



**RURAL ELECTRIFICATION AGENCY**

ENERGY  $\neq$  EMPOWERMENT  $\neq$  EFFICIENCY

**Rural Electrification Fund (REF)**  
**Operational**  
**Guidelines**  
**2017**

APPROVED, OCTOBER 2017

**FIRST VERSION**



**RURAL ELECTRIFICATION AGENCY**

ENERGY  $\neq$  EMPOWERMENT  $\neq$  EFFICIENCY

**Rural Electrification Fund (REF)**  
**Operational**  
**Guidelines**  
**2017**

APPROVED, OCTOBER 2017

FIRST VERSION

# Contents

## Tables

Acronyms .....	3
1 Acknowledgement .....	4
2 Purpose and scope of the REA and the REF.....	4
3 Sources and allocation of REF resources .....	9
4 REF grant award process .....	11
5 Criteria .....	17
6 REF support instruments .....	22
7 Grant Disbursement, Monitoring, Evaluation and Verification .....	25
<b>Annex 1:</b> Form for Applicant's profile .....	28
<b>Annex 2:</b> Outline of Project Concept Note.....	30
1 The background of the prospected project.....	30
2 Market assessment .....	30
3 Energy resource assessment .....	30
4 Technical assessment .....	30
5 Management & institutional aspects .....	30
6 Financial assessment .....	30
7 Environment and social assessment .....	30
8 Risk analysis .....	30
<b>Annex 3:</b> Example of matrix for Evaluation of Eols .....	30
<b>Annex 4:</b> Outline of Proposal .....	32
1 Project background .....	32
2 Site identification/Market survey .....	32

3	Energy resource assessment .....	32
4	Demand assessment .....	32
5	System design .....	32
6	O&M&M .....	33
7	Customer relationship management strategy ..	33
8	Financial profitability .....	33
9	Status of regulatory process .....	33
10	Implementation strategy .....	33
11	Timeline .....	33
12	Risk analysis .....	33
13	SWOT analysis .....	33
14	Request for REF support .....	33
15	Annexes .....	33
<b>Annex 5:</b>	Example of matrix for evaluation of Proposals .....	34
<b>Annex 6:</b>	Sustainable Energy for All Multi-Tier Framework for Measuring Energy Access .....	36
<b>Annex 7:</b>	Technical Assistance .....	36
<b>Tables</b>		
<b>Table 1:</b>	Grant amount per connection .....	23
<b>Table 2:</b>	Parameters defining the different Tiers .....	23
<b>Table 3:</b>	Proposed entities that will form part of the one- stop shop at the REA Error! Bookmark not defined. ....	37
<b>Figures</b>		
<b>Figure 1:</b>	REF grant application process .....	11
<b>Figure 2:</b>	Verification mechanism for infrastructure projects .....	26
<b>Figure 3:</b>	Verification mechanism for non-infrastructure projects .....	26

## Acronyms

EPSRA	Electric Power Sector Reform Act 2005
DisCo	Electricity Distribution Company
FGN	Federal Government of Nigeria
IPD	Independent Power Distributor
IPP	Independent Power Producer
kW	Kilowatt
kWh	Kilowatt per hour
M&E&V	Monitoring and Evaluation and Verification
MW	Megawatt
NGN	Nigerian Naira
NGO	Non-Governmental Organization
PV	Photovoltaic
RBF	Results Based Funding
REA	Rural Electrification Agency
REB	Rural Electrification Board
REF	Rural Electrification Fund
RESIP	Rural Electrification Strategy and Implementation Plan
SHS	Solar Home System
USD	United States Dollar

# 1. Acknowledgement

The Operational Guidelines for Rural Electrification Fund 2017 for Nigeria was developed through joint efforts of the Rural Electrification Agency and the Ministry of Power, Works and Housing, with inputs from the World Bank, Power Africa, DFID Solar-Nigeria and GIZ.

Contacts:

**Mrs. Damilola Ogunbiyi**

Managing Director/CEO

Rural Electrification Agency (REA)

22 Freetown Street, Wuse 2, Abuja

Damilola.ogunbiyi@rea.gov.ng

**Dr. Sanusi Ohiare**

Executive Director, Rural Electrification Fund

Rural Electrification Agency

22 Freetown Street, Wuse 2, Abuja

Sanusi.ohiare@rea.gov.ng

## 2. Purpose and scope of the REA and the REF

The Electric Power Sector Reform Act (EPSRA) 2005, Section 88 (1), established the REA as a body with perpetual succession and a common seal with power to act as a corporate body.

The Act also sets out the power of the Minister to appoint members to the REB upon approval by the President. In line with the EPSRA, the REB will consist of seven members, including representatives from each of the six geo-political zones. The Board is the governing body for the REA and the REF and shall be responsible for making determinations on grants under the REF.

The Minister is also saddled with the responsibility of preparing a rural

electrification strategy and plan for the REA, which was approved by the President in July, 2016.

Section 88 (13) of the EPSRA states that the REF shall support the increase in access to rural electrification. It shall promote fast and cost-effective expansion of electricity access in unelectrified rural areas, evenly, across the different geo-political zones in Nigeria. This shall be done in line with the Federal Government of Nigeria's (FGN) plans to provide electricity for all its citizens, using off-grid and on-grid electrification solutions through partial one-off capital subsidies and or technical assistance<sup>1</sup>, with the ultimate goal of improving the living and socio-economic conditions of rural dwellers. The core focus of the REF will be to support the development of the off-grid clean energy by providing an enabling environment for the sector to thrive.

This section will serve as a general guide as regards the technologies that are eligible for REF support. The REA may decide to include more detailed technical specifications as part of each of the future Calls. Technology advancement may also lead to adjustments in the REF scope of application.

## **2.1 Power supply systems<sup>2</sup>**

### **2.1.1 Infrastructure projects**

#### **2.1.1.1 Grid Extension**

As a rule of thumb, Grid Extension makes most sense in highly populated areas (e.g. cities and towns) with high load resulting from productive activities. This solution may cover the extension of medium and low voltage distribution networks (connected to the central grid) to off-grid areas (including legacy projects). It may also cover projects that aim at refurbishing, rehabilitating and or enhancing grids in grid-connected areas. This solution will generally be developed together with the Electricity Distribution Companies (DisCos). However, the existing regulations also allow for Independent Power Distributors since

---

<sup>1</sup> For more information on technical assistance, please refer to Annex 7

<sup>2</sup> Where technically and financially feasible, all projects should preferably use metering solutions (preferably, pre-paid meters/solutions) and telemetric management and monitoring systems.

existing Discos are not vested with exclusive rights over the areas they operate.

The installation of Embedded Generation<sup>3</sup>, in accordance with NERC Regulations on Embedded Generation 2012, or the transformation of a specific area of the distribution network into an Interconnected Mini-grid, in accordance with NERC Mini-grid Regulations 2016, may be necessary in the context of Grid Extension projects in order to ensure a reliable electricity supply.

