that the necessary due process certificates of No Objection, Environmental Impact Assessment approvals and permits etc. will be obtained. REA, in collaboration with the REA PMU, will submit necessary applications to regulatory bodies and provide all required information towards obtaining aforementioned approvals, permits etc.

7. **Construction Activities:** EPC contractors will build Power Plants, rehabilitate distribution infrastructures, install street lights and build training centers of the EEP Phase II projects

8. **Construction Supervision:** The Owner's Engineer (OE) will supervise implementation activities of the EPC Contractors on site, regularly carrying out site inspections to ascertain milestones covered. The OE will also review and approve detailed designs, equipment and materials proposed by the EPC Contractors, participate in the FATs of equipment procured, coordinate meetings with the EPC Contractors towards addressing challenges and recording progress, which shall be captured in progress reports to be developed by the OE and sent to the REA and REA PMU

9. **Operation and Maintenance (O&M):** The Operation and Maintenance (O&M) of the EEP Phase II projects will be carried out by the EPC contractors for a three-year period, following which the contract will be open for review

10. **Project Management:** The Project Management Plan (PMP) will be developed by a consultant to provide a roadmap/guide to achieve the overall aims and objectives of the EEP. The PMP will govern scope, stakeholder, cost, risk, communications etc. management throughout the life cycle of EEP Phase II

11. **Develop a Sustainability Plan:** A Sustainability Plan will be developed by a consultant, and will cover a plan of action to ensure the sustainability of the power plants beyond the completion of the construction phase and the subsequent three-year O&M contract. The plan will encompass ownership, maintenance, long-term management arrangements (including potential tariff, metering and revenue collection structures). The O&M Contractors, the EEP beneficiaries and REA will be expected to implement or facilitate the implementation of the Plan.

4. Procurement

The REA has hired an experienced procurement specialist with adequate World Bank experience to implement the NEP project. Additional qualified staff will be deployed to the PMU procurement unit to enhance its capacity.

Procedures for procurement pursuant to the utilization of IDA credit are found in the relevant guidelines of the World Bank. In the case of inconsistency with the contents of this manual, such procedures as outlined in the relevant World Bank procurement regulations shall take precedence over the contents of this manual.

4.1. Procurement Plan

The Procurement Plan contains a list of contract packages for Goods, Works and Non-consulting Services and Consulting Assignments to be executed within the five years of the project. It will be updated on a regular basis to reflect the latest developments. The latest version of the procurement plan can be viewed in the document library for the Nigeria Electrification Project on the World Bank website at the following address:

http://projects.worldbank.org/P161885/?lang=en&tab=documents&subTab=projectDocuments

The procurement plan excludes mini grid and individual solar systems components that follow an output-based approach.

4.2. Procurement Thresholds

All direct contracting and contracts estimated to cost above USD1,000,000 (Goods) or USD10,000,000 (Works/ Supply & Installation) per contract will be subject to prior review by the Bank.

Table 14: Procurement Methods and Prior Review Thresholds for Procurement of Goods, Works and Non-Consulting Services.

	Category	Procurement Method	Method Threshold USD	Prior Review Threshold USD
1.	Goods and Non-consulting Services	ICB	Above 5,000,000	All
2.	Goods, Information Technology and Non-Consulting Services	NCB	Below 5,000,000	1,000,000 and above
3.	Goods, Information Technology and Non-Consulting Services	*RFQ	Up to 100,000	None
4.	Works; including turnkey, supply & installation of plant, and PPP	ICB	Above 20,000,000	All
5.	Works; including turnkey, supply & installation of plant, and PPP	NCB	Below 20,000,000	10,000,000 and above
6.	Works; including turnkey, supply & installation of plant, and PPP	*RFQ	Up to 200,000	None
7.	Motor vehicles. Quotation from 1st line distributors	*RFQ	Up to 500,000	None

* *Request for Quotation*

Consultancy Services estimated to cost above USD200,000 per contract and single source selection of consultants for *all values* will be subject to prior review by the Bank.

A shortlist of consultants for services estimated to cost less than USD300,000 or equivalent per contract and USD500,000 for engineering design and supervision may consist entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

Table 15: Selection Methods and Prior Review Thresholds for Selection of Consultants.

	Category	Selection Methods	Prior Review Threshold USD
1.	Firms	Competitive Methods	500,000
2.	Firms	Direct Selection	All
3.	Individual	Individual	200,000

4.3. Standard Bidding Documents

All procurement activities under the project would be carried out in accordance with the Procurement Plan and with the Procurement Regulations for IPF Borrowers July 2016 and Revised November 2017.

