NIGERIAN ELECTRICITY REGULATORY COMMISSION

CONSULTATION PAPER ON THE DEVELOPMENT OF A REGULATORY FRAMEWORK FOR ELECTRICITY DISTRIBUTION FRANCHISING IN NIGERIA

12/04/2019

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1.0 BACKGROUND

The Nigerian Electricity Regulatory Commission ("NERC" or the "Commission") is created by the Electric Power Sector Reform Act (the "EPSRA" or the "Act") to, among other things, license and regulate legal persons engaged in the generation, transmission, system operation, distribution, and trading of electricity. In giving effect to the provisions of section 32, 62, and 67 of the EPSRA, the Commission licensed Eleven (11) Distribution Companies (herein called the "DisCos") to undertake, but not limited, to the following regulated activities:

1. Connection of customers for the purpose of provision of electricity supply;
2. Installation, maintenance and reading of meters, billing and collection; and
3. Wide ranging functions contained in the electricity distribution license terms and conditions issued to the 11 DisCos.

The provision of these services by DisCos on a non-discriminatory basis is a fundamental requirement arising from the natural monopoly they enjoy as distribution network service providers. The sustainability of this traditional regulatory framework is increasingly becoming difficult due to continued technological improvements and advancement in the capabilities of Distributed Energy Resources (DER). Additionally, since the commencement of the power sector reforms in 2005, the DisCos in Nigeria are unable to satisfactorily meet stakeholders' expectations in the provision of access to safe and reliable electricity services to all customers within their franchise territories, especially those areas that are not considered to be economically viable.

Accordingly, introducing sub-franchising of DisCos' operations and coverage areas is expected to improve quality of supply of electricity to customers through investment in metering, billing, collection and network rehabilitation and expansion.

Sub-franchising (referred to as Distribution Franchising for this purpose) means the business model applied by a DisCo to authorise a third party to provide electric distribution utility services on its behalf in a particular area within the DisCo's area of supply. Proposals for the franchising arrangement can either be initiated by DisCos or customer groups (community) within a specified geographical boundary. The community, through a registered association, may formally approach the DisCo to declare its interest and initiate franchising arrangements in the areas of supply, metering, billing and collection including additional investment in the distribution networks where appropriate. Additionally, any unserved or underserved community have the option of exploring the provisions of NERC's Regulation on Independent Electricity Distribution Network (IEDN) in finding solutions to their supply challenges as may be applicable.

1.1 Purpose of this document

This document sets out for consultation, the Commission's proposal to introduce a regulation to guide sub-franchising activities in DisCos' operations and coverage areas in order to take advantage of evolving technologies and adopt new business models in overcoming the challenges inhibiting DisCos from providing access to adequate, safe and reliable services efficiently. In particular, this consultation paper seeks to:

a. Provide industry stakeholders with information about the proposed regulatory framework for Distribution Franchising;
b. Solicit for stakeholders' views and comments on the proposed Framework for Regulating Distribution Franchising;
c. Propose areas of concern in the development of the proposed regulations.

NERC anticipates that submissions from the public will provide information on specific issues relating to Distribution Franchising as well as alternatives to proposals contained in this paper, thereby assisting the Commission in developing a robust regulation on Distribution Franchising in Nigeria.

1.2 Objective of the Distribution Franchising Regulations

The overarching objective of the proposed regulation on distribution franchising is to facilitate the development of favourable business models that would attract third party investments in the supply of adequate, safe, reliable and prudently priced electricity to customers of DisCos. The implementation of the Distribution Franchising is expected to provide the following contributions:

a. **Improved Investments in the Networks;**
   Depending on the terms of the Franchise Agreement, it is expected that this Regulation will stimulate the desired prudent investments in filling the funding and infrastructure gap in the distribution subsector of the NESI.
b. **Bridging of Power Supply Deficit;**
   The current power generation level is significantly lower than the customer load demand in the various DisCos across the country. To bridge this supply deficit, the Franchisee may procure from other sources of power outside the contracted capacity with NBET on a bilateral arrangement through the national grid or from embedded generation sources. In this regard, the Bulk Power Procurement Regulation and Embedded Generation Regulation shall be applicable as appropriate.
c. **Improved Customer Satisfaction;**
   It is expected that there will be improved customer satisfaction in terms of availability, quality of electricity supply and customer services.

d. Technological Improvements;

Facilitate adoption of advanced technologies in the design and operations of modern grid systems that can offer cheaper and flexible alternatives to customers.

e. Better Service:

To avail opportunities for underserved customer groups desirous of better services by prompting the Distribution Company to engage Franchisee(s) for the provision of the desired services in the respective area(s).

2.0 LEGAL FRAMEWORK

The Nigerian Electricity Regulatory Commission (NERC) is established by the Electric Power Sector Reform Act with a clear mandate as the technical and economic regulator of the Nigerian Electricity Supply Industry ("NESI"). It's principal objects, amongst others, include:

a. To create, promote and preserve efficient industry and market structures and to ensure optimal utilization of resources for the provision of electricity services;
b. To undertake such activities which are necessary or convenient for the better carrying out of or giving effect to the objects of the Commission.

Section 96(1) empowers the Commission to make regulations on matters which, in its opinion, are necessary or convenient to be prescribed for carrying out or giving effect to the EPSR Act. Consequently, it is the Commission's opinion that the proposal set out in this Consultation Paper will assist in addressing some of the current challenges facing the industry especially at the distribution subsector.