Embedded Generation gives the opportunity to directly address, together with Independent Power Producers (IPP), the gap between on-grid power generation and demand in high load sections of the central grid on the distribution level. This solution will generally be developed by IPPs in collaboration with the respective DisCo or Independent Power Distributor (IPD), which will become the off-taker.

- Interconnected mini-grid are electricity supply systems that can operate in grid connected mode or in island mode with self-generation, with a capacity of up to 1 MW with its own power generation system, but installed within an existing low-voltage distribution network, which forms part of the central grid. The system is by its technical principle comparable to an isolated mini-grid, but different in the sense that the distribution system was already in place before the new mini-grid is grafted on to it. While isolated mini-grid are designed to operate in island mode only, but may or may not be grid ready. Hence, the interconnected mini-grid generation system is only an add-on to an existing distribution system. On the other hand, isolated mini-grids and interconnected mini-grids may represent a highly attractive investment for rural growth poles (large villages with medium load requirements). This solution will generally be developed by Mini-grid developers in collaboration with the DisCos or IPDs that own(s) the distribution grid to be used for the interconnected mini-grid.

The extension of the high voltage grid (132 kV and above) will not be eligible for grant under the REF, as this type of solution is not considered

---

<sup>3</sup> Embedded generation is the term used to describe the process of generating electricity at a specific location and then connecting that supply into the existing electricity distribution network.

as a rural electricity access intervention. Embedded generation will be eligible for the REF grant, as long as it can prove improved and increased access to electricity in rural areas,

### **2.1.1.2 Isolated Mini-grids**

For the REA and according to the existing regulation, Isolated Mini-grid means any electricity supply system unconnected to the central grid with a capacity of up to 1 MW with its own power generation capacity supplying electricity to more than one customer through a distribution line. As a rule of thumb, Isolated Mini-grids make most economic sense in rural growth poles (densely populated large villages with a medium load resulting from small productive activities) located far away from the central grid and/or where grid extension is costly. The development of Isolated Mini-grids are eligible for grant under the REF, as these types of solutions are considered interventions in rural electricity access.

### **2.1.1.3 Isolated Micro/Nano Grids**

As a rule of the thumb, Isolated Micro/Nano Grids shall be used where there is a remote and densely populated community with a demand for lighting and other small power appliances, but low load due to the absence of productive activities. Different Isolated Micro/Nano Grids may include one central generation set or interconnected Solar Home Systems (SHS) to power additional customers. Isolated Micro/Nano Grids may use low cost Direct Current (DC) grids and different voltage levels (12, 24 and 230 Volts), which are generally not compatible with the central grid. The development of Isolated Micro/Nano Grids will be eligible for grant under the REF, as these types of solutions are considered interventions in rural electricity access.

## **2.2 Non-infrastructure projects**

Stand-alone Systems refer to individual electrical systems powering one building at a time and that are not fitted with a distribution system such as SHS or Solar lanterns. The capacity of these systems can range from several Watts (domestic systems) to several kW. They can be installed on the roof of the building they are powering or be movable. Stand-alone Systems shall play a very important role in the electrification of the most remote, sparsely populated and poorest

rural areas. Bigger and more sophisticated non-grid and captive power solutions may also be used to power rural industries or as back-up in grid-connected but poorly served rural areas. The development of Stand-alone Systems will be eligible for grant under the REF in circumstances where they are considered interventions in rural electricity access.

### 2.3 Power generation

The solutions that REF would support may combine renewable and other conventional power generation sources. However, all solutions supported by the REF shall fall under the category of renewable energy, having, at least, a 30% penetration by a renewable energy source or a combination of them.

Eligible renewable energies may be as follows:

- **Hydropower:** Both run-of-river and dam-based hydropower projects are eligible. All types of turbines (incl. kinetic technology) are eligible.
- **Solar photovoltaic:** The use of mono-crystalline and poly-crystalline silicon is allowed for all Power Supply Systems, while amorphous silicon may be used for Solar Lanterns only. All sorts of mounting structures shall be eligible (including tracking systems).
- **Biomass:** All types of biomass-to-power technologies shall be eligible.
- **Wind:** All kinds of turbines shall be eligible.

Hybrid systems combining different renewable generation technologies and conventional technologies (e.g. open and closed cycle gas turbines, reciprocating oil and diesel engines or coal technologies) are also eligible. Intermittent generation technologies such as solar photovoltaic and wind may use any kind of electrochemical storage (lead-acid, lithium-ion, nickel-metal hydride, nickel-cadmium, etc.) and /or alternative sources of storage (e.g. hydrogen) which shall also be eligible. All kinds of electronic equipment such as rectifiers and converters used shall be eligible. Technology innovation, which results in more sustainable solutions and/or improves the financial viability of the projects, shall be an asset.

### 3. Sources and allocation of REF resources

The REA is responsible for administering and managing funds from different sources towards achieving its objective of promoting rural development. Section 88 (12) of the EPSRA lists the capital and assets that make up the REF:

- (a) Any surplus of the Commission (NERC) deriving from budgetary allocation subject to approval of the National Assembly;
- (b) Any fines obtained by the Commission (NERC) pursuant to the EPSRA;
- (c) Any donations, gifts or loans made by international agencies, State Governments, the Federal Government, local communities, businesses or any other entity
- (d) Contribution payments that may be made by licensees and eligible customers directly to REA pursuant to Section 90 of the EPSRA, in cases where there is a shortfall in the capital and assets of the REF; and interest and other benefits accrued to the REF;
- (e) Monies appropriated by the National Assembly; and
- (f) Such percentage of the annual turnover of licensees as may be determined by the Commission (NERC).

The REF shall source or mobilize funds as stipulated in Section 88 (12) and shall be managed and implemented by the REF Management Department. Trust agents will be selected biennially by the REA to monitor REF grant disbursement following an open competitive procedure. All procurement process undertaken by beneficiaries of REA's REF shall be transparent, and depending on the size of the REF percentage contribution to the total cost of the project, the procurement process may be required to comply with the provisions of the Public Procurement Act 2007 and extant procurement regulations and the Procurement Procedures Manual. REF grants shall be awarded in line with the procedures set out in the REF Operational Guidelines 2017.