The following versions of the standard bidding documents, Request for Proposals and Bid Evaluation Forms shall be used:

GOODS

1. Request for Bids - Goods (1 envelope process) - [October 2017]
2. Request for Bids - Goods (2 envelope process) - [October 2017]
3. Request for Bids - Goods - Framework Agreement (1 envelope process)- January 2018

WORKS

1. Prequalification Document – Works [October 2017
2. Request for Bids - Works (after prequalification) [October 2017]
3. Request for Bids - Works (without prequalification) [October 2017]
4. Request for Bids - Small Works (2 envelope process) [October 2017]
5. Request for Bids - Small Works (1 envelope process) [October 2017]

DESIGN AND BUILD

1. Initial Selection [October 2017]
2. Request for Proposal [October 2017]

PLANT

1. Request for Bids - Plant (after prequalification) [October 2017]
2. Request for Bids - Plant (without prequalification) [October 2017]
3. Initial Selection Document – Plant [October 2017]
4. Request for Proposals - Plant [October 2017]

NON-CONSULTING SERVICES

Request for Bids - Non-consulting Services [October 2017]

CONSULTING SERVICES

Request for Proposals - Consulting Services [October 2017]

The above standard bidding documents for Goods and Works shall be used for ICB method of procurement. Under NCB method of procurement, the standard bidding documents shall be adapted to suit procurement conditions of the Government of Nigeria.

4.4. Operating Costs

Operating costs financed by the project will be procured using the procedures in the table below.

Table 16: Procedure for financing Operating costs

Description	Procedure	Post/ Prior Review
Staff travel expenditures and other travel related allowances	Staff travel shall be based on DSA rates for local and foreign travel as published by the World Bank from time to time	Prior
Vehicle operation, maintenance and repair	Retainer ship contract with certified motor repair workshop	Post
Office rental	Tenancy Agreement with suitable property owner	Post
Office maintenance, materials and supplies	Shopping in accordance with FGN National Procurement Manual for major items. Minor off the shelve items by comparison of at least three invoices	Post
Utilities, communication expenses and bank charges	Bills, invoices and receipts presented by approved vendors	Post

4.5. Contract Management

Procurement and Contract Management training for REA/PMU staff that have not attended similar training would be organized within one year of project effectiveness. Each contract shall be allocated a competent Project Manager from within the PMU or engage a Consultant who shall be responsible for administering the contract. Project Managers shall ensure that all bank guarantees, and insurances submitted by Contractors and Suppliers remain valid in accordance with the terms of the contract.

REA-PMU shall be closely supervised and enforced to avoid cost and time overruns. Collaboration with all stakeholders, especially host communities where the individual contracts will be executed, is necessary for successful implementation of the project.

Payment to contractors and consultants shall be made promptly as per terms and conditions outlined in each contract. To avoid delay in payment, Contractors and Suppliers shall first notify the Employer or Purchaser with details of works completed or goods supplied. Upon verification, the Employer or Purchaser issues a Work Valuation/Payment Certificate for works and installation services or an Acceptance Certificate for goods delivered. Contractors and Suppliers shall then attach copies of the relevant certificates to their invoices and submit for payment.

4.6. Procurement by Grantees (for Components 1 & 2)

Contracts for works, goods and consultancy services_to be procured by private entities, must be done through *established commercial practices* acceptable to the World Bank. The REA/PMU will assess the procurement capacity of Project Developers as part of the Grant Application or Proposal evaluation.

5. 'Environmental and Social Safeguards

Each project's Environmental and Social (E&S) assessments process must comply with the NEP Environmental and Social Management Framework (ESMF) and the Resettlement Policy Framework (RPF), where applicable. The Project Developers should agree to adhere to these frameworks during the preparation, construction and operation of the projects.

The ESMF and the RFP are available on REA's website at the following link:

http://rea.gov.ng/inc/uploads/2018/04/ENVIRONMENTAL-SOCIAL-MANAGEMENT-FRAMEWORK-FOR-NEP.pdf

6. Planning and Budgeting, Disbursement Procedures and Financial Management

6.1. Planning and Budgeting

On an annual basis, the Project Accountant from the Federal Project Financial Management Division (FPFMD), residing within the NEP will prepare the budget for the fiscal year based on the work program in consultation with key members of the PMU. The budget will be submitted to the World Bank at least two months before the beginning of the Project fiscal year. Detailed procedures for planning and budgeting will be documented in the Financial Procedures Manual (FPM).

6.2. Financial Reporting Arrangements

The REA/PMU will prepare quarterly un-audited Interim Financial Reports (IFR) in form and content satisfactory to the Bank and submit them to the Bank within 45 days after the end of the quarter to which they relate. The format of the IFR has been agreed between the Bank and REA. The contents of the IFR will include a section to report on the accountability of funds utilized and a section to access funds using the report-based method of disbursement.

World Bank funds will be accounted for by the Project on a cash basis. A computerized accounting system will be used. Annual financial statements will be prepared in accordance with the relevant International Public Sector Accounting Standards (IPSAS). All accounting and control procedures will be documented in the FPM, a living document which will be subject to review as appropriate.

6.3. External Audit Arrangements

The Auditor General of the Federation is the statutory auditor of all government entities, including the REA. The Office of the Auditor General of the Federation (OAGF) will audit the annual financial statements. The auditor will express an opinion on the Annual Financial Statements in compliance with the International Standards on Auditing (ISA). In addition to the audit report; the OAGF will prepare a Management Letter. Copies of the audited financial statements along with the Management Letter will be submitted to IDA not later than six months after the end of each financial year.