3.0 THE CONCEPT OF ELECTRICITY DISTRIBUTION FRANCHISE

Under the electricity distribution franchise arrangement, specific roles for a demarcated area/function within the total licensed coverage of distribution can be franchised out by the DisCo to a third party. The main elements of a typical Franchising arrangement may include:

a. The DisCo supplying electricity to the Franchisee metered at some injection point at a pre-determined price as per the Franchise Agreement;
b. The Franchisee will supply electricity to consumers of the DisCo in the allocated area (a part of the total area of supply of the DisCo) as per the tariffs approved by the Commission;

c. Depending on the franchising model chosen, the Franchisee may manage Metering, Billing and Collection (MBC) activities or the entire electricity distribution system in the allocated area which may include the maintenance, upgrade and strengthening of the distribution system as per the terms and conditions of the franchise agreement;
d. The Franchisee shall pay in full the cost of bulk energy to the DisCo in line with the terms and conditions of the Franchise Agreement. The Franchisee shall retain a portion of the revenue collection from consumers after deducting amount payable/paid to the DisCo as per conditions defined therein;
e. The Franchisee will operate under the overall guidance of the DisCo's License and the Disco remains responsible to the Regulator for compliance with its licensing terms and conditions;
f. The Franchisee may also procure additional generation from bilateral sources (outside capacities contracted with NBET) through the transmission grid and/or from embedded generation through distribution network to supplement the existing supply but procured in compliance with existing regulations of the Commission;
g. In the event that the Franchisee has surplus power, arrangement could be made for the sale of such surplus power to the existing distribution network as embedded generator to supply neighbouring areas or can be exported to other off-takers outside the resident DisCo through the transmission grid.

3.1 Applicable Tariffs

NERC approved MYTO Tariffs shall be applicable to areas covered by the Distribution Franchisee. However, where Distribution Franchisee makes investments to provide additional power at a premium cost outside the provisions of the MYTO to cover the supply shortfall, it may attract "Surcharge" subject to the Commission's approval in line with relevant rules and regulations.

3.2 Contract Structure

The Electricity Distribution Franchise arrangement shall be governed primarily by the Agreement reached between both parties but in full compliance with the requirements of the proposed regulation. The Franchise Agreement shall, at a minimum, provide for the following:

(i) Performance delivery/Performance Parameters;
(ii) Asset register;
(iii) Ownership of Assets: The ownership of all distribution networks shall remain with the Distribution Licensee. However, generation assets provided to meet supply shortages can remain with the Franchisee;
(iv) Investment plan;

(v) Frequency and mode of payment;
(vi) Payment guarantees, where applicable;
(vii) Default events and conditions for termination;
(viii) Other parameters include but not limited to the following: Contract Period; Baseline Data; Energy Procurement; Treatment of existing contracts (e.g. MAP) etc.

3.3 Proposed Key Franchisee Models

Franchising may be structured along the under-listed proposed models depending on the allocation of responsibilities, risk sharing, the payment structure and securitisation as defined in the franchise agreement:

a. **Metering, Billing and Collection (MBC);**
The distribution function of metering, billing and collection may be outsourced to a third party based on the franchising model. A typical configuration may be to franchise the metering, billing and collection of a 33kV or 11kV feeder or a cluster of feeders to a third party for the supply of electricity to rural, semi-urban or urban areas. The diagrams on Figures 2, 3, 5 & 6 can be applicable as the case may be (please refer to Appendices).

b. **Total Management of Electricity Distribution Function;**
Under this arrangement, the Franchisee is responsible for maintaining the electricity distribution system (comprising HT/LT lines, meters, distribution transformers, breakers, and in addition to MBC function). The Franchisee undertakes the rehabilitation and upgrading of the distribution system, as required, by investing its own funds and recover through a Project Agreement with the Distribution Licensee.

c. **Distributed Generation (DG) based Electricity Distribution Franchisee;**
In addition to the functions mentioned above, the Franchisee may undertake to procure more energy either through bilateral arrangements over the transmission network (TCN grid) or embedded at local distribution networks level to meet the electricity deficit (or peak demand deficit) of customers within the franchise area.

4.0 KEY ROLES AND RESPONSIBILITIES

Under the Distribution Franchising Framework, the Commission proposes to undertake the following:

1. Ensure that a transparent process is adopted in the procurement processes;
2. Approve the Franchise Agreements and Franchise Proposals submitted by the DisCos;
3. Provide regulatory certainty for cost recovery to all parties involved in the transactions;
4. Develop the Regulatory Framework and supporting Instruments (such as Procurement Guidelines, Model Franchise Agreements etc.).
5. Ensure that the network Operators do not use the scheme to abandon their performance contracts;
6. Develop and implement an effective stakeholder enlightenment drive.

4.1 Proposed Obligations of the Distribution Company (DisCo)

a. **Prior to initiation of a Franchise transaction, a DisCo needs to initiate the following steps:**
    i. Conduct of a needs assessment of its franchise areas including baseline data relating to the franchising model under consideration;
    ii. Develop minimum qualification criteria and evaluation criteria for participation in the competitive bids;
    iii. Bid documents preparation and procurement process management.

b. **Clear Terms of Reference (ToR) for franchise arrangement to include among others:**
    i. Key performance indicators such as distribution loss, collection efficiency, etc as applicable;
    ii. Electrical separation of designated area of supply under consideration;
    iii. Composition of load and consumer profile;
    iv. Nature, composition and quality of infrastructure assets;
    v. Ease of establishing and access to baseline data.

c. **DisCos shall invite bids for the franchising model on the basis of Bid Documents. The Bid Documents related to designated area of supply will provide all the information in respect of the area, inter-alia:**
    i. Evaluation criteria;
    ii. Geographical area;
    iii. Description of the existing electricity distribution system (length of HT/LT lines in circuit kilometres, number of distribution transformers, number of poles, substations, etc.), schematic diagram and other related drawings;

iv. Load data, load profile, load duration curve, annual energy input, consumer categories and classification;
v. Metering status, billing history, distribution loss, and collection efficiency.