The REF resources shall be evenly allocated across the different

geopolitical zones in Nigeria in line with the EPSRA, Section 91 (1), subject to the observance of the following conditions precedent:

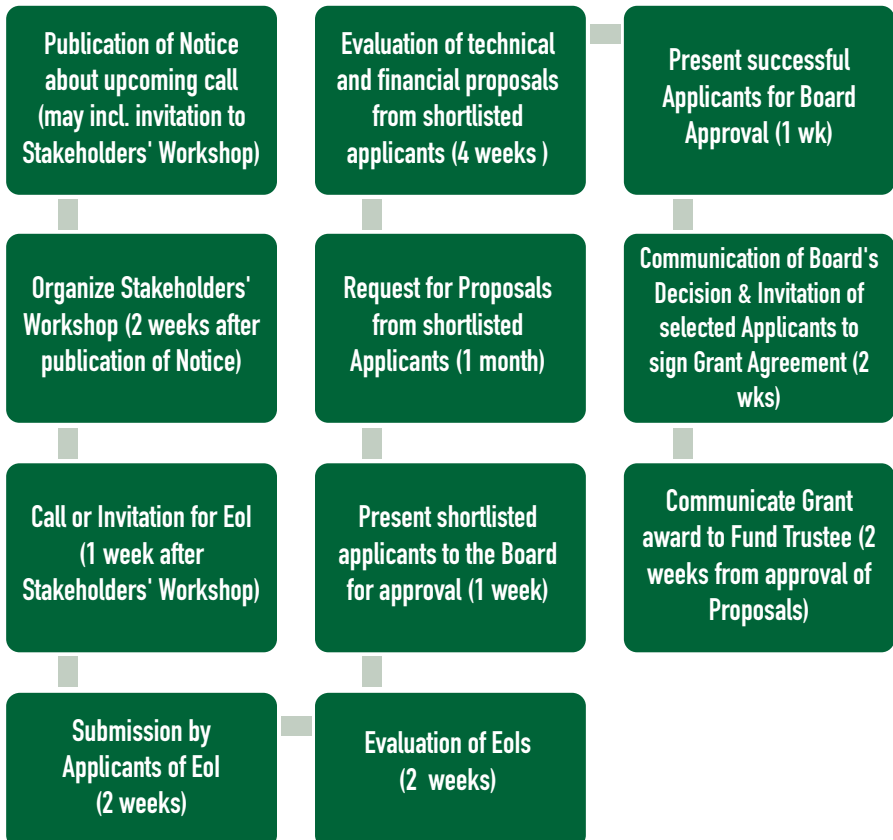
1. Develop a publicly accessible database of possible communities to be targeted by the REF.
2. Prior to launching any call, the total available resources allocated for the specific Call shall be split into 6 even parts. Each 1/6th shall be allocated to a specific Geopolitical Zone and designated as a Lot.
3. Each Lot may then be subdivided into 3 parts, to be allocated to specific Power Supply Systems eligible under the REF (Grid Extension, Isolated Mini/Micro/Nano-grids and Stand-alone Systems) and designated as Sub-lots.
4. For each Geopolitical Zone, applicants/projects shall be selected in order of highest to lowest score (criteria outlined in Section 5) until the Lot and Sub-lot are depleted in line with the selection process stipulated in the present Guidelines.
5. If any Sub-lot has not been depleted at the end of the Call, the REA shall have the right to redistribute the remaining resources for that specific Sub-lot evenly amongst the remaining Sub-lots where demand for subsidies exceeds the resources allocated for such Sub-lots until all resources for the specific Lot are depleted.
6. If any Lot has not been depleted after Step 4, the REA shall have the right to distribute the remaining resources for that specific Lot evenly amongst the remaining Lots where demand for subsidies exceeds the resources allocated for such Lots until all funds for the Call are depleted.

If any funds are still available after Step 6, the REA shall have the right to allocate the remaining funds as extra funding in the next Call following the above-mentioned procedure. *“The same Applicant shall have the right to apply for and benefit from REF support from different Lots and Sub-lots in the context of the same Call and shall have the right to participate in all Calls launched by the REA. Considering a situation whereby the Applicant has not delivered fully yet on its initial grant agreement, as captured in the grant agreement, the latter will not be eligible for a second grant award.”*

There may be instances where third parties (e.g. international donors, other government agencies and/or State Governments) might be interested in contributing to REA's activities, but are prevented from doing so based on their rules. In such cases, REA will need to set up special accounts different from the REF account through which such funds are administered and managed by the REA according to different rules other than the ones mentioned in the present guidelines.

## 4. REF grant award process

**Figure 1: REF grant application process**



## 4.1 Notice

Upon decision of the Rural Electrification Board (REB) to provide grants from the REF, and in order to ensure the highest level of competition, the REA shall launch a public campaign, by the Promotions team. The aim shall be to bring to the notice of as many potential applicants as possible, the imminent launch of a Call. To this end, the REA shall use the media (including newspapers, television, radio, the internet and organizational networks as communication channels incl. REA's website and social media platforms).

As part of its messaging during the publicity campaign, the REA may invite potential Applicants to a Bidders Meeting or Workshop where the rules of the competition process will be explained. The REA shall give a 2-week notice to bidders between the date of publication of the Notice and the date of convening the Meeting/Workshop.

**Department**

**Promotions**

## 4.2 Bidders workshop

The thrust of the Bidders Meeting or Workshop, shall be to make the bidding process easier and understandable through interaction with the potential bidders, sharing views and possibly obtaining consensus on the following information:

- The market potential for the each of the specific Geopolitical Zones and Power Supply Systems covered by the Call<sup>4</sup>;
- Full description of the framework (legislation, policy, regulation and support mechanisms) that applies to this specific call emphasizing how it creates an enabling environment for private investment;
- Structure of the selection process (including the phases, the documentation to be submitted and templates to be used during each phase as well as selection and eligibility criteria);

---

<sup>4</sup> In order to ease the site identification process by Applicants, the REA shall carry out resource mapping and electrification planning exercises as well as market surveys prior to the Call. The REA shall however not select sites and/or conduct feasibility studies for specific sites on behalf of the Applicants.

- Expectations from the private sector (e.g. expected financial contribution from applicants) and contribution from the public sector (e.g. information on grant and technical assistance); and
- Legal framework used to formalize the collaboration between the public and the awarded Applicants/Projects.

## Key facts

### Department REF Contract Management

#### 4.3 Call for Expressions of Interest (Eoi)

Within a few days after the Bidders Workshop, the REA shall launch the Eoi Call and give a 2 weeks deadline for submission by interested Applicants. The Eoi shall allow for a preliminary assessment on the Applicants and the initial Project concept. In order to allow the REA to evaluate large amounts of submissions within a short time-frame, REA may make policy as regards the acceptable length of Eoi:

- A preliminary template for the applicant's profile shall be made available to all applicants. The REA shall reserve the right to make adjustments to such a template at any time as it deems necessary. While reviewing the applicant's profile, the REA may perform background checks on any information supplied by the applicant, especially the applicant's level of compliance with the applicable Laws of the land (e.g. CAC registration, taxation, etc.). The REA may also decide to undertake visits to the offices or reference projects of applicants for in-depth assessments.
- A preliminary template for the applicant's profile has been included in Annexes 1 and 2. The REA reserves the right to make any adjustments to the criteria and template as it deems necessary.

