



NIGERIAN ELECTRICITY REGULATORY COMMISSION

**GUIDELINES ON COMMERCIAL FRAMEWORK FOR
INTERCONNECTED MINI-GRIDS**

DECEMBER 2025

1
PSA


A

NIGERIAN ELECTRICITY REGULATORY COMMISSION

In the exercise of the powers conferred under sections 63, 164, and 226 of the Electricity Act 2023 ("EA" or the "Act") and all powers related thereto, the Nigerian Electricity Regulatory Commission ("NERC" or the "Commission") hereby issues guidelines on the commercial framework for Interconnected Mini-Grids.

Table of Contents

1.	Title	3
2.	Scope	3
3.	Purpose	3
4.	Background	3
5.	Objectives	4
6.	Commercial Principles	5
7.	Treatment of Legacy debt	8
8.	Billing and Settlement	9
9.	Dispute Resolution	10
10.	Effective Date	10



1. Title

This regulatory instrument may be cited as the *"Guidelines on the Commercial Framework for Interconnected Mini-Grids, 2025"*.

2. Scope

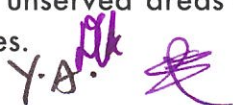
The Guidelines apply to all Distribution Licensees ("DisCos"), Interconnected Mini-Grid ("IMG") developers and operators, and any entities involved in the planning, installation, or operation of the IMG interconnections with the distribution network in Nigeria.

3. Purpose

The Guidelines provide the commercial and settlement framework for IMGs interconnecting with DisCos in Nigeria.

4. Background

1. Sections 63, 164, 165, and 226 of the Electricity Act ("EA" or the "Act") mandate the Commission to promote the adoption of renewable energy resources, streamline licensing, and issue guidelines to ensure the efficient operation of the electricity market.
2. The April 2024 Supplementary Multi-Year Tariff Order ("MYTO") introduced directives requiring DisCos to improve service reliability and migrate customer-feeders to higher service bands, deploying distributed energy resource solutions under the IMG and Embedded Generation ("EG") frameworks of the Nigerian Electricity Supply Industry ("NESI").
3. The Commission's Mini-Grids Regulations 2023 further provide the foundational regulatory framework for the establishment and operation of Mini-Grids.
4. Following the issuance of the Mini-Grid Regulations 2023, IMG developers, DisCos, and other stakeholders have actively leveraged its provisions to deploy Mini-Grid solutions either independently or through collaboration. These deployments have expanded electricity access in previously unserved areas and improved service quality in underserved communities.

Y.A. 

5. Notwithstanding these improvements, the full potential of IMGs to address Nigeria's substantial electricity access deficit remains underutilised. This is due to ambiguities in the determination of key commercial provisions, which stakeholders have identified as significant barriers to the effective deployment of IMGs. These include –
 - a. Rental Fee/Distribution Use of System (DUoS)
 - b. Cost of Energy (CoE) fees
 - c. Treatment of legacy debt inherited by IMGs
6. Due to these gaps and the need for clarity on key commercial issues, including Rental Fees ("DUoS"), Cost of Energy ("CoE"), and the treatment of legacy debt, the Commission has developed these Guidelines to provide a transparent and standardised framework for IMGs deployment.

5. Objectives

These Guidelines seek to –

1. Promote safe and reliable interconnection, ensure transparent cost allocation, and align with relevant standards in the Distribution Metering Codes.
2. Provide clarity and certainty for commercial negotiations between Distribution licensees and the IMG developers.
3. Ensure cost-recovery and non-discriminatory pricing for the use of network assets.
4. Protect the interests of consumers, the IMG developers, Operators, and Distribution licensees.
5. Enhance the transparency and bankability of IMGs projects.


Y.A.

6. Commercial Principles

The commercial principles define a two-part pricing framework for service to the IMG: a fixed component for capital recovery (Rental Fee) and a variable component for pass-through energy costs (Cost of Energy). The Rental Fee recovers the cost of capital associated with the distribution assets allocated to the IMG and is payable regardless of energy flow. The CoE is based on actual metered energy consumed within the billing period.