6.4. Funds Flow Arrangements

Project funding will consist mainly of IDA credit.

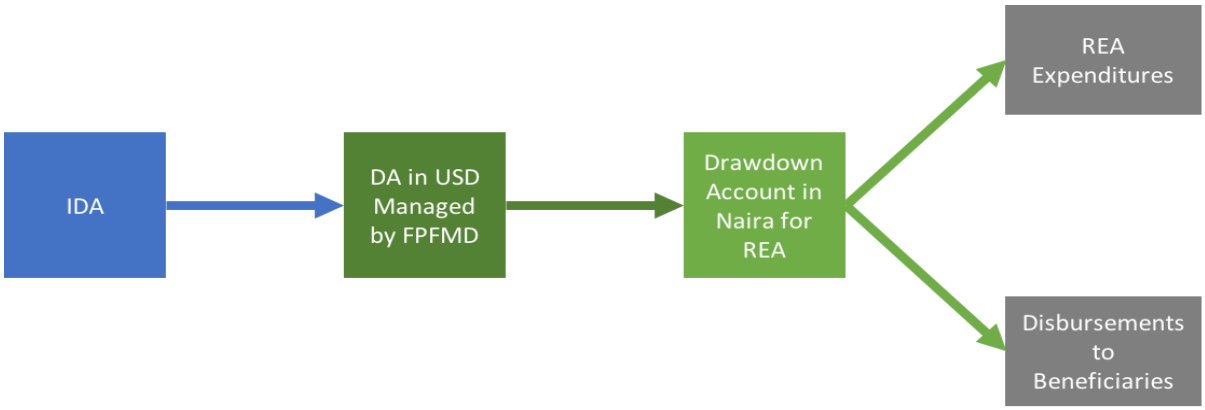
Funds flow arrangements for the project will be as follows:

- World Bank will make an initial advance disbursement from the proceeds of the Credit by depositing into the Recipients-operated Designated Accounts (DAs), opened and managed in the CBN by the FPFMD and denominated in US Dollars
- Actual expenditure will be reimbursed through submission of Withdrawal Applications and documented statements of expenses (SOEs)
- Transfers from the DAs (for payment of transactions in local currency) will be deposited in the Project Account in the CBN, opened in accordance with FGN's Single Treasury Account policy, to meet eligible expenditures in local currency project transactions denominated in Naira, provided that transactions and balances in these accounts are included in all project financial reports.

DA funds will be accounted for by the Project on a cash basis. A computerized accounting system will be used. Annual financial statements will be prepared in accordance with the relevant International Public Sector Accounting Standards (IPSAS). All accounting and control procedures will be documented in the Financial Procedures Manual, a living document which will be subject to review as appropriate.

The PMU will draw funds from the Project Account and then disburse them directly to mini grid developers (Component 1), and will be responsible for ensuring that any pre-conditions for making a grant/subsidy payment are met by each developer. It will also disburse directly to the EPC and O&M contractors of the power plants at the designated universities (Component 3). The PMU will disburse directly to grantees under Components (1 & 2) after the receipt of cleared invoices from the Grant Administrator/Independent Verification Agent. The PMU will also draw from this account to fund the project support and technical assistance activities under Component 4.

Figure 18 :Project Flow of Funds Diagram



6.5. Planning and Budgeting, Disbursement Procedures and Financial Reporting Arrangements

The REA/PMU will prepare quarterly un-audited Interim Financial Reports (IFR) in form and content satisfactory to the Bank and submit to the Bank within 45 days after the end of the quarter to which they relate. The format of the IFR has been agreed between the Bank and REA. The contents of the IFR will include a section to report on the accountability of funds utilized and a section to access funds using the report-based method of disbursement.

World Bank funds will be accounted for by the Project on accrual basis. A computerized accounting system will be used. Annual financial statements will be prepared in accordance with the relevant International Public Sector Accounting Standards (IPSAS). All accounting and control procedures will be documented in the FPM, a living document which will be subject to review as appropriate.

6.6. External Audit Arrangements

The Auditor General of the Federation is the statutory auditor of all government entities, including the REA. The Office of the Auditor General of the Federation (OAGF) will audit the annual financial statements. The auditor will express an opinion on the Annual Financial Statements in compliance with the International Standards on Auditing (ISA). In addition to the audit report; the OAGF will prepare a Management Letter. Copies of the audited financial statements along with the Management Letter will be submitted to IDA not later than six months after the end of each financial year.

7. Monitoring and Evaluation

The World Bank Monitoring and Evaluation (M&E) guidelines will enable the Project Management Unit (PMU) of the Nigeria Electrification Project (NEP) to carry out the monitoring of all program activities as well as evaluate its impact going forward to ensure that assigned objectives are met.

The function of the M&E system is aimed at:

1. Measuring the gaps between planned and implemented activities and budget
2. Proposing corrective measures if deviations occur
3. Sharing information amongst the program's stakeholders

The PMU will monitor all component activities and send progress reports to the World Bank in a form and substance satisfactory to the World Bank. As needed, to review progress and address issues that may arise, the PMU will convene meetings with relevant stakeholders, including NERC, private sector mini grid developers and stand-alone system providers, universities, and EPC and O&M contractors. Progress reports will be prepared biannually during project implementation and will be submitted to the World Bank no later than 45 days after the end of the period covered by the reports. Monitoring of results and outcomes, in accordance with the project results framework, will be reported in the project progress reports.