## Key facts

### Department REF Contract Management

#### 4.4 Evaluation of Eols

The REA shall endeavor to commence the evaluation of the received Eols as soon after the submission deadline as possible. It shall evaluate them based on objective criteria as stipulated in the Eol Call. The REA reserves its right to make any adjustments to the criteria and template as it deems necessary.

Upon finalization of the Evaluation of the Eol, the REA shall generate short-lists of applicants per Lot and Sub-lot.

##### Key facts

<b>Department</b>	<b>REF Contract Management (REF Evaluation Team)</b>
-------------------	--

**2 weeks**

<b>Activity</b>	<b>Evaluate Eols Generate short-lists of applicants per Lot and Sub-lot who will proceed to the RfP stage.</b>
-----------------	--

#### 4.5 Request for Proposals (RfP)

Upon Completion of the Evaluation of the Eols and following Board approval of the shortlist, the REA shall invite those Applicants that have handed in the best Eol to submit Proposals. Applicants shall be given a 30 day deadline within which to prepare and submit their Proposals which shall include, but not limited to a summary of the feasibility study (demand/resource/supply chain assessments) and a summary of the financial model as well as the request for support from the REF in terms of grant and technical assistance. The REA reserves the right to make any adjustments to the criteria and template as it deems necessary.

##### Key facts

<b>Department</b>	<b>REF Contract Management</b>
-------------------	--------------------------------

#### 4.6 Evaluation of Proposals

The REA shall establish a REF Evaluation Team in charge of evaluating the Proposals. While the Eol Call stage shall focus on the legal structure of the entities behind the projects, the RfP shall focus more on the

proposed Project in order to determine its technical, economic, financial, social, environmental and operational viability. The commitment of the applicant and its financial contribution to the project will also be key factors in the evaluation process.

The REF Evaluation Committee shall submit its report to the Executive Director REF for each Lot and Sub-lot, to review and produce an executive summary of the report for presentation to, and final approval of the REA Board. After the final selection decision of the REA Board has been communicated to successful bidders, all unsuccessful bidders that submitted a proposal shall be informed of the outcome of their Proposals.

The REA shall maintain a reserve list for each Lot and Sub-lot of the non-selected applicants by order of ranking for each Lot or session of grant procurement under the REF. In the event that any of the selected applicants withdraws or is withdrawn by the REA in consequence of poor mobilization within one month of signing the grant agreement or for poor performance or violation of applicable rules of limitation in the use of REF fund, the next highest scoring company on the reserve list shall be invited to take over the project. Until the bidders on this reserve list have been exhausted, the REA shall not call for fresh proposals or initiate a fresh procurement process on the same project. Subject to proper justification to be further detailed in the bidding documents, the REA Board may before the selection of the successful applicant reject any or all EoIs and/or proposals submitted by all bidders for any Lot or sub-lot and/or terminate the entire process without incurring liability to the Agency with respect to the expenses incurred by bidders in preparation of documents in response to either the Call for EOI or RfP.

### Key facts

<b>Department</b>	<b>REF Evaluation Team</b>
<b>Duration</b>	<b>4 weeks</b>

### 4.7 Grant Award

The REA shall establish a REF Grant Award Team who will be responsible for completing the Grant Forms indicating the grant amount to which each selected applicant is entitled to according to its proposal and

the methodology as stipulated in Section 6. The Grant Form shall also mention the kind of technical assistance that the approved Proposal shall be entitled to from the REA's perspective and in line with Section 6.

The REF Grant Award Team shall send its provisional decision on Grant Award to the Executive Director, Rural Electrification Fund, for review and subsequent submission to the Rural Electrification Board (REB) for its final decision on Grant Award.

If the REB approves the completed Grant Forms, the REF Contract Management department shall send a letter informing the respective applicant about the acceptance of its proposal and indicating the grant amount and type of technical assistance it is entitled to.

1. In case the selected applicant does not agree on the REB decision on Grant Award, the REA's REF shall invite the selected applicant for a meeting to discuss on a possible way forward always in line with the present Guidelines.
2. In case no agreement is reached within 1 month of the notification to the selected applicant on the decision on Grant Award, the REA shall have the right to replace the selected applicant by the next non-selected applicant in the reserve list ("newly selected applicant").
3. In the course of this process and in case the REA runs out of newly selected applicants in a given Sub-lot, the REA shall choose newly selected Applicants from a different Sub-lot until full depletion of the resources allocated for the specific Lot.
4. In the course of this process and in case the REA runs out of newly selected applicants, the REA shall launch another Call following the same procedure for allocation of funds and grant award as mentioned in Sections 4 and 5 until full depletion of the resources allocated for the specific Call.

This step shall not take longer than 6 weeks to reach an agreement with all selected Applicants that have been awarded a grant.

The REB may decide to reject in full or partially the provisional decision from the Grant Award Committee and re-initiate the process of Grant Award thereby extending the process of the Call by 1 extra month.

## Key facts

<b>Department</b>	<b>REF Grant Award Team</b>
<b>Duration</b>	<b>2 weeks</b>
<b>Activity</b>	<p>REF Grant Award Team to fill in Grant Form and submit provisional decision to ED REF for review and onward submission to REB for final decision</p> <p>REB to take final decision on Grant Award</p> <p>REA and awarded Applicants to sign Grant Agreement</p>

Prerequisites Only applicants for which their Proposal was approved shall be eligible for Grant Award.

## 5. Criteria

The REA shall first assess the compliance of the Applicant and the proposed project with the Eligibility Criteria as mentioned in Section 5.1. If the applicant and the proposed project are eligible, will the REA then assess the latter against the Selection Criteria as stipulated in Section 5.2. Subject to proper justification and approval by appropriate approving authority, the REA may decide to make adjustments to the Eligibility and/or Selection Criteria as mentioned below and/or complement them with additional criteria in the context of each of the specific future Calls.

### 5.1 Eligibility criteria

#### 5.1.1 Applicant

The Applicant shall:

- be a 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;
- possess the necessary professional and technical qualifications to carry out particular / project for which application for grant is made;

- have access to or possess financial capability of not less than 25% of the total funds required to execute the project to completion;
- own or has lease access to equipment and other relevant infrastructure to execute the project;
- have adequate personnel to perform the obligations of the contract;
- not be in receivership, the subject of any form of insolvency or bankruptcy, proceedings or the subject of any form of winding up petition or 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 in any country;
- accompany every bid with an affidavit disclosing whether or not any officer of the relevant committees of the REA or Board member is a former or present director, shareholder or has any pecuniary interest in the bidder;
- attach affidavit confirming that all information presented in its bid are true and correct in all particulars;
- be free from conflicts of interest;
- not have 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;
- not have been blacklisted by any national government;
- commit to acquire the necessary insurance policy as concerns the proposed Project according to the applicable Law;
- have submitted all required documentation, properly filled and submitted prior to the deadline of the call as set by the REA; and
- declare that, in addition to developing the project, the applicant will also operate it or that applicant has found another eligible and capable entity that will operate the project on its behalf.

