NIGERIAN ELECTRICITY REGULATORY COMMISSION
GUIDELINES FOR THE LICENCING OF
INDEPENDENT ELECTRICITY TRANSMISSION NETWORK (IETN) OPERATORS 2024

1.0 TITLE

This regulatory instrument may be cited as "Guidelines for the Licencing of Independent Electricity Transmission Network Operators in the Nigerian Electricity Supply Industry".

2.0 OBJECTIVE

These Guidelines provide a framework for the filing and evaluation of an application for the issuance of an Independent Electricity Transmission Network (IETN) licence to qualified applicants pursuant to the provisions of Section 66(2) of the Electricity Act 2023 (*"EA"*).

3.0 BACKGROUND

The **EA** provides the basis for the licencing and operation of **Independent Electricity Transmission Networks (IETNs)** in order to enhance electricity access and encourage private sector participation in the transmission infrastructure of the NESI. **Section 66(2)** empowers the Commission to issue an IETN licence where:

a. There is no existing transmission facility and there is need for extension of the transmission network to increase electricity access; or
b. There are existing transmission facilities that require reinforcement of transmission network to connect new power generating facilities.

Section 63 further provides that the Commission shall retain and exercise regulatory powers over IETNs:

a. Within any state that has no legal and institutional framework in place for the regulation of IETNs or related electricity services; or
b. The operation of such IETN undertaking within any State of the Federation relies on any part of the national grid for its operations.

These provisions aim to decentralise grid operations, expand transmission network access, and attract private sector investments for a more efficient and reliable transmission network.

4.0 DEFINITION

For the purposes of interpretation of these Guidelines:

a. **IETN**: means any transmission licensee, other than the TSP, that is authorised to provide transmission services and is connected to the national grid. The

System Operator of the national grid shall be responsible for System Operations functions in IETNs.

b. **IETNO**: means any transmission licensee, other than the TSP, authorised to own and manage an isolated transmission networks and perform the associated systems operations.

c. Isolated Transmission Network: means any transmission network not connected to the grid.

d. **National Grid** – means any electrical power system that transcends the boundaries of one or more states in Nigeria or that is connected to a country outside Nigeria for the purpose of electricity generation, transmission, system operation, distribution, supply and trading.

e. **System Operations**: means the operation of one or more transmission systems

f. **System Operations Licensee**: A licensee of the Commission authorized to operate one or more transmission systems and other activities as prescribed in section 67 of the EA.

g. **Transmission** - means conveying Energy at Voltages of greater than or equal to 132kV

h. **Transmission Network or Transmission System** - means the System or network of electric lines comprising wholly or mainly high Voltage lines and electric Plant and which is used for Transmission of Energy from a Power Station to a substation, from one Power Station to another, from one substation to another or to or from any Interconnector or to final consumers, and includes any structures and Equipment for that purpose

i. **Transmission Services**: includes planning, design, development, construction and maintenance of a transmission system.

j. **Transmission Service Provider (TSP)** - means the division of TCN that owns and maintains the Transmission Network

5.0 APPLICATION OF THE GUIDELINES

(1) These Guidelines shall apply to all IETN licence applications before the Commission.

(2) No applicant shall be eligible for the grant of an IETN licence except it satisfies the requirements of these Guidelines (including the provision of the documents provided in Schedule A) and the requirements of the NERC Application for Licences Regulations, 2010, as may be amended from time to time.

SCOPE OF OPERATIONS AN IETN/IETNO

(1) The IETN Licensee shall:

i. Design, construct, and commission transmission-related facilities in compliance with the Grid Code, approved regulations, standards, technical codes, and any additional standards prescribed by the Commission or other authorized agencies.
ii. Enter into network connection and use-of-system agreements with other licensees and eligible customers.
iii. Coordinate authorized augmentation or interconnection activities with impacted licensees to minimize overall system and transmission costs.
iv. Maintain the transmission system and notify the Commission of all scheduled maintenance and outages as required by the Grid Code and any applicable regulations.
v. Ensure that no transmission facility required for services is abandoned, whether partially or entirely, and that adequate maintenance is conducted.

(2) An IETNO Licensee shall, in addition to 6(1) above, carry out the System Operations activities of its network

7.0 OBLIGATIONS OF AN IETN/IETNO LICENSEE

(1) An IETN/IETNO licensee shall, during the validity of its licence, comply with the provisions of the terms and conditions of the licence

(2) The IETN/ IETNO licensee shall comply with the terms of the interconnection Agreement (where applicable).

(3) The IETN/IETNO licensee shall, construct and maintain its transmission network in accordance with the technical codes and standards of the NESI.

(4) The IETN/IETNO licensee shall comply with Good Electricity Industry Practices in its operations.

(5) The IETN/IETNO licensee shall, where applicable, comply with such directives as may be issued from time to time by the System Operations Licensee.

(6) The IETN/IETNO licensee shall comply with all laws in force in Nigeria, the EA, Technical Codes, Market Rules and all other Regulatory instruments issued by the Commission.

(7) The IETN/IETNO Licensee shall submit all applications for access to the Commission for approval.

(8) The IETN/IETNO licensee shall provide open access to its transmission network in a non-discriminatory manner for use by any other licensee or Eligible Customer in accordance with these Guidelines and the Terms and the provisions of Section 8 of the terms and conditions of its licence.