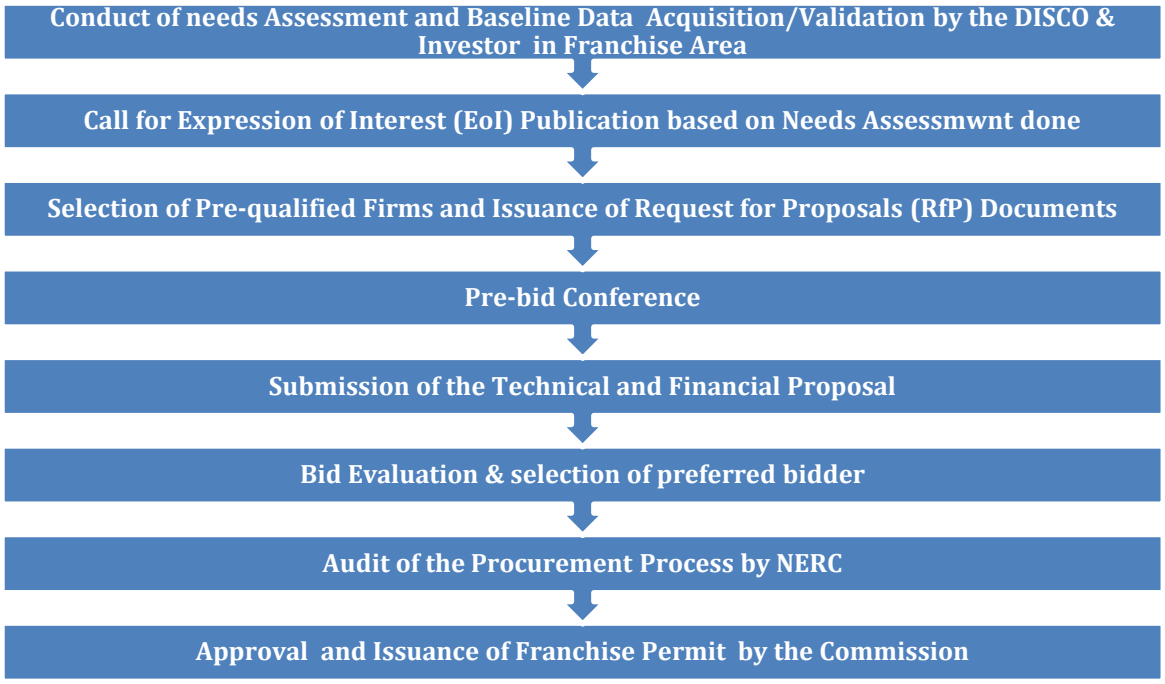
4.2 Proposed Obligations of Distribution Franchisee (DF)

The following obligations may be applicable depending on the Distribution Franchise Model chosen:

a. Validation of data related to the identified franchise area or feeder to ensure accurate information is provided by the DisCo prior to the commencement of the procurement;
b. To provide acceptable guarantee for payments of energy supplied by the DisCo;
c. To supply electricity to consumers of the DisCo within the allocated area of service;
d. To operate and maintain electricity distribution infrastructures in line with the Franchisee Agreement;
e. To invest and upgrade distribution infrastructure;
f. To provide additional power to cover supply shortfall through the national grid or embedded generation;
g. To meter all customers within the franchise area and maintain or replace defective meters by engaging the services of NERC approved Meter Asset Provider (MAP);
h. Manage metering, billing and collection functions in the designated area;
i. To promote efficient use of electricity by customers through customer education programmes;
j. Ensure compliance with technical and health & safety standards.
k. Improve customer care and satisfaction.

5.0 COMPETITIVE PROCUREMENT FOR SELECTION OF DISTRIBUTION FRANCHISEES

It is proposed that DisCos wishing to engage third parties as distribution franchisees shall do so through a competitive procurement process in the following stages:



6.0 DELINEATION OF TECHNICAL BOUNDARIES (TB) OF DISTRIBUTION FRANCHISE AREAS AND PROVISION OF SUPPLEMENTARY ELECTRIC POWER

The first step in the process of appointment of franchisees is selection of the area to be franchised. A careful and thorough research is required before determining the area to be franchised. In this consultation paper, we propose six (6) possible delineations of technical boundaries (TB) of Distribution Franchise Areas as follows:

a. **TB1:** Multiple 33kV Distribution Feeders with the Input at 132/33kV Transmission/Distribution Interface to supply customers at 33/0.400kV or 11/0.400kV with the possibility of injection of additional power from Embedded Generators connected at 33kV and or 11kV Busses on Island or Synchronized operation Modes. This is mostly applicable in the Urban Areas. Please refer to the diagram – TB Option1;

b. **TB2:** A Single 33kV Distribution Feeder with the Input at 132/33kV Transmission/Distribution Interface to supply customers at 33/0.400kV or 11/0.400kV with possibility of injection of additional power from Embedded Generators connected at 33kV and or 11kV Busses on Island or Synchronized