### 5.1.2 Proposed Project

The Proposed Project shall:

- fall under one of the categories included in Section 2;
- target rural areas;
- demonstrate clear impact on rural development (e.g. job creation or contribute to improve the productivity of rural businesses);
- not be financially viable without REF support, but otherwise be technically viable;
- require a one-off partial capital grant, which shall not exceed the grant amount as calculated using the grant calculation methodology included in Section 7;
- make a financial commitment towards the proposed project, which covers for the remaining project development and capital costs not covered by the REF support;
- financial/in-kind contributions from third parties (e.g. beneficiary communities or State Governments) that help offset project costs;
- demonstrate that it can generate enough income to sustain itself over the long term (including, but not limited through a demand assessment/market survey) and shall not require a continuous subsidy covering for operations costs and/or end-user consumption costs;
- demonstrate the continuous availability of the energy resource(s) chosen for the project through a detailed energy resource assessment (especially for site dependent technologies such as wind and hydropower) and/or supply chain study (for biomass and conventional energy resources);
- comply with the applicable Law (including regulation of the power sector);

- use equipment, which shall have been certified by Standards Organization of Nigeria or any other locally or internationally recognized body/initiative (e.g. Lighting Africa for PicoPV products) and all equipment be warranted at least for 2 years or as stipulated in the applicable Law;
- build all its distribution networks in compliance with the distribution code (only applies to infrastructure projects falling under Tier 3 or above);
- be technically viable in its design and may use conventional sources of energy provided that the renewable energy supply part is, at least, 30% of the total system's energy supply;
- demonstrate that it will provide reliable electricity services (less than 10 unscheduled blackouts per year) to end-users (applies mainly to infrastructure projects); and
- be operational within one year of the signature of the Grant Agreement.

## **5.2 Selection criteria**

### **5.2.1 Applicant**

The Applicants shall be assessed based on many criteria including the following:

- Level of financial commitment from the Applicant;
- Number of staff and staff qualifications and experience;
- Previous experience of the firm in the acquisition of co-funding (grants, third-party equity or debt) for rural electrification projects;
- Performance in previous REF competition processes and across all government or power sector related procurements, if any;
- Previous experience in results-based funding, if any; and
- Previous experience with rural electrification programs.

## 5.2.2 Proposed Projects

Eligible proposed projects shall be assessed amongst other things on the following criteria:

- Extent of co-funding coming from other sources than REF;
- Level of own equity brought in by applicant;
- Level of economic rate of return on REF contribution;
- Level of long-term financial sustainability;
- Level of long term levelized cost of energy supplied;
- Prices per kWh/per lumens to be paid by end users;
- Level of cost savings by end-users by switching from their current source of electricity to the proposed one;
- Expected lifetime of the product (in case of fee for product model)/business (in case of fee for service);
- Number of new connections to be made/products to be distributed by the project;
- kWh per capita to be delivered/number of lumens of the products to be distributed by the project;
- Length of period of implementation;
- Extent of job creation and/or community involvement;
- Local content on equipment and human resources to be used for the project;
- Extent of support for broader rural development (e.g. support to commercial and productive uses or public services e.g. water access, health, education), usability of products to be distributed (phone/lap top charging, powering ICTs, powering other home appliances, appliances for productive uses);
- Level of environmental impact determined by the level of penetration of renewable energy generation in the project and the environmental plan (including the disposal of environmentally harmful components);
- Level of innovation brought in; and
- Level of future scalability.

## 6. REF support instruments<sup>5</sup>

After signing the contract and upon payment of the first installment, the Grant Beneficiary shall have a maximum of 1 year to implement the project during which the grantee shall benefit from the REF support as per the agreed milestones in the contract. Subject to proper justification from the Grant Beneficiary, the REA may decide to extend the Grant Agreement by up to 1 additional year. All terms and conditions of the REF support shall be as stipulated in the RBF grant agreement template.

In addition to the grants, REA can also provide technical assistance. For more information on the Technical Assistance, please refer to Annex 7.

### 6.1 Grants

The REA shall provide graduated partial capital grants to offset part of the capital costs of the selected Proposals following the principles of Results Based Funding as follows.

#### 6.1.1 Infrastructure projects

##### 6.1.1.1 General procedure

Grants shall be calculated based on the number of planned connections and the quality of electricity service that the Grant Beneficiary plans to provide to the Beneficiary Community in line with the Sustainable Energy for All (SE4ALL) Multi-tier Framework for Measuring Energy Access as captured in Table 1 and 2 below.

---

<sup>5</sup> The model for REF support instruments mentioned in this section is preliminary. It will be reviewed as the REA acquires experience while implementing.

<sup>6</sup> As per the Results Based Financing (RBF) grants for renewable energy investments in green mini and micro grids, First call for applications, 2016 (RBF2016C1)

Grants shall be paid in Naira only. Naira equivalent grants shall be calculated based on the prevailing official exchange rate as set by the Central Bank of Nigeria (CBN).

No Tier refers to any specific technology. The Tier under which a technology falls will be determined solely on the basis of the quality of service it provides in the context of a specific project.

**Table 1: Grant amount per connection<sup>6</sup>**

Tier	Grant per connection
<b>Tier 5</b>	USD 600
<b>Tier 4</b>	USD 500
<b>Tier 3</b>	USD 300
<b>Tier 2</b>	USD 25

**Table 2: Parameters defining the different Tiers<sup>7</sup>**

Attributes	Tier 2	Tier 3	Tier 4	Tier 5
Daily capacity per customer (kWh)	>0.2	>1	>2	>4
Duration of service per day (hrs)	≥4	≥8	≥16	≥23
Main grid compatibility	-	√	√	√

The minimum grant amount eligible shall be USD 10,000, while the maximum grant amount shall be USD300,000.00 or 75% of the total capital costs of the project, whichever is less. The REA may allow proposals including several projects (interventions in separate areas within a given Geopolitical Zone). Each project shall comply separately with the above-mentioned minimum and maximum grant amounts allowed.

The grants shall be disbursed in 3 installments prefaced on verifiable milestone as follows:

1. 35% mobilization after signing RBF Grant Agreement;
2. 35% after verification of delivery of equipment at project site; and
3. 30% after verification of customer connections and quality of service.

A review of the incentive levels may be made subject to the results of the verification of the number of customer connections and quality of service. The REA may organize constant verification visits and/or hire external auditors to undertake independent verification visits.

<sup>7</sup> Infrastructure projects which fall under Tier 1 shall not be eligible for REF support.

