

STEP BY STEP REGULATORY REQUIREMENTS FOR THE OPERATION OF MINI-GRIDS IN NIGERIA

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Before applying for a Permit or the approval of a Tripartite Contract for a mini-grids in Nigeria, it is important to consider several regulatory factors. This article briefly outlines them.

Introduction

Before applying for a Permit or the approval of a Tripartite Contract for a mini grid project, it is important to consider if the main/national grid is already present in the area where the project will be developed or if the site is completely off-grid.

Where an area has no existing distribution grid, the area is considered as unserved and may receive an Isolated Mini-Grid.

Where the grid is present but the area is poorly electrified or has a non-functional distribution grid, it is considered as underserved and is eligible for an Interconnected Mini-Grid.

For clarity, an Isolated Mini-grid is one which is not connected to any existing Distribution Licensee's network. On the other hand, an Interconnected Mini Grid means a Mini-Grid which is connected to an existing Distribution Licensee's network

A. Unserved Areas – Isolated Mini-Grids

The entire application process for unserved areas is summarized below:

Step 1: Identification and Eligibility of Unserved Area

In order to be eligible, the area selected must meet the following conditions:

- The area is unserved.
- The area must not have been assigned to an IEDNO (Independent Electricity Distribution Network Operator) or any other Mini-Grid Developer
- The area is not part of an already existing expansion plan (5-year plan) of a DisCo (A Distribution Licensee). Where it is identified that the area is part of an expansion plan of a DisCo,

the Mini-Grid Developer needs the consent of the Disco before the area identified becomes eligible.

- If the area identified fulfils all the requirements listed above, the process can continue and contact with the Community can be established.
- As a repository of the expansion plans of the Discos and applications from IEDNOs and other Mini-Grid developers, Nigerian Electricity Regulatory Commission (**NERC** or the **Commission**) may also assist Mini-Grid developers in identifying a suitable area that fulfils the above mentioned criteria. Federal and State authorities responsible for electrification should also be consulted.

Step 2: Contact with the Community and Settlement of an Exclusivity Period

- Now that the area located can potentially receive an Isolated Mini-Grid, the community concerned should be contacted to confirm if the local population is interested in benefitting from the services provided by the mini-grid developer. Either, the community or the mini-grid developer can approach the other party to start negotiations.

- At this stage, the community and the mini-grid developer can decide to set an exclusivity period and an exclusivity agreement is executed. Ensure to get a lawyer to assist with this agreement
- The exclusivity period allows the developer to investigate the feasibility of implementing a mini-grid at the location and

ensures that no other operator is conducting any other feasibility during the investigation period.

- The exclusivity period is an agreement only between the community and the mini-grid operator and is only valid up to 12 months. This period could then be extended once and only for a further 12 months subject to the approval of the Commission.
- If at the inception, the mini-grid developer needs an exclusivity period of more than 12 months, it can also enter into an exclusivity agreement. However, this would need to be justified, submitted to the Commission and the agreement approved by the Commission.

Step 3: Size of the system and registration

- If the power distributed by the isolated Mini-Grid is larger than 100 kW, the mini-grid developer will need to apply for a mandatory Permit.
- If the generation capacity of the power station installed is larger than 1 MW the plant is not a Mini-Grid and other NERC regulations on generation will apply. Ensure you get a legal adviser to assist with this. Generation Capacity is defined as the guaranteed active power that a generation plant can supply to a load or network at any point in time under the given environmental constraints (temperature, humidity, etc.) and a power factor of 0.8 (inductive) for at least one hour under the assumption that the plant is well maintained and fully functional.

- If the power distributed by the isolated Mini-Grid is below 100 kW, the Mini-Grid Developer may elect at his discretion to apply for a permit following the same procedure as the mandatory permit.
- Where a permit is granted by the Commission and a DISCO's network eventually extends to such area, the Mini-Grid Operator will be entitled to receive a compensation for investment made including 12 months revenue before the mini-grid can be taken over by the DISCO and connected to the main distribution grid. A permit holder will also enjoy any other protection given to the mini-grid developer under the Mini-Grid Regulations, 2016.
- The mini-grid developer that has been granted a permit will need to execute an agreement with the beneficiary community. Ensure to get a legal adviser to assist with this.
- Where the Mini-Grid Developer of less than 100kw decides not to apply for a permit, it shall only be required to register by submitting the registration form called "Registration form for Mini-Grids smaller 100 kW" with NERC.

C. Underserved Areas – Interconnected Mini-Grids

The entire application process for underserved areas is summarized below:

Step 1: Identification and Eligibility of an Underserved Area

In order to be eligible, the community concerned should be first contacted to confirm if the local population is interested in

benefitting from the services provided by the mini-grid developer.

The community selected should meet the following criteria:

- The community is being underserved. The main grid is present in that area, but does not provide a sufficient level of service to meet the Community's electricity demand.
- The community is ready to pay higher tariffs than the main grid tariff in order to

improve the reliability of electricity supply.

Step 2: Contract with the Distribution Licensee and Settlement Of an Exclusivity Period

- Once it has been established that the area located can potentially receive an Interconnected Mini-Grid, the Distribution Licensee should be contacted to know if it would be willing to enter in a Tripartite Contract.
- At that stage, the Community, the Mini-Grid Developer and the Distribution Licensee can decide to set an exclusivity period. This exclusivity period allows for the investigation on the feasibility of implementing a mini-grid at the location and ensures that no other operator is conducting any other feasibility study during the investigation period.
- The exclusivity period is an agreement between the community, the mini-grid developer and the Distribution Licensee valid for up to 12 months. However, this period can be extended once and only for a further 12 months subject to the approval of the Commission.

- If at the inception, the mini-grid developer needs an exclusivity period of more than 12 months, it can also enter into an exclusivity agreement. However, this would need to be justified and the agreement approved by the Commission.

Step 3: Tripartite Contract And Registration

- An agreement between the Connected Community, the mini-grid developer and the Distribution Licensee must be reached. Thus a Tripartite Contract must be signed by all three parties.

- The contract is then submitted to NERC for approval.

Culled from [NERC Mini-Grid Regulations, 2016.](#)



In Nigeria, a Template for Solar-Powered Minigrids Emerges.

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