(9) The IETN/IETNO Licensee shall publish on its website, a template of all the applicable agreements for access to the transmission network including, but not limited to, Connection Agreement, Use of Transmission Network Agreements, and Ancillary Services Agreement.

8.0 INTERCONNECTION AND NETWORK DELINEATION

(1) The IETN/IETNO licensee shall construct, manage and maintain its system along the transmission path specified in the terms and conditions of its licence.

(2) Where an IETNO interconnects with the national grid, the IETNO shall surrender its system operations functions to the System Operator of the national grid.

(3) Where IETNO licensees intend to interconnect:

i. The connection agreement shall be subject to the approval of the Commission;
ii. The operations of the interconnected IETNOs shall be governed by the provisions of their connection agreement.

9.0 OPEN ACCESS TO THE NETWORK

(1) The IETN licensee shall provide open access to its transmission network at applicable fees, in a non-discriminatory manner, for use by any other

licensee or Eligible Customer in accordance with these Guideline and the Terms and Conditions of its licence.

(2) Notwithstanding the requirements of Section 9(1) of these Guidelines, the IETN licensee shall provide access where:

a. There is available capacity on the network;
b. It does not affect existing obligations to other parties; and
c. The Commission has granted an approval for the connection and the Transmission Use of System (TUoS) Agreements.

(3) Where there is a dispute between the IETN Licensee and a third party in respect of its application for access to the network, the third party shall have recourse to the intervention of the Commission.

10.0 DETERMINATION OF TRANSMISSION FEES/CHARGES

An IETN/ IETNO licensee/ applicant shall submit to the Commission, charges, tariffs and tariff methodologies used to determine the applicable fees or charges for access for the Commission's approval where applicable.

11.0 EFFECTIVE DATE

These Guidelines shall be effective from this 2nd day of December 2024

02/12/2024

Musiliu O. Oseni
Vice-Chairman

SCHEDULE A

REQUIREMENTS FOR APPLICATION FOR INDEPENDENT ELECTRICITY TRANSMISSION NETWORK/OPERATOR (IETN/IETNO) LICENCES

1. Completed Application Form.
2. Certificate of Incorporation and Memorandum and Articles of Association.
3. Tax Clearance Certificate for immediate past three (3) years.
4. 3 (three) -year Business Plan.
5. Off-take Agreement or Arrangement (where applicable)
6. MoU with or Letter of intent from Engineering Procurement Contract (EPC) Contractor (if applicable).
7. MoU with or Letter of Intent from the technical partner (if applicable).
8. Financing Agreements or Letter to fund the project from financial institution(s).
9. 3 (three) years Audited account or statement of Affairs of the Applicant or the sponsors of the project.
10. Network Agreements with Generation licensee, Distribution, or Trading Licensee or Eligible Customer (where applicable)
11. Single line diagram of the entire Transmission Network (132kV and above)
12. Single line diagram of the transmission network showing points of connections to major loads/power stations.
13. Number, Names and Capacities of Transmission Sub-stations
14. Number and Lengths of Transmission Lines
15. Interconnecting Transformers (Number, types, capacities)
16. Reactive compensation equipment (details of compensators installed)
17. Sub-stations layout diagrams showing:
    a. Bus layouts.
    b. Electrical Circuitry, lines, cables, transformers, switchgears etc
    c. Earthing arrangements
    d. Switching facilities and interlocking arrangements
    e. Numbering nomenclature of transformers, circuits, circuit breakers and isolating switches in liaison with TCN.
18. Transmission Lines Parameters:
    a. Designation of transmission lines



b. Route Length of transmission lines
c. Number of Circuits
d. Per Circuit Values:
i. Operating Voltage(s)
ii. Positive phase sequence reactance – ohms/KM
iii. Positive phase sequence resistance – ohms/KM
iv. Positive phase sequence susceptance – ohms/KM
v. Negative phase sequence reactance – ohms/KM
vi. Negative phase sequence resistance – ohms/KM
vii. Negative phase sequence susceptance – mhos/KM
viii. Zero phase sequence reactance – ohms/KM
ix. Zero phase sequence resistance – ohms/KM
x. Zero phase sequence susceptance – mhos/KM
xi. Thermal Rating

19. Transformer Parameters (for all transformers)
    a. Rated MVA
    b. Voltage Ratio
    c. Vector Group
    d. Positive sequence reactance on rated MVA base (Max., Min., & Normal)
    e. Positive sequence resistance on rated MVA base (Max., Min., & Normal)
    f. Zero sequence reactance on rated MVA base
    g. Tap change range (+% to - %) and steps
    h. Details of tap changer
    i. Neutral grounding transformer/Resistor values
    j. Type of Cooling
20. Equipment details:
    a. Circuit Breakers
    b. Isolating switches
    c. Current transformers
    d. Potential transformers
    e. Lightning arresters
21. Relaying and Metering:
    a. Relay protection installed for transformers and feeders along with their settings and level of coordination with others
    b. Transmission Metering details
22. Transmission Lines Right of Way (RoW) and Trace Clearance
23. Details of Communication and SCADA Facilities available.

24. Total System Peak Load to be connected
25. Maximum Capacity of Network (MW, MVar)
26. Health & Safety Policy
27. Environmental Impact Assessment (EIA) for new transmission Lines
28. TUoS agreement with the Generation, Eligible Customer, Distribution or trading licensee
29. Connection agreement with TCN (where applicable)

    Grid Impact assessment from TCN.