### 6.1.1.2 Special procedure for Legacy Projects

Selected proposals for such type of projects shall be calculated and disbursed using the following methodology:

- Based on the documentation produced during their procurement process, the value of the already installed assets that are still in a good condition shall be determined<sup>8</sup>;
- The value of the already installed assets shall then be depreciated linearly over their typical expected useful lifetime from the time of installation;
- The depreciated value of the already installed assets shall then be discounted from the grant amount to which the grant beneficiary is entitled to.

The government shall transfer the ownership of the already installed assets covered by the Grant or purchased by the grant beneficiary upon commissioning of the project. If required, the government shall provide the grant beneficiary with a temporary right of usage over the grant assets during project implementation.

In case the grant amount, which the grant beneficiary is entitled to, is not fully covered by the depreciated value of the already installed assets, the remaining value of the grant shall be disbursed in cash. Any amount in cash corresponding to the grant, shall be disbursed using the instalment mechanism as described in Section 6.1.1.1.

In case the depreciated value of the already installed assets is higher than the grant amount which the grant beneficiary requires, the grant beneficiary shall be given the option to purchase the already installed assets not covered by the grant amount.

---

<sup>8</sup> A visit by REA to the project site to check the conditions of the already installed assets may be required.

## 6.1.2 Non-infrastructure projects

Grants shall amount to 50% of the price (Free on Board - FOB) of the products, as stipulated in the contract between the Grant Beneficiary and its equipment provider. These grants shall support the deployment of stand-alone systems in the most remote rural areas where the deployment of such technology on a commercial basis is unviable.

The minimum grant amount shall be USD 10,000 and the maximum grant amount shall not exceed USD 300,000 or 50% of the project, whichever is less. The REA may allow proposals including several projects (interventions in separate areas within a given Geopolitical Zone). Each project shall comply separately with the above-mentioned minimum and maximum grant amounts allowed.

The full amount of the grants shall be disbursed upon verification of the sale/installation of the system.

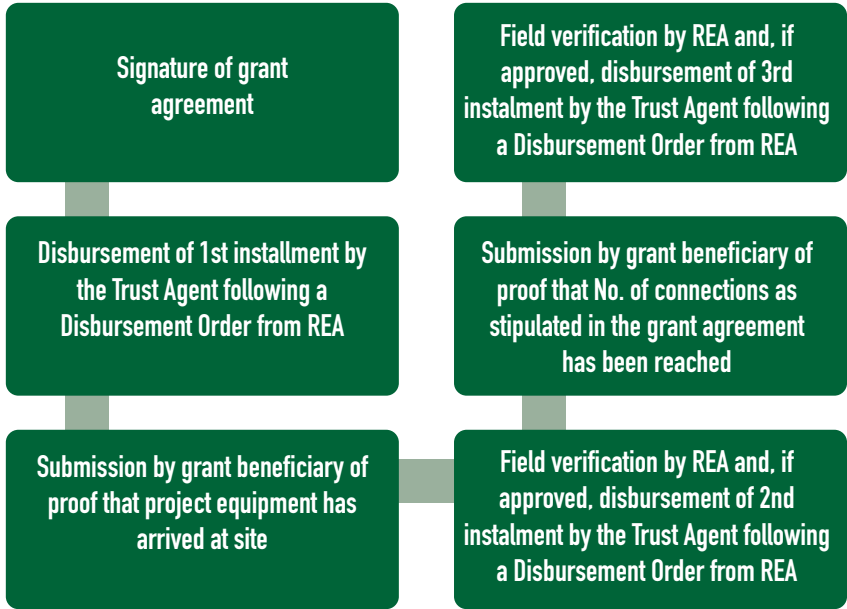
A review of the incentive levels may be made based on the results of the verification of number and quality of products delivered. The REA may decide to organize extra verification visits and/or hire external auditors to undertake independent verification visits.

# 7. Grant Disbursement, Monitoring, Evaluation and Verification

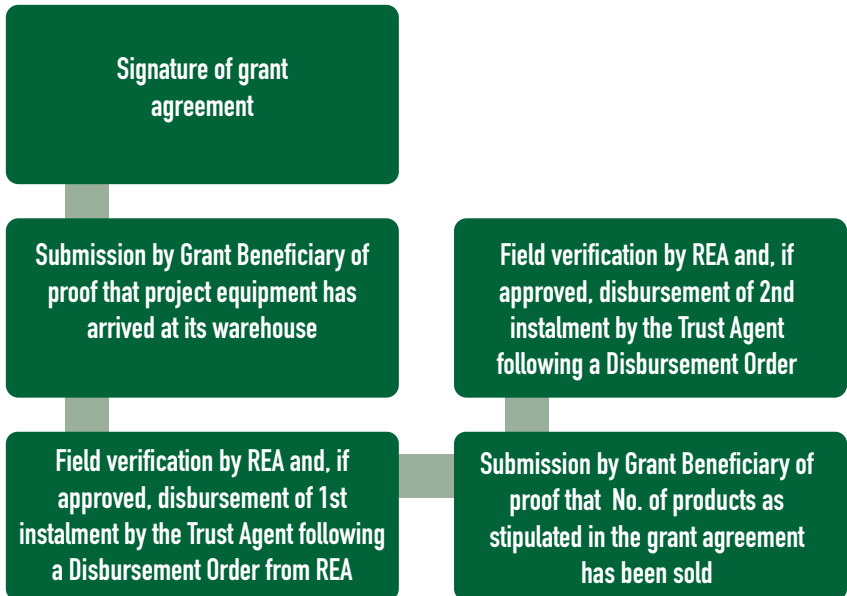
## 7.1 Process of disbursement

The disbursement of the financial support shall be instructed by the REA and effected by the Trust Agent following the instalments stipulated in Section 6.1.1.1. The disbursement of instalments will only be made upon submission of proof by grant beneficiary that it meets all conditions precedent and upon verification by the REA that confirms the grant beneficiary's statement to be truthful as follows:

**Figure 2: Verification mechanism for infrastructure projects**



**Figure 3: Verification mechanism for non-infrastructure projects**



The REA shall frequently organize independent field verifications of selected projects to ensure that projects are evenly distributed amongst the Geopolitical Zones and that the type of Power Supply Systems being deployed is consistent with the approval granted. Independent field verifications may continue up till one (1) year after the completion of grant disbursement by the REA.

The REA shall prepare M&E report 2 months after the termination of each Grant Agreement. The REA may decide to organize an additional field verification if it deems fit. This additional field verification shall have the same legal status as the ones that shall take place during the process of the grant disbursement and may also lead to adjustments in the incentive level.

In addition, the REA shall maintain a database on each project to which REF support has been provided and the data shall at all times include progress report on the projects. The REA shall every 2nd month of the year prepare an M&E report to be submitted to the Supervising Minister in charge of REA and the President together with an audited statement of the accounts of the REF.