Operation Modes. This is mostly applicable in the Urban Areas. Please refer to the diagram – TB Option2;

c. **TB3:** A Single 33kV Distribution Feeder with Input at 33/0.400kV Transmission/Distribution Interface to supply customers directly on 33/0.400kV with possibility of additional power from Embedded Generators at 33kV Bus on Island or synchronized Operation Modes. This Model applies mostly to Rural Areas with a few in Urban Areas. Please refer to the diagram – TB Option 3;

d. **TB4:** Multiple 11kV Distribution Feeders with Input at 11/0.400kV distribution interface to supply customers at 11/0.400kV with possibility of injection of additional power from Embedded Generators connected at 11kV Bus on Island or Synchronized Operation Modes. This Model applies mostly to delineated areas such as big Markets, Universities, Schools, and Hospitals etc. within the Urban Areas with a few in Rural Areas. Please refer to the diagram – TB Option4;

e. **TB5:** A Single 11kV Distribution Feeder with multiple distribution transformers (DTs) with Input at 11/0.400kV distribution Bus Interface to supply customers at 11/0.400kV with possibility of injection of additional power from Embedded Generators connected at 11kV Bus on Island or Synchronized Operation Modes. This Model applies mostly to delineated areas such as Markets, schools, Hospitals etc. within the Urban Areas with a few in Rural Areas. Please refer to the diagram – TB Option5;

f. **TB6:** A Single 11kV Distribution Feeder with a single distribution transformer (DT) with Input at 11/0.400kV distribution Bus Interface to supply customers at 11/0.400kV with possibility of injection of additional power from at the Primary Side of the 11kV Distribution Transformer on Island or Synchronized Operation Modes. This Model applies mostly to delineated areas such as Markets, schools, Hospitals etc. within the Urban Areas with a few in Rural Areas. Please refer to the diagram – TB Option6.

7.0 CONCLUSION AND STAKEHOLDERS' INPUT

7.1 Conclusion

A carefully thought out and well implemented Distribution Franchise Model is expected to result in a "*Win-Win*" situation for the DisCo, the Franchisee and the Customers.

The Franchisee is required to have electrical distribution management expertise and the capacity to invest resources into the upgrade and expansion of the distribution system as required. The Franchisee may implement the MAP Regulations, reduce ATC&C losses and carry out other services ordinarily carried out by DisCos within the

franchised area to achieve targeted performance improvements in accordance with the Franchise Agreement between the parties.

The franchising framework as envisaged by the Commission shall not involve the issuance of a license to Franchisees. The Franchisee shall operate under the DisCo's electricity distribution license and the responsibility for compliance with the licensing terms and conditions remains with the licensee.

7.2 Stakeholders' Input to the Proposed Consultation Paper

Stakeholders' Input 1

Stakeholders are invited to freely comment on the Franchising proposal presented in this Consultation Paper.

Stakeholders' Input 2

Stakeholders are invited to contribute other concerns that may be considered by the Commission in the development of this framework including response to the following questions:

a. Is the Commission's proposal on Distribution Franchising expedient to address funding and infrastructure gap in the DisCos?
b. If no, what other alternative proposals can be adopted by NERC to bridge the funding and infrastructure gaps in the Discos in order to improve supply services to customers?
c. Is there a justification for Franchised areas to charge a different tariff from other areas directly served by the Disco?
d. Should customers have a choice/say on a Disco's proposal to engage the services of a Franchise operator to serve their area?
e. Should a Disco demand for compensation on invested assets from a community-based Franchise operator?
f. What type of assets/investment should be considered for the compensation, if any?
g. What can be removed or added from the role of NERC in the implementation of Distribution Franchising?
h. Should competitive procurement be made compulsory in all circumstances (Community or Disco based) of franchising proposals?
i. Is competitive procurement necessary where the franchisee will continue to charge existing Disco Tariffs without requesting for an upward review or a surcharge?
j. To what extent can this process be triggered by other parties (e.g. customers, prospective investors) and its implication on the role of the Commission?
k. Should the regulation prescribe thresholds for minimum and or maximum size/area (capacity, number of customers, geographical area etc.) that can be franchised?
l. Should the Regulation determine minimum and or maximum period for the Franchise Agreement?

m. Is it necessary for NERC to develop a template Franchise Agreement or parties should be freely allowed to customize their Franchise Agreements to meet their peculiarities?

8.0 INVITATION TO COMMENT

The Commission invites public comments in the matters discussed in this paper which will form part of the Commission's public consultation process for regulatory rule-making in accordance with the EPSRA and the NERC Business Rules.

Members of the public are hereby invited to respond to the issues raised, or comment on any other relevant issue by submitting a written memorandum to the Commission at the following address:

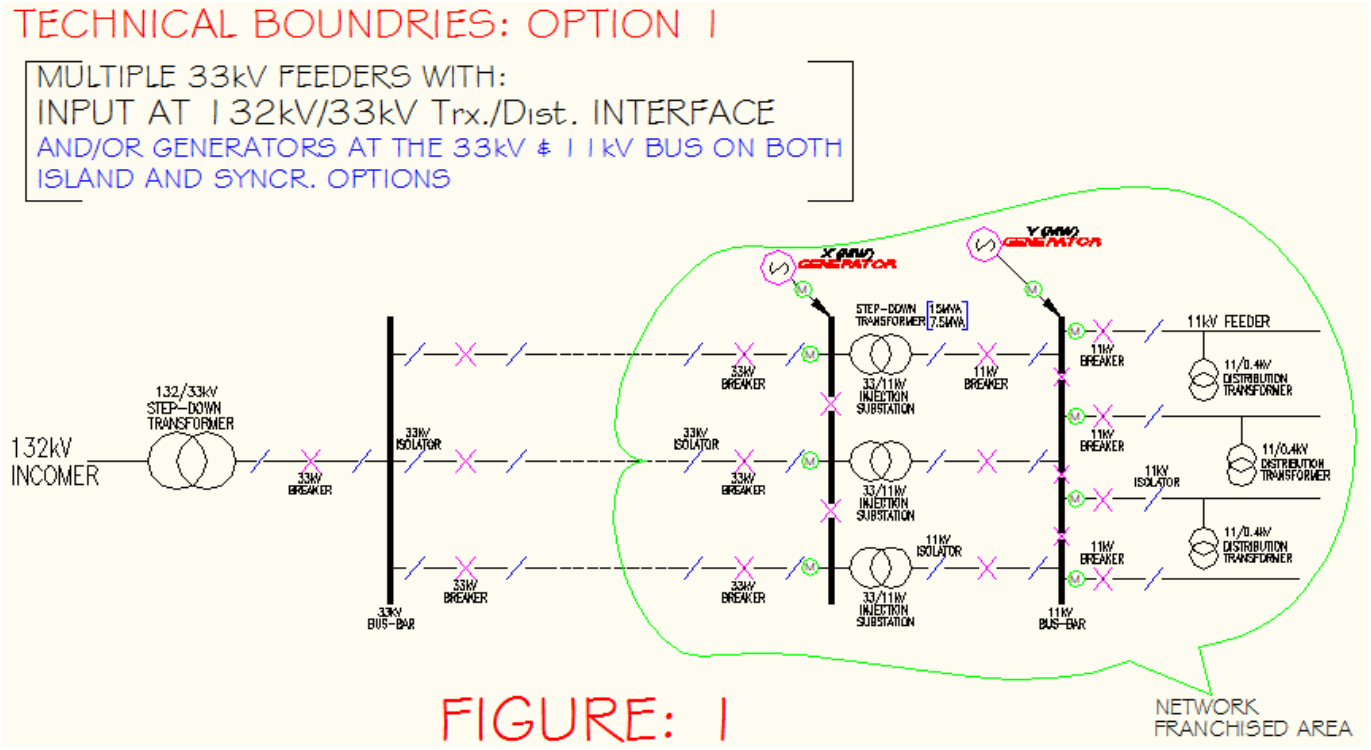
The Nigerian Electricity Regulatory Commission
Plot 1387 Cadastral Zone A00
Central Business District
Abuja.

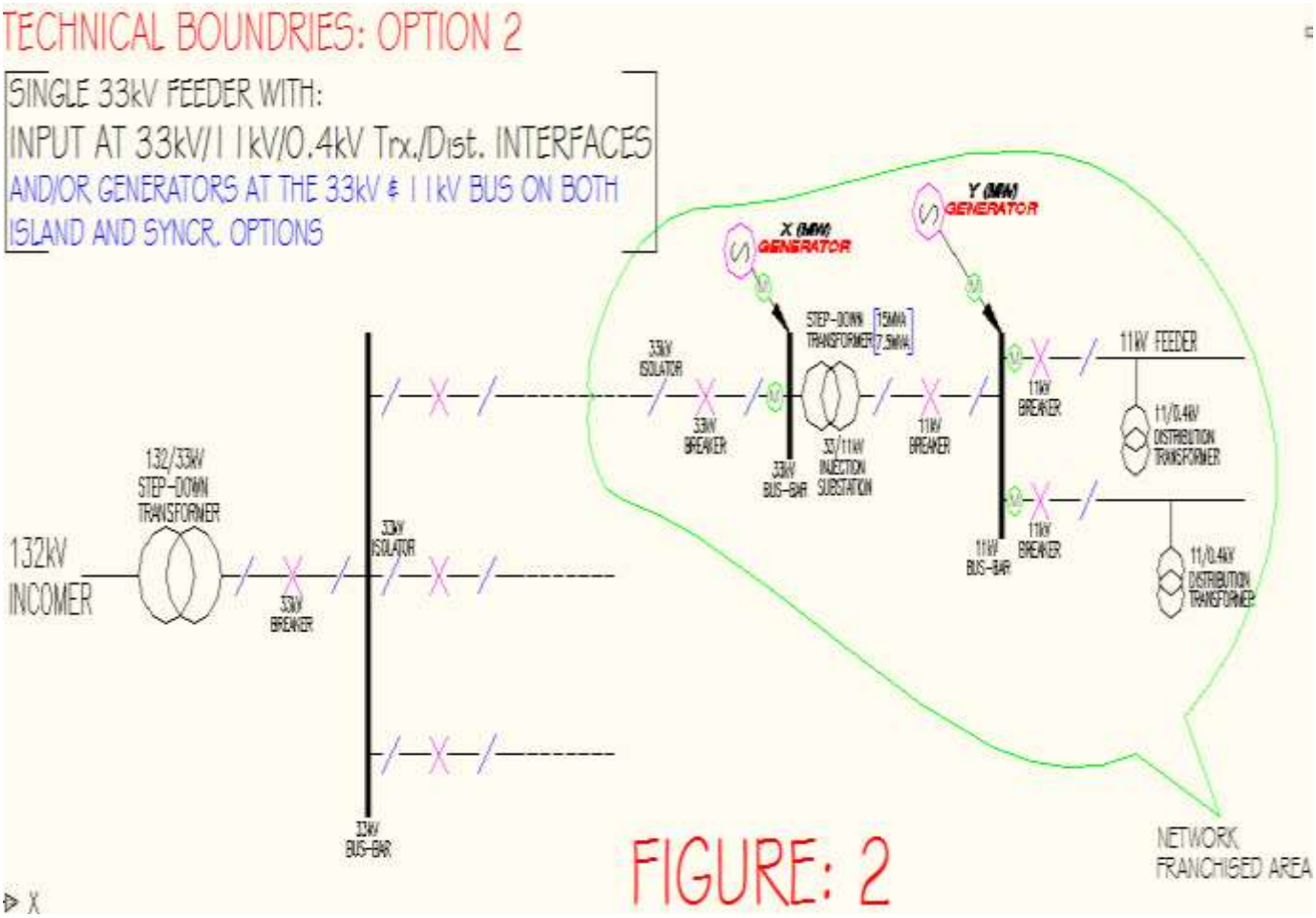
Comments on this Consultation should be submitted to distribution.franchising@nerc.gov.ng no later than May 6, 2019.