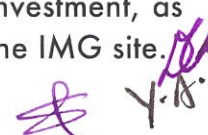
1. Rental Fee / Distribution Use of System ("DUoS")

- a. Rental Fee is the compensation payable by the IMG operator to the DisCo, made up of the capital recovery and associated return component of the DUoS charge on the distribution network and any dedicated interconnection assets.
- b. The DUoS charge is the regulated fee paid by electricity consumers for the use of the distribution network infrastructure owned and operated by a DisCo.

Table 1: Components of DUoS in Determining Monthly Rental Fee ("MRF")

Component of DUoS	Recognition in the MRF
Return on Investment (ROI)	50%
Return of Investment (Dep)	100%
Operations and Maintenance Cost (Opex)	0%

- c. The key components of the Rental Fee are:
 - i. Return on Investment (ROI) – This is the profit on deployed capital that is allowed for licensees to attract investment. It is calculated by multiplying the regulated Weighted Average Cost of Capital ("WACC") on the unarmortised Regulated Asset Value ("RAV") of a DisCo. The ROI component comprises the return on investment and working capital (comprising two months' cost of energy and Opex). However, the portion payable by the IMG is limited to the return on investment, as the DisCo will not incur working capital costs on the IMG site.



- ii. Return of Investment (ROIdep): Also known as depreciation, this is the amortisation of invested capital assets over their useful life, allowing for the gradual recovery of infrastructure costs through tariffs.

d. Determination of Rental Fee

$$RF = \% \text{ Share of RAB} \times [(Monthly ROIdep) + (50\% \times Monthly ROI)]$$

Table 2: Components for Determining Rental Fee

Components	Description
% RAB	$\frac{\text{Depreciated value of DisCo asset under IMG}}{\text{DisCo RAB provision}}$
ROIdep (₦)	Provided in the monthly MYTO order
ROI (₦)	Provided in the monthly MYTO order

2. Cost of Energy (CoE) Requirements

- a. The CoE represents the variable monthly charge payable by the IMG operator for energy supplied through the PCC. It represents the unit price (per kWh) that a DisCo is permitted to charge for energy delivered.
- b. The CoE shall consist primarily of upstream costs (generation and transmission), as well as the costs associated with regulatory borrowings and provisions.

Table 3: Distribution Licensees' Cost of Energy

Component of Cost of Energy	Share of CRT allowed to be passed to the IMG Developer
Regulatory borrowings and provisions (RB)	100%
Generation Cost (GC)	DRO
TCN & Admin Cost (TC)	100%
Distribution licensee - ROI	0%
Distribution licensee - Dep	0%
Distribution licensee - Opex (OP)	33%
Regulated Losses (RL)	25%

Y.A.

c. The key components of the CoE are:

- i. Regulatory Borrowing and Provision: these are Commission-approved borrowings, market support funds, or regulatory provisions created to stabilise the NESI. They are passed through in full to the IMG as part of allowed energy-related charges.
- ii. Generation Cost: The CoE is priced at 100% of the applicable regulated tariff for the IMG's location and customer band. The CoE shall be determined by a combination of the total generation cost and the applicable DRO. This ensures a full pass-through of energy costs, incorporating regulatory adjustments and band-specific factors.
- iii. TCN & Admin Cost: These represent the full transmission network service charges, system operations charges, market operations charges, and associated administrative costs approved by the Commission. This is fully recoverable from the IMG.
- iv. Distribution Licensee Opex: Only 33% of the approved Opex attributable to the IMG-related distribution functions is allowed as a pass-through. This encompasses operational support, including fault management, switching, system coordination, and minimal administrative services, up to the 11KV interconnection point with the IMG.
- v. Regulated Losses: Only 25% of the DisCo allowed (ATC&C) is recoverable from the IMG. This takes into cognizance any technical losses that may be incurred between the 33KV transformer and the interconnection point with the IMG.

d. Determination of Monthly Cost of Energy (CoE):

- i. The monthly CoE payable by the IMG to the DisCo shall be calculated based on the formula below:

Monthly COE = metered energy delivered at the PCC x IMG CoE rate (₹/kWh)

 Y.A.