The project outcomes will be assessed through surveys before (for baseline), during, and after project implementation.

The World Bank will supervise the project over its lifetime and monitor its results and outcomes on a regular basis to evaluate the achievement of the Project Development Objectives (PDO) and implementation performance.

A project midterm review will be conducted at least two years after the start of project implementation. The exact timing for the midterm review will be decided in consultation with the World Bank. The midterm review will provide the opportunity to thoroughly assess overall project performance in achieving the development objectives and ensure that lessons learned are considered during implementation over the remaining period. Adjustments, including funding reallocation and implementation arrangement changes, and wider restructuring to build on the approaches that work best will be discussed, agreed, and implemented as necessary.

The Monitoring and Evaluating System as designed is made up of actors, data, procedures and collection tools, whose roles and responsibilities are discussed below.

7.1. Actors

The actors for this M&E system are Managers, Users and all Stakeholders.

The Managers/Implementing Entities are the PMU and the REA.

The Stakeholders of this system include, but are not limited to, the following:

- Federal Government of Nigeria
- Federal Ministry of Power, Works & Housing
- Federal Ministry of Finance
- Federal Ministry of Environment
- International Development Association (IDA)
- International and Nigerian Companies
- Nigeria Electricity Regulatory Commission
- Rural Electrification Agency
- Federal Universities and Teaching Hospitals.

7.2. Data Gathering

Data for Project Implementation will be gathered through the following processes:

1. **Baseline/Pre-Project Data**. This describes conditions at Project sites prior to the interventions. A baseline survey will be conducted at latest three months before implementation to collect data necessary for capturing pre-project conditions
2. **Second Round of Data Gathering**. The second round of data will be collected for planning purposes and drawn directly from annual work plans /targets or benchmarks to be achieved during a particular year or period of time
3. **Third Round of Data Gathering.** The third round is implementation data and information derived from monitoring reports and periodic impact evaluation studies.

The above data will enable the M&E System to track the project indicators as captured in the ESMF and the Project Implementation Manual.

Field missions by the REA will be organized periodically to collect data that will be analyzed, verified and validated by the PMU.

7.3. Procedures

Primary data collection will be done by the Zonal officers at the REA Zonal offices, while the M&E team at the PMU will validate/verify data collected,

process such data, produce associated reports at identified intervals, disseminate the reports and finally archive them.

The PMU M&E team and the Project Accountant will prepare annual Work Plans and Budget (AWPB).

An M&E dashboard, which will be produced by the PMU M&E team, will be a two-page document that will be produced monthly, and will be made up of key indicators /milestones, achievements within the month, constraints and possible solutions.

M&E reports shall assess progress made during the quarter and shall provide a summary of the monthly reports.

An M&E annual report shall be produced and disseminated at the end of each year and discussed in a meeting with all Stakeholders before the end of the first Quarter of the succeeding year.

An external consultant with active participation in the PMU and the M&E team will conduct the final Evaluation of the Program.

7.4. Tools

The main tools of the M&E system shall consist of the following:

- Databases for historical data collection
- Impact Assessment Studies
- Data collection forms and Surveys
- Data validation exercises
- M&E software to process, collate/collect technical data for indicator monitoring, which shall consist of dashboard, utilities, reporting, implementation, planning and parameters modules.

7.5. Component 1 & 2: Monitoring & Evaluation

The REA/PMU shall prepare a monitoring and evaluation (M&E) report one year after the commissioning of each mini grid and solar homes system (SHS) co-financed by the project. The REA/PMU may decide to organize an additional field verification if it deems fit. Grant beneficiaries shall permit the REA/PMU staff or any persons appointed by the REA/PMU free access to the project's premises/site for purposes of inspecting either the project or any documentation relating to the project. In order to ensure the independence of M&E activities, all costs related to M&E shall be borne by the REA/PMU.

The REA/PMU shall maintain a database of each project to which NEP funds have been provided. The REA/PMU shall provide the World Bank a quarterly

report on the NEP implementation progress. This progress report shall be submitted to the World Bank latest by January 31; April 30; July 31, and October 31.

7.6. Component 3: Monitoring & Evaluation

The REA/PMU shall prepare a monitoring and evaluation (M&E) report one year after the commissioning of each captive power plant, training center and all streetlights financed by the project. The REA/PMU may decide to organize an additional field verification if it deems fit. Grant beneficiaries shall permit the REA/PMU staff or any persons appointed by the REA/PMU free access to the project's premises/site and for purposes of inspecting either the project or any documentation relating to the project. In order to ensure the independence of M&E activities, all costs related to M&E shall be borne by the REA/PMU.

The REA/PMU shall maintain a database of each project to which NEP funds have been provided. The REA/PMU shall provide the World Bank with a quarterly report on the NEP implementation progress. This progress report shall be submitted to the World Bank latest by January 31; April 30; July 31, and October 31.