The REA shall implement the recommendations for improvement proposed by REA monitors and or auditors in subsequent Calls. Grant beneficiaries shall permit REA staff and or any persons appointed by the agency free access to the project's premises/site and for purposes of inspecting either the project or any documentation relating to the project up to 1 year after the termination of the grant agreement.

In order to ensure the independence of the M&E&V activities, all costs related to M&E&V shall be borne by the REA.

All external auditors hired by the REA shall be appointed in accordance with applicable extant laws and regulations for hiring a consultant service.

## Annex 1: Form for Applicant's profile

*(The filled form shall not exceed 5 pages)*

### GENERAL INFORMATION

Company name<sup>10</sup>

Physical address

Website

Contact person

E-mail

Phone number:

Legal status

Registration number

Tax Identification number

Name of partner(s)  
(in case of consortium)

### FINANCIAL DETAILS

Of Immediate past 3 years)	20.....	20.....	20.....
Annual turnover in NGN			
Operating profit in NGN			
Equity capital in NGN			
Outside capital in NGN			

<sup>9</sup> Together with the Expression of Interest, Applicant shall submit a letter (using the letterhead of its organization) signed by an authorized signatory of the Applicant, stating that none of the grounds for exclusion as mentioned in Section 6.1 (Eligibility Criteria for the Applicant) apply to the Applicant or any of its partners in the competition.

<sup>10</sup> In the case of a consortium, the lead company should be the one filling the form. The partner in the consortium and its specific role in the project should be mentioned as part of the company profile.

## NUMBER OF EMPLOYEES

MANPOWER MAINTAINED (LAST 3 YEARS)	2015	2016	2017J N
Permanent staff			
Staff working on rural electrification			

## COMPANY PROFILE (max. 20 lines)<sup>11</sup>

- What is your company's vision, objectives, strategy?
- What challenges do you encounter in your sector?
- What kind of support do you need to upscale your business?

## REFERENCE RURAL ELECTRIFICATION PROJECTS IN THE LAST 3 YEARS

Type/capacity	Region	Budget	Funding source(s)

## LIST OF PLANNED RURAL ELECTRIFICATION PROJECTS

Type/capacity	Region	Budget	Funding source(s)

## BRIEF PROFILE OF KEY STAFF (Maximum 5)<sup>12</sup>

No	Name	Brief profile
1		
2		
3		
4		
5		

<sup>11</sup> A full company profile shall be submitted as part of the application.

<sup>12</sup> The CVs of up to 5 key staff must be submitted together with the application. In the case of a consortium, the lead applicant may decide to include the CV of up to 2 key staff from the partner company. Its application shall however not exceed 5 CVs

## Annex 2: Outline of Project Concept Note

*(The note shall not exceed 5 pages)*

1. The background of the prospected project
2. Market assessment
3. Energy resource assessment
4. Technical assessment
5. Management & institutional aspects
6. Financial assessment  
*(including justification on why the REF support incl. capital grant is needed)*
7. Environment and social assessment
8. Risk analysis

## Annex 3: Example of matrix for Evaluation of Eols

All eligible applicants will be evaluated based on 27 criteria categorized 9 sections. Each criterion will be rated between 0 to 3 points (3 being the highest rating for a fully met criterion). Depending on the importance of the criterion, a weighting factor between 0 and 5 (5 being the highest factor for highest importance of the respective criterion) has been attributed for each criterion. The total evaluation result for each candidate is the sum of the criteria rating multiplied by their respective weighting factor which equals to 300. Only candidates that score at least 50% will be invited for the call for proposals stage.

ELIGIBILITY CRITERIA - (Candidate fulfills eligibility criteria)		Yes/No		
#	SELECTION CRITERIA - Designation	Weight	Rate (0-3)	Value
<b>1 General data</b>				
1.1	Information completed	1	3	3
1.2	Local content	3	3	9
1.3	Proof of successful due diligence by certified body	1	3	3
<b>2 Financial details</b>				
2.1	Does annual turnover match with envisaged project size?	2	3	6
2.2	Does the entity generate profit?	5	3	15
2.3	Equity/debt ratio	2	3	6
2.4	Financial performance over the past three years	5	3	15
2.5	Submission of proof of access to private finance	1	3	3
<b>3 Number of employees</b>				
3.1	Variation of permanent personnel over the past three years	5	3	15
3.2	Personnel with concrete experience in decentralized electrification	5	3	15
<b>4 Brief company profile</b>				
4.1	Renewable energy, off-grid or rural electrification as a key element of company's identity	5	3	15
4.2	Company's portfolio diversification	2	3	6
4.3	Alignment between entity's needs and objectives of competition	3	3	9
<b>5 List of planned projects</b>				
5.1	Technology	5	3	15
5.2	Size	5	3	15
5.3	Location	5	3	15
5.4	Funding available	5	3	15

<b>6</b>	<b>Reference projects in the last 3 years</b>			
6.1	Technology	5	3	15
6.2	Size	5	3	15
6.3	Location	5	3	15
6.4	Budget	5	3	15
6.5	Experience working with Government	5	3	15
<b>7</b>	<b>Brief profile of key staff</b>			
7.1	Sector specific experience of key staff	4	3	12
7.2	Certificates	1	3	3
<b>8.</b>	<b>Project concept note</b>			
8.1	Quality of preliminary assessments	5	3	15
8.2	Quality of proposed project concept	2	3	6
8.3	Environmental and socio-economic impact of project	3	3	9
<b>TOTAL</b>				<b>300</b>

## Annex 4: Outline of Proposal

- 1 Project background**
- 2 Site identification/Market survey**
  - 2.1 Selection of pilot site/area
  - 2.2 Scaling potential
- 3 Energy resource assessment**
- 4 Demand assessment**
  - 4.1 Approach for demand assessment
  - 4.2 Estimated electricity demand
- 5 System design**
  - 5.1 Power generation
  - 5.2 Power distribution network
  - 5.3 System controls
  - 5.4 Metering

## **6 O&M&M model**

- 6.1 Low cost and lean management concept
- 6.2 Operations and Maintenance

## **7 Customer relationship management strategy**

- 7.1 Community involvement strategy
- 7.2 Customer satisfaction monitoring system
- 7.3 Demand side management
- 7.4 Payment collection

## **8 Financial profitability**

- 8.1 Tariff/Price structure
- 8.2 Profit and loss
- 8.3 Cash flow
- 8.4 Balance sheet
- 8.5 Key performance indicators
- 8.6 Availability of funding

## **9 Status of regulatory process**

## **10 Implementation strategy**

- 10.1 Procurement
- 10.2 Installation
- 10.3 Commissioning

## **11 Timeline**

- 11.1 Pilot project implementation
- 11.2 Large scale roll-out

## **12 Risk analysis**

## **13 SWOT analysis**

## **14 Request for REF support**

- 14.1 Grant
- 14.2 Technical assistance

## **15 Annexes**

- 15.1 Technical concept
- 15.2 Financial model
- 15.3 Plan of operations

## Annex 5: Example of matrix for evaluation of Proposals

All eligible proposals will be evaluated based on 29 criteria categorized 12 sections. Each criterion will be rated between 0 to 3 points (3 being the highest rating for a fully met criterion). Depending on the importance of the criterion, a weighting factor between 0 and 8 (8 being the highest factor for highest importance of the respective criterion) has been attributed for each criterion. The score for each proposal is the sum of the criteria rating multiplied by their respective weighting factor which equals to 300.