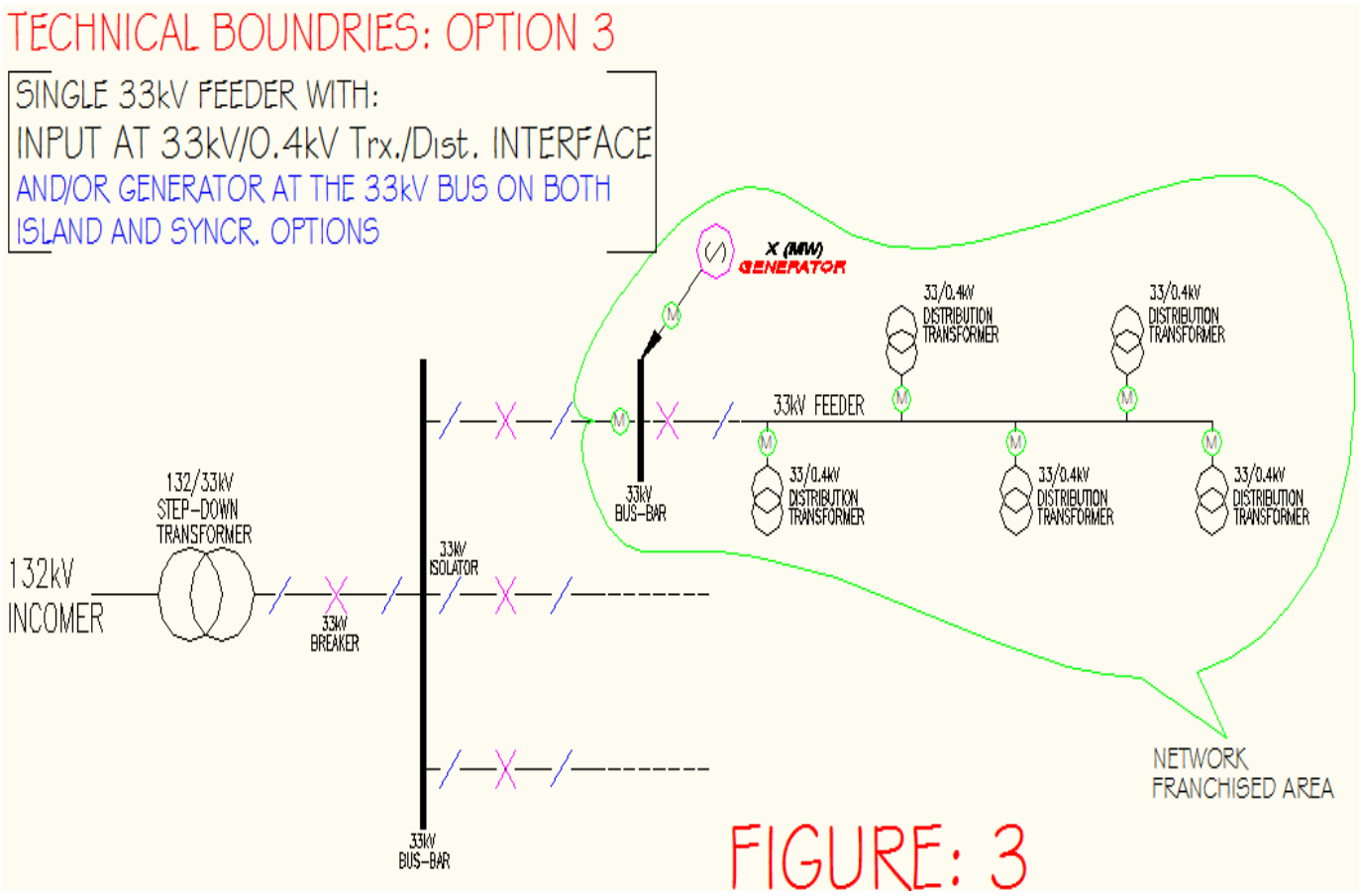
Unless clearly marked to the contrary, the Commission will assume that comments received are not confidential, and that respondents' consent to our quoting from or referring to their comments, in whole or in part, and attributing the comments to them. Requests for confidentiality or anonymity will be respected to the extent permitted by the Freedom of Information (FoI) Act.