8. World Bank Supervision

The World Bank will conduct a supervision mission at least two times each year to ensure effective implementation of the Project as well as the maintenance of strong financial management systems. The Implementation Status Report (ISR) will include a financial management rating for the Grants and the entire Project by the Country Financial Management Specialist after an appropriate review.

The World Bank will monitor the implementation progress and discuss with the REA and, in the case of Component 1, with the Project Developers, the actions needed in case progress is slower than expected.

Approximately 30 months after effectiveness, the World Bank will undertake a Mid Term Review.

After completion of the Project, the World Bank will prepare an Implementation Completion Report (ICR).

Annex A: Component 3: EEP Phase II Implementation Plan

	PROJECT / TASK	START DATE	COMPLETION DATE
1.1	**PROJECT PREPARATION ADVANCE (PPA)**		
1.1.1	Prepare Draft PPA to WB for Approval	1st Sept 2017	14th Oct 2017
1.1.2	Forward World Bank Approved PPA to Ministry of Finance for Approval/Signing	14th Oct 2017	21st Oct 2017
1.1.3	Commence Action at Min of Finance to Open Account in CBN	21st Oct 2017	29th Dec 2017
1.1.4	Prepare and sign a subsidiary Agreement to the PPA between REA and Min of Finance		
1.2	**FINANCIAL MANAGEMENT ASSESSMENT**		
1.2.1	Distribution of Financial Management Questionnaires and Collection of Data from REA Funds Management Department	1st Sept 2017	8th Sept 2017
1.2.2	Financial Management Assessment and Disbursement Plan	2nd Sept 2017	6th Sept 2017
1.3	**PROCURE CONSULTANCIES & SURVEY EQUIPMENT USING PPA FUND.**		
1.3.1	Define Safeguard	**26th Dec 2018**	**26th June 2019**
1.3.1.1	Define Environmental Safeguards		
1.3.2	Environmental Social Impact Assessment (ESIA)		
1.3.2.1	Prepare Terms of Reference (TOR) for ESIA	18th Jan 2019	
1.3.2.2	Obtain WB's No Objection of the ESIA ToR & REoI	21st Jan 2019	
1.3.2.3	Issue Request for Expression of Interest (REoI)	23rd Jan 2019	
1.3.2.4	Consultant Qualification Selection (CQS) for the REoI	6th Feb 2019	
1.3.2.5	Evaluate / Shortlist the EoIs for ESIA	7th Feb 2019	
1.3.2.6	Post-Review	8th Feb 2019	
1.3.2.7	Issuance Request for Proposal (RFP) to selected firms	11th Feb 2019	
1.3.2.8	Evaluate Technical Proposal	11th March 2019	
1.3.2.9	Obtain approval from H-PMU	14th March 2019	
1.3.2.10	Opening of Financial proposal & prepare combined technical & financial proposals	18th March 2019	

1.3.2.11	Obtain approval from H-PMU	21st March 2019
	Invitation to negotiation with recommended firm	25th March 2019
1.3.2.12	Transmission to all the firms, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	26th March 2019
1.3.2.13	Notification of Award	10th April 2019
1.3.2.14	Prepare draft contract agreement	11th April 2019
1.3.2.15	Obtain approval from H-PMU	15th April 2019
1.3.2.16	Contract signing	18th April 2019
1.3.2.17	Project Site Assessment	TBD
1.3.2.18	Develop Environmental Social Impact Assessment & Land Survey	TBD
1.3.2.19	Submit ESIA Report to Ministry of Environment for Approval and land surveys to Surveyor General for certification of the land surveys	18th Sep 2019
1.3.2.20	Obtain Approval of ESIA Reports and Land Surveys for projects from the WB	18th Oct 2019
1.3.2.21	Resettlement Action Plan (RAP)	TBD
1.3.3	Project Management Plan (PMP)	
1.3.3.1	Prepare Terms of Reference (TOR) for PMP	Jan-19
1.3.3.2	Obtain WB's No Objection of the PMP ToR & REoI	28th Feb 2019
1.3.3.3	Issue Request for Expression of Interest (REoI)	8th March 2019
1.3.3.4	Consultant Qualification Selection (CQS) for the REoI	25th March 2019
1.3.3.5	Evaluate / Shortlist the EoIs for PMP	5th April 2019
1.3.3.6	Post-Review	7th April 2019
1.3.3.7	Issue Request for Proposal (RFP) to recommended firms	5th May 2019
1.3.3.8	Evaluate Technical Proposal	9th May 2019
1.3.3.9	Obtain approval from H-PMU	10th May 2019
1.3.3.10	Opening of Financial proposal & prepare combined technical & financial proposals	12th May 2019
1.3.3.11	Obtain approval from MD CEO REA and H-PMU	16th May 2019
	Invitation to negotiate with recommended firm	19th May 2019