- ii. The IMG CoE rate (₦/kWh) shall be included in the applicable monthly Tariff Order issued pursuant to the MYTO methodology and shall be calculated based on the formula below:

$$CoE = [RB + (GC \times DRO) + TC + (0.33 \times OP) + (0.25 \times RL)]$$

Table 4: Parameters for Determining the Costs of Energy Supply

Parameters	Description
Metered Energy	IMG's metered monthly energy consumption at the Point of Common Coupling ("PCC")
RB (₦)	Provided in the monthly tariff Order
GC (₦)	Provided in the monthly tariff Order
DRO %	Provided in the monthly tariff Order
TC (₦)	Provided in the monthly tariff Order
OP (₦)	Provided in the monthly MYTO Order
RL (₦)	Provided in the monthly MYTO Order

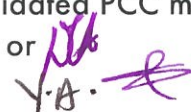
7. Treatment of Legacy Debt

- Legacy debt refers to pre-existing financial obligations that a Distribution licensee may have incurred prior to the commencement of the IMG operations within a designated area.
- Where customers to be served by the IMG have verified outstanding debts owed to the DisCo, the IMG operator and DisCo shall execute a Debt Recovery Agreement ("DRA") specifying the percentage of debtor-customers' vending to be allocated towards debt recovery. The DisCo shall provide the IMG Operator and the Commission with verified legacy debt lists prior to the commencement of IMG operations.
- These guidelines set a cap of not more than ten percent (10%) of energy purchases/vending by debtor customers to be applied towards the recovery of legacy debt. Customers shall be notified in writing, and any disputes arising from the implementation of this provision shall be resolved in accordance with the Commission's Consumer Protection Regulations ("CPR"), 2023.

Y-A

8. Billing and Settlement

- a. Settlement volumes used to calculate the CoE shall be the metered import volumes recorded by a certified meter at the PCC.
- b. DisCo shall issue monthly invoices for Rental Fee and CoE to the IMG operator based on metered data at the PCC and provisions of DisCo's applicable monthly tariff order/model.
- c. Settlement for all payments due to the DisCo shall be made into a single designated feeder collection account pursuant to the Account Administration Agreement ("AAA") with NESI Stabilisation Strategy Limited ("NESI-SSL"). The following shall apply –
 - i. DisCo shall notify NESI-SSL of any approval granted by the Commission to execute an IMG arrangement and obtain authorisation to operate a designated account.
 - ii. The IMG operator shall be provided only with the NESI-SSL-approved designated account for the settlement of all DisCo invoices.
 - iii. NESI-SSL shall maintain oversight and monitor transaction flows from the designated account in accordance with the AAA.
 - iv. All payments shall be made in accordance with the settlement timelines stipulated in the Interconnection Agreement and the AAA.
 - v. Where NESI-SSL identifies material non-compliance with the waterfall or settlement rules, it shall notify the Commission and parties within three business days.
- d. In the event of meter failure or data loss, provisional settlement shall follow the estimation and reconciliation protocol below:
 - i. Average of the preceding 3 (three) months validated PCC meter data adjusted for load factor and seasonality; or


Y.A.


- ii. If unavailable, a proxy estimate (e.g., feeder energy balance) proposed by the DisCo and subject to the IMG operator acceptance.
- e. Parties may not substitute estimated customer-level metering or other aggregator measurements for PCC settlement except where expressly approved by the Commission.
- f. Audit & Oversight: Both parties shall maintain auditable logs of estimation and reconciliation.

9. Dispute Resolution

- 1. All Disputes arising under these commercial guidelines shall, in the first instance, be resolved by the parties through mutual negotiations within a period of thirty (30) days from the date the dispute arises. Parties can mutually agree to extend the negotiation period.
- 2. Where the parties fail to resolve the dispute within the specified period, the matter shall be referred to the Commission for final adjudication.

10. Effective Date

These Guidelines shall be effective from 11 December 2025



Yusuf O. Ali, PhD
Commissioner