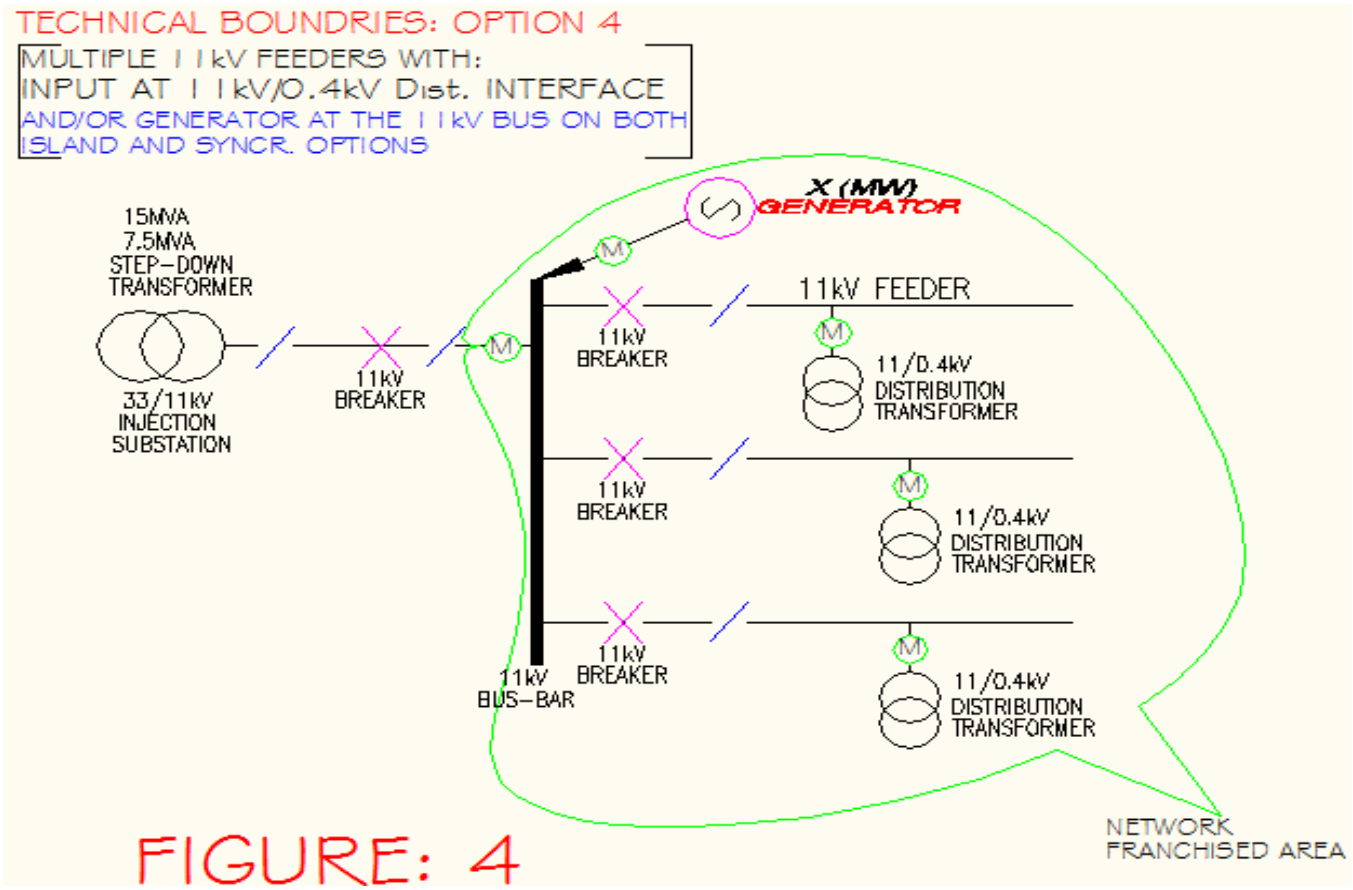
APPENDICES

(TECHNICAL BOUNDARY OPTIONS)






TECHNICAL BOUNDRIES: OPTION 3
SINGLE 33kV FEEDER WITH:
INPUT AT 33kV/0.4kV Trx./Dist. INTERFACE
AND/OR GENERATOR AT THE 33kV BUS ON BOTH
ISLAND AND SYNCR. OPTIONS
X (MW) GENERATOR
33/0.4kV DISTRIBUTION TRANSFORMER
33/0.4kV DISTRIBUTION TRANSFORMER
33kV FEEDER
33/0.4kV DISTRIBUTION TRANSFORMER
33/0.4kV DISTRIBUTION TRANSFORMER
33/0.4kV DISTRIBUTION TRANSFORMER
33kV BUS-BAR
132/33kV STEP-DOWN TRANSFORMER
132kV INCOMER
33kV BREAKER
33kV ISOLATOR
33kV BUS-BAR
NETWORK FRANCHISED AREA
FIGURE: 3


TECHNICAL BOUNDRIES: OPTION 4
MULTIPLE 11kV FEEDERS WITH:
INPUT AT 11kV/0.4kV Dist. INTERFACE
AND/OR GENERATOR AT THE 11kV BUS ON BOTH
ISLAND AND SYNCR. OPTIONS
X (MW) GENERATOR
15MVA 7.5MVA STEP-DOWN TRANSFORMER
33/11kV INJECTION SUBSTATION
11kV BREAKER
11kV FEEDER
11kV BREAKER
11/0.4kV DISTRIBUTION TRANSFORMER
11kV BREAKER
11/0.4kV DISTRIBUTION TRANSFORMER
11kV BUS-BAR
11kV BREAKER
11/0.4kV DISTRIBUTION TRANSFORMER
NETWORK FRANCHISED AREA
FIGURE: 4