1.3.3.12	Transmission to all the firms, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	20th May 2019
1.3.3.13	Notification of Award	7th June 2019
1.3.3.14	Prepare draft contract agreement	8th June 2019
1.3.3.15	Obtain approval from MD CEO REA and H-PMU	11th June 2019
1.3.3.16	Contract signing	16th June 2019
1.3.4	Sustainability Plan (SP)	
1.3.4.1	Prepare Terms of Reference (TOR) for SP	31st January 2019
1.3.4.2	Obtain WB's No Objection of the SP ToR & REoI	28th Feb 2019
1.3.4.3	Issue Request for Expression of Interest (REoI)	8th March 2019
1.3.4.4	Consultant Qualification Selection (CQS) for the REoI	25th March 2019
1.3.4.5	Evaluate / Shortlist the EoIs for SP	5th April 2019
1.3.4.6	Post-Review	7th April 2019
1.3.4.7	Issuance Request for Proposal (RFP) to selected firms	5th May 2019
1.3.4.8	Evaluate Technical Proposal	9th May 2019
1.3.4.9	Obtain approval from H-PMU	10th May 2019
1.3.4.10	Opening of Financial proposal & prepare combined technical & financial proposals	12th May 2019
1.3.4.11	Obtain approval from MD CEO and H-PMU	16th May 2019
	Invitation to negotiate with recommended firm	19th May 2019
1.3.4.12	Transmission to all the firms, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	20th May 2019
1.3.4.13	Notification of Award	7th June 2019
1.3.4.14	Prepare draft contract agreement	8th June 2019
1.3.4.15	Obtain approval from MD CEO REA and H-PMU	11th June 2019
1.3.4.16	Contract signing	16th June 2019
1.3.5	Owner's Engineer (OE)	

1.3.5.1	Prepare Terms of Reference (TOR) for OE	26th Nov 2018	
1.3.5.2	Obtain WB's No Objection of the OE TOR & REoI	Sep-19	
1.3.5.3	Issue Request for Expression of Interest (REoI)	25th Oct 2019	
1.3.5.4	Consultant Qualification Selection (CQS) for the REoI	8th Nov 2019	
1.3.5.5	Evaluate / Shortlist the EoIs for OE	9th Nov 2019	
1.3.5.6	Post-Review	10th Nov 2019	
1.3.5.7	Issuance Request for Proposal (RFP) to selected firms	11th Nov 2019	
1.3.5.8	Evaluate Technical Proposal	9th Dec 2019	
1.3.5.9	Obtain approval from MD CEO REA and H-PMU	12th Dec 2019	
1.3.5.10	Opening of Financial proposal & prepare combined technical & financial proposals	16th Dec 2019	
1.3.5.11	Obtain approval from MD CEO REA and H-PMU	19th Dec 2019	
	Invitation to negotiate with recommended firm	23rd Dec 2019	
1.3.5.12	Transmission to all the firms, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	24th Dec 2019	
1.3.5.13	Notification of Award	13th Jan 2020	
1.3.5.14	Prepare draft contract agreement	16th Jan 2020	
1.3.5.15	Obtain approval from MD CEO REA H-PMU	20th Jan 2020	
1.3.5.16	Contract signing	27th Jan 2020	
1.4	**PROCURE DATA LOGGERS & SURVEY TOOLS/EQUIPMENT**		
1.4.1	Prepare and send RFQ	20th Dec 2017	12th Jan 2018
1.4.2	Evaluate	24th Jan 2018	
1.4.3	Contract Award	19th Feb 2018	
1.4.4	Acquire goods (tools for survey/equipment)	18th July 2018	
1.5	**SITE IDENTIFICATION & DESIGN POWER PLANT**		
1.5.1	Identify and Confirm Approval of Sites from HMPWH from the 6 geopolitical zones (Out of the 28 Universities)		
1.5.1.1	Establish criteria used for selection of sites	26th July 2018	28th June 2018
1.5.2	Stakeholders engagement		

1.5.2.1	Liaise with NUC to communicate to selected Universities	5th July 2018	
1.5.2.2	Hold key stakeholder forum (universities, teaching hospitals and NUC)	19th July 2018	
1.5.3	Perform Initial Site Visits		
1.5.3.1	Carry out Baseline Survey	26th Aug 2018	Nov-18
1.5.3.2	Prepare Baseline Survey Report	Nov-18	Dec-18
1.5.3.3	Install data loggers	1st Aug 2018	29th Nov 2018
1.5.3.4	Assess Existing Electrical System	1st Aug 2018	29th Nov 2018
1.5.3.5	Perform Basic Energy Audit	1st Aug 2018	29th Nov 2018
1.5.3.6	Prepare demand profile	1st Dec 2018	14th Dec 2018
1.6	**IMPLEMENT ENERGY EFFICIENCY (EE) PROGRAM**		
1.6.1	Energy Efficiency Audit	Conducted along side the FEED	
1.6.1.1	Compile data gathered from site visits	TBD	
1.6.1.2	Identify EE measures	TBD	
1.6.1.3	Quantify Energy/Money Impact of measures	TBD	
1.6.1.4	Select EE Measures	TBD	
1.6.1.5	Implement EE Measures	TBD	
1.6.1.6	Awareness Campaign		
1.6.1.7	Design Awareness Campaign	TBD	
1.6.1.8	Implement Awareness Campaign	TBD	
1.6.2	Procure FEED Consultancy		
1.6.2.1	Develop TOR for FEED	7th Sept 2018	
1.6.2.2	Obtain WB's No Objection for TOR & REoI for FEED		
1.6.2.3	Issue request for Expression of Interest (REoL)	21st Jan 2019	
	Consultant Qualification Selection (CQS) for the REoI	4th Feb 2019	
1.6.2.4	Evaluate/ Shortlist EoIs for FEED	5th Feb 2019	
	Post-Review	6th Feb 2019	
	Issue Request for Proposal (RFP) to recommended firms	7th Feb 2019	
1.6.2.5	Evaluate Technical Proposal	7th March 2019	
	Obtain approval from H-PMU	11th March 2019	
	Opening of Financial proposal & prepare combined technical & financial proposals	14th March 2019	
1.6.2.6	Obtain approval from MD CEO REA and H-PMU	18th March 2019	
1.6.2.7	Invitation to negotiate with recommended firm	21st March 2019	