ELIGIBILITY CRITERIA - (Proposal fulfills eligibility criteria)		Yes/No		
#	SELECTION CRITERIA	Weighting	Rating (0-3)	Valuation
<b>1</b>	<b>Project background</b>	<b>3</b>	<b>3</b>	<b>9</b>
<b>2</b>	<b>Site identification</b>			
	2.1 Selection of pilot site	5	3	15
	2.2 Scaling potential	5	3	15
<b>3</b>	<b>Demand assessment</b>			
	3.1 Approach for demand assessment	5	3	15
	3.2 Estimated electricity demand	5	3	15
<b>4</b>	<b>System design</b>			
	4.1 Power generation	3	3	9
	4.2 Power distribution network	1	3	3
	4.3 System controls	2	3	6
	4.4 Metering	4	3	12
<b>5</b>	<b>O&amp;M&amp;M Model</b>			
	5.1 Management concept	4	3	12
	5.2 O&M concept	4	3	12
<b>6</b>	<b>CRM strategy</b>			
	6.1 Community involvement strategy	2	3	6

6.2	Customer satisfaction monitoring system	2	3	6
6.3	Demand side management	3	3	9
6.4	Payment collection system	3	3	9
<b>7</b>	<b>Financial profitability</b>			
7.1	Tariff/Price structure	5	3	15
7.2	Profit and loss	4	3	12
7.3	Cash flow	4	3	12
7.4	Balance sheet	4	3	12
7.5	Key performance indicators	4	3	12
7.6	Availability of funding	8	3	24
<b>8</b>	<b>Status of regulatory process</b>	<b>5</b>	<b>3</b>	<b>15</b>
<b>9</b>	<b>Implementation strategy</b>			
9.1	Procurement	2	3	6
9.2	Installation	2	3	6
9.3	Commissioning	2	3	6
<b>10</b>	<b>Timeline</b>			
10.1	Pilot project implementation	2	3	6
10.2	Large scale roll out	3	3	9
<b>11</b>	<b>Risk analysis</b>	<b>2</b>	<b>3</b>	<b>6</b>
<b>12</b>	<b>SWOT analysis</b>	<b>2</b>	<b>3</b>	<b>6</b>
			<b>TOTAL VALUATION:</b>	<b>300</b>

## Annex 6: Sustainable Energy for All Multi-Tier Framework for Measuring Energy Access

Energy Access	No	Basic	Advanced			
Attributes	Tier-0	Tier-1	Tier-2	Tier-3	Tier-4	Tier-5
Peak Available capacity [Watts]	–	>3W	>50W	>200W	>800W	>2000W
Duration [hours]	–	>4h	>4h	>8h	>16h	>23h
Evening supply [hours]	–	>1h	>2h	>3h	>4h	>4h
Indicated Minimum Technology	–	Nano-grids/ Microgrids PicoPV/Solar lantern	Rechargeable batteries, Solar home systems	Home systems	Mini-grids and Grid	Mini-grids and Grid

Levels	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Energy usage	Household lighting, radio and phone charging	Household lighting, radio, phone charging and basic appliances (TV or fan)	Tier 2 plus medium appliances such as low power refrigeration	Tier 3 plus high power appliances such as pumping	24/7 high power suited to commercial and industrial uses

## Annex 7: Technical Assistance

The Grant Beneficiary may also benefit from Technical Assistance, which shall be tailored to the project's specific needs and may cover all or any of the following areas:

- **Regulation:** Acquisition of regulatory approvals (Power sector related licenses/permits, Land use rights, Water rights, Building approvals, Environmental and Social Impact Assessment, etc)<sup>13</sup>;

- **Legal:** Development of legal templates and facilitation of any additional agreements between the Grant Beneficiary and end-users or the Federal/State Government as may be required;
- **Fiscal incentives:** Support in the acquisition of fiscal incentives such as tax holidays or import duty waivers; and/or
- **Access to finance:** Support in the acquisition of finance and/or risk mitigation mechanisms (e.g. Partial Risk Guarantees) to complete the project financing structure.

In adherence to the principle of one-stop shop, the following Ministries and Agencies may appoint a representative to the REA to provide Technical Assistance to the grant beneficiary in the aforementioned areas:

**Table 3: Proposed entities that will form part of the one-stop shop at the REA**

Entity	Role
Federal Ministry of Power	General coordination in the power sector
Nigerian Electricity Management Services Agency	Inspection of electrical infrastructure
Federal Ministry of Environment	Env. and Social Impact Assessment
Federal Ministry of Water Resources	Water rights

<sup>13</sup> All costs and fees that the regulatory approvals attract shall be paid by the Grant Beneficiary. As part of the Technical Assistance and in order to ensure affordable electricity services/products for the end-users, the REA, to the extent of its capacities, may help the Grant Beneficiary to get waivers from the relevant Authorities that offset all or part of the fees of the regulatory approvals.

Nigerian Electricity Regulatory Commission	Power sector licenses and permits
Standards Organization of Nigeria	Equipment standards
Federal Ministry of Finance	Import duty waivers
Nigerian Investment Promotion Commission	Tax holidays
Central Bank of Nigeria	Finance and risk mitigation mechanisms
Federal Ministry of Justice	Legal templates and additional agreements
Nigeria Communications Commission	Framework on mobile money...
Nigerian Ports Authority and Nigerian Customs Service	For any equipment importation

The REA may as necessary request further assistance from other MDAs in order to actualize any project under the REF. The REA, through its zonal offices, may also facilitate exchanges between the grant beneficiary and the respective State Government(s) where the selected Projects will be deployed (e.g. on Land use provision, issuance of Building Approvals, coordination with the respective Local Government Council or Heads of Beneficiary Communities).







## RURAL ELECTRIFICATION AGENCY

ENERGY = EMPOWERMENT = EFFICIENCY

Website: [www.rea.gov.ng](http://www.rea.gov.ng)

Email: [info@rea.gov.ng](mailto:info@rea.gov.ng)



@REANigeria



@realREANigeria



@REANigeria



@realREANigeria