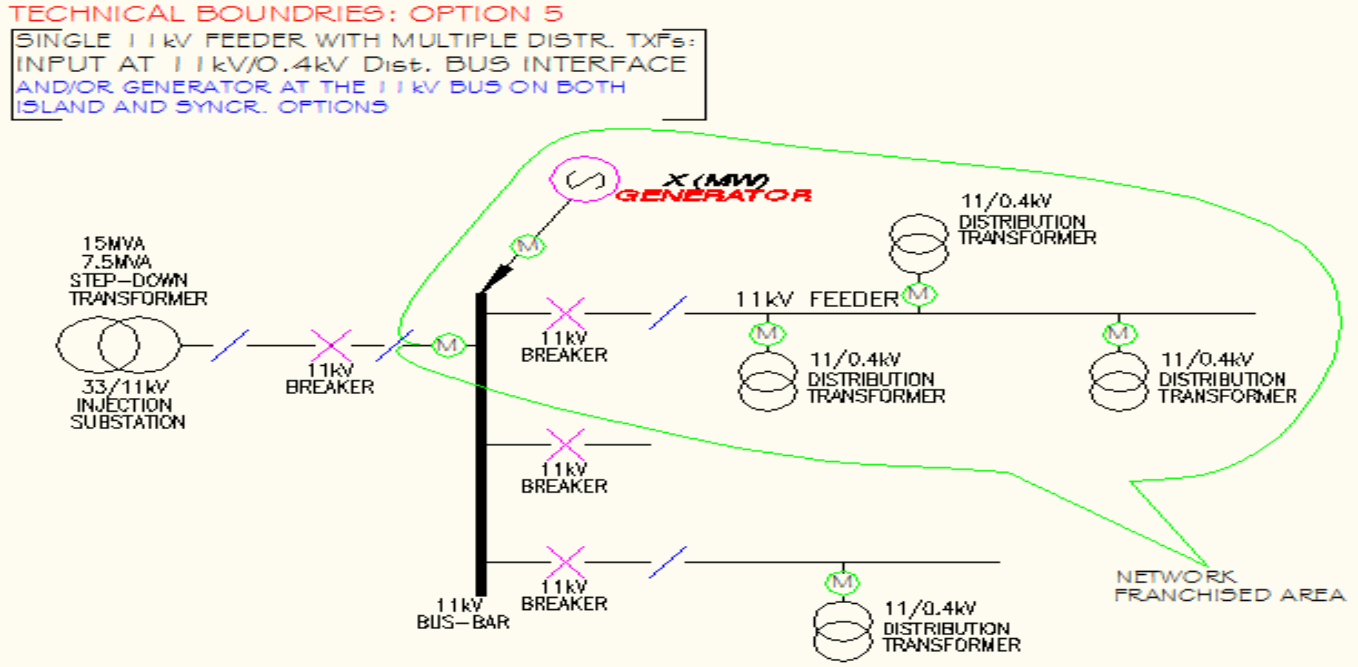


FIGURE: 5

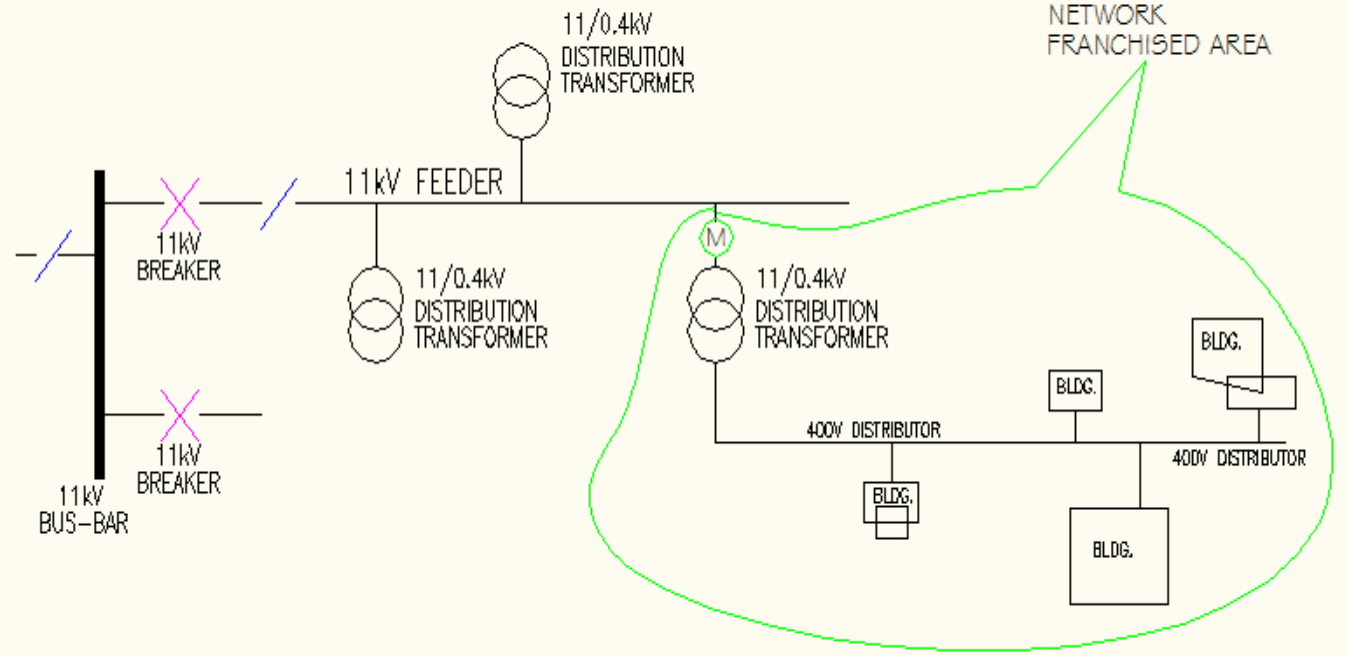


FIGURE: 6