1.6.2.8	Transmission to all the firms, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	22nd March 2019	
	Notification of Award	8th April 2019	
1.6.2.9	Prepare draft contract agreement	11th April 2019	
	Obtain approval from MD CEO REA and H-PMU	16th April 2019	
1.6.2.10	Contract Signing	19th April 2019	
1.6.3	Develop Front End-Engineering Design (FEED) for Power Plant	**22nd April 2019**	**1st August 2019**
1.6.3.1	Size Batteries	TBD	
1.6.3.2	Size Gensets	TBD	
1.6.3.3	Define distribution system upgrades	TBD	
1.6.3.4	Assess Technical & Economic Feasibility	TBD	
1.6.3.5	Prepare Bill of Quantities	TBD	
1.6.3.6	Prepare Estimated Budget	TBD	
1.6.3.7	Prepare Drawings	TBD	
1.6.3.8	Prepare Technical Specifications	TBD	
1.6.3.9	Front-End Engineering for Street Lighting	TBD	
1.6.3.10	Assess Appropriate Technology	TBD	
1.6.3.11	Size components	TBD	
1.6.4	Front End-Engineering Design (FEED) for Streetlight	**22nd April 2019**	**1st August 2019**
1.6.4.1	Prepare Bill of Quantities	TBD	
1.6.4.2	Prepare Estimated Budget	TBD	
1.6.4.3	Prepare Drawings	TBD	
1.6.4.4	Prepare Technical Specifications	TBD	
1.6.4.5	Front End-Engineering Design FEED for Training Center	TBD	
1.6.4.6	Assess Appropriate Technology	TBD	
1.6.4.7	Structural Design	TBD	
1.6.5	Front End-Engineering Design FEED for Training Center	**22nd April 2019**	**1st August 2019**
1.6.5.1	Assess Appropriate Technology	TBD	
1.6.5.2	Structural Design	TBD	
1.6.5.3	Architectural Design	TBD	
1.6.5.4	Prepare Bill of Quantities	TBD	

1.6.5.5	Prepare Estimated Budget	TBD	
1.6.5.6	Installation of Mechanical & Electrical Equipment	TBD	
1.6.5.7	Prepare Technical Specifications	TBD	
1.7	**SIGN MoU**		
1.7.1	Develop and Forward draft MoU to Universities for Input and invite them for signing ceremony	TBD	
1.7.2	Hold MoU signing ceremony	TBD	
1.8	**SECURE PERMITS & APPROVALS**		
1.8.1	Apply for captive power permits from NERC	TBD	
1.8.2	Obtain captive Power Permits	TBD	
1.9	**PROCURE POWER PLANT**		
1.9.1	Prepare Project Preparation Strategy for Development (PPSD)	9th May 2018	
1.9.1.1	Prepare Procurement Plan	29th Oct 2018	2nd Nov 2018
1.9.1.2	Obtain WB's No Objection for Procurement Plan	5th Nov 2018	19th Nov 2018
1.9.2	Procure EPC		
1.9.2.1	Prepare pre-qualification Document (Open Competitive Bidding):	2nd May 2019	9th May 2019 (6 months post completion of FEED)
1.9.2.1.1	Obtain WB's No Objection	13th May 2019	27th May 2019
1.9.2.2	Shortlist bidders (Open Competitive Bidding method):		
1.9.2.2.1	Issue pre-qualification document	29th May 2019	
1.9.2.2.2	Opening of pre-qualification document	3rd July 2019	
1.9.2.2.3	Evaluate (pre-qualified/shortlist bidders)	4th July 2019	25th July 2019
1.9.2.2.4	Obtain WB's Non-Objection	25th July 2019	15th Aug 2019
1.9.2.2.5	Issue bid document to pre-qualified bidders	16th Aug 2019	20th Sept 2019
1.9.2.2.6	Conduct Bidder's meeting & Site Visits	29th Aug 2019	
1.9.2.2.7	Response to bidders' clarifications	29th Aug 2019	
1.9.3	Evaluation of bids		
1.9.3.1.1	Evaluate Bids	23rd September 2019	14th Oct 2019

1.9.3.1.2	Obtain WB's Non-Objection	14th October 2019	4th Nov 2019
1.9.3.1.3	Transmission to all the bidders, the notification of the intention to award the contract / 10 working days Standstill period (To respond to complaints from non-recommended firms)	4th November 2019	15th Nov 2019
1.9.3.2	Award Contract	15th Nov 2019	
1.9.3.4	Contract signing	20th Nov 2019	
1.9.3.5	Submission of Guarantees (Advance, Performance)	20th Nov 2019	
1.9.4	O&M (Consultancy)	**Start Date**	**End Date**
1.9.4.1	Prepare ToR	2nd May 2019	9th May 2019
1.9.4.2	Obtain WB's No Objection	9th May 2019	23rd May 2019
1.9.4.3	issue request for expression of interest (REOI)	27th May 2019	24th June 2019
1.9.4.4	Evaluate submissions	24th June 2019	8th July 2019
1.9.4.5	Obtain WB's No Objection for evaluation report	8th July 2019	22nd July 2019
1.9.4.6	Issue request for proposal (RFP)	23rd July 2019	20th August 2019
1.9.4.7	Evaluation of Technical Proposal	20th August 2019	19th September 2019
1.9.4.8	Obtain WB's No-Objection on technical evaluation report	20th September 2019	4th October 2019
1.9.4.9	Open financial proposal	4th October 2019	18th October 2019
1.9.4.10	Forward combined evaluation to the bank.	18th October 2019	
1.9.4.11	Negotiation	18th October 2019	8th November 2019
1.9.4.12	Send draft contract to the shortlisted firm	8th November 2019	22nd November 2019
1.9.4.13	Send endorsed (initialed) contract to the WB for No objection	22nd November 2019	6th December 2019
1.9.4.14	Notification of intention to award	6th December 2019	20th December 2019
1.9.4.15	Contract Signing	20th December 2019	3rd January 2020

1.9.4.16	Notification of award	20th December 2019	3rd January 2020
1.10.	**BUILD POWER PLANTS**		
1.10.1	Review construction schedule for EPC with emphasis on the normal operation of the University	25th Nov 2019	16th Dec 2019
1.10.2	Commence deployment of equipment, construction etc	Subject to the construction schedule provided by the EPCC	
1.10.3	Supervise EPC Contractor	Subject to the construction schedule provided by the EPCC	
1.10.4	Supervise Construction safeguards	Subject to the construction schedule provided by the EPCC	
1.10.5	Commission Plant	Subject to the construction schedule provided by the EPCC	
1.10.6	HANDOVER/ SIGN-OFF:	Subject to the construction schedule provided by the EPCC	
1.10.6.1	Prepare hand-over	Subject to the construction schedule provided by the EPCC	
1.10.6.2	Conduct hand-over	Subject to the construction schedule provided by the EPCC	
1.10.6.3	Conduct training from Contractor	Subject to the construction schedule provided by the EPCC	
1.11	**POWER PLANT OPERATION**		
1.11.1	Design Operations and Maintenance Model		
1.11.1.1	Define Legal Agreements	TBD	
1.11.1.2	Define Ownership Structure	TBD	
1.11.1.3	Conduct Financial Model	TBD	
1.11.1.3.1	Define Costs	TBD	
1.11.1.3.2	Define Revenues	TBD	
1.11.1.3.3	Run Model	TBD	
1.11.1.4	Supervise O&M Contractor	Subject to the construction schedule provided by the EPC	
1.11.1.5	Implement Operation Safeguards		
1.11.1.6	Define Engagement Strategy	TBD during the construction phase	
1.12.	**OPERATE TRAINING CENTERS**		
1.12.1	Define Operation & Maintenance Model	TBD during the construction phase	

1.12.2	Develop Curricula	During Construction of Training Center
1.12.3	Define and Implement Gender Strategy	Subject to the construction schedule provided by the EPC
1.12.4	Supervise Operation of Training Centers	Subject to the construction schedule provided by the EPC
1.13	**MANAGEMENT**	
1.13.1.1	Scope Management	Throughout the Programme Phase
1.13.1.2	Time Management	Throughout the Programme Phase
1.13.1.3	Cost Management	Throughout the Programme Phase
1.13.1.4	Quality Management	Throughout the Programme Phase
1.13.1.5	Human Resources Management	Throughout the Programme Phase
1.13.1.6	Communications Management	Throughout the Programme Phase
1.13.2	**Risk Management**	
1.13.2.1	Identify Risks	Throughout the Programme Phase
1.13.2.2	Plan Risk Responses	Throughout the Programme Phase
1.13.2.3	Control Risks	Throughout the Programme Phase
1.13.3	**Stakeholder Management**	
1.13.3.1	Identify Stakeholders	Throughout the Programme Phase
1.13.3.2	Plan Stakeholder Management	Throughout the Programme Phase
1.13.3.3	Manage Stakeholder Engagement	Throughout the Programme Phase