NIGERIAN ELECTRICITY REGULATORY COMMISSION

CONSULTATION PAPER ON THE REVIEW OF METER ASSET PROVIDER (MAP) REGULATIONS 2018

FEBRUARY, 2021

1. Introduction

Metering of end-use electricity consumption is critical to achieving financial viability of the Nigerian Electricity Supply Industry ("NESI") due to its dual benefits of improving customers' satisfaction and enhancement of revenue recovery by electricity distribution companies ("DisCos"). Besides providing a transparent and accurate measurement for energy consumed by customer, it also ensures energy accounting and revenue protection for the DisCos. It further affords the customer adequate information to control and manage their consumption thereby engendering satisfaction and confidence.

The cost of providing meters to customers should ordinarily be included in end-use electricity tariffs as an investment in infrastructure and hence part of the rate base for computation of revenue requirement. However, the prevailing absence of cost-reflective tariffs, a contributory factor to the impairment of DisCos' balance sheets, adversely impacts on the capacity of DisCos to raise the necessary financing to support critical investments including but not limited to the metering of customers.

As a regulatory initiative to fast track the closure of the metering gap, the Commission issued the Meter Asset Provider ("MAP") Regulations in March 2018 with the objective of eliminating estimated billing practices, attracting private investment in the provision of metering services, enhancing revenue assurance in NESI and promoting local meter manufacturing in Nigeria. In order to ensure transparency in the meter roll-out as provided for in the MAP regulations, deployment of meters could not commence until August 2019 following the conclusion of competitive procurement by DisCos which was monitored by the Commission. A total of 611,231 meters have been deployed as at 31st January, 2021 under the MAP initiative since its full operation despite the COVID –19 pandemic and other extraneous factors. The challenge of closing the metering gap in NESI still persists as more than half of the registered electricity customers remain unmetered.

The existence of a huge metering gap and the need to ensure successful implementation of the MYTO 2020 Service-Based Tariff resulted in the approval of the **National Mass Metering Programme ("NMMP"), a** policy of the Federal Government anchored on the provision of long-term low interest financing to the DisCos. The main objectives of the NMMP are to increase the meter deployment rate, promote local meter manufacturing, create jobs in the local meter value chain, reduce collection losses and enhance NESI's financial viability. The NMMP is planned to be implemented in three (3) phases as hereunder:

Phase 0:

The Central bank of Nigeria ("CBN") shall provide funding to the DisCos to procure 1million meters from the existing stock available from MAPs at the regulated cost already established via the competitive procurement under MAP initiative. All meters to be procured by the MAPs outside their inventory must be from a local meter manufacturer/assembler. This is expected to be implemented over a period of 3-6months.

Phase 1:

The CBN shall provide financing to the DisCos for the procurement of between 3 - 4 million meters through a competitive procurement process among local meter manufacturers/assemblers. The outcome of the procurement process shall provide a benchmark price for single and three phase meters respectively. Contract volumes shall be apportioned to local meter manufacturers in proportion to verified manufacturing capacity.

Phase 2:

The World Bank shall provide financing to DisCos for the procurement of meters to close any remaining metering gap in NESI.

2. **Purpose:**

The purpose of this Consultation Paper is to review the various options to fast track the closure of the metering gap within the implementation framework of the MAP Regulations and the NMMP and consider the merits and demerits of each option.

This Consultation Paper is structured into two broad areas:

a. **Proposed options for metering implementation going forward:**

   i. To allow the implementation of both the NMMP and MAP metering frameworks to run concurrently;

   ii. To continue with the current MAP framework with meters procured under the NMMP supplied only through MAPs (by being off-takers from the local manufacturers/assemblers); and

   iii. To wind down the MAP framework and allow the DisCos to procure meters directly from local manufacturers/assemblers (or as procured by the WB), and enter into new contracts for the installation and maintenance of such meters.

   Under all three options, the DisCos shall continue to be accountable for metering as this remains a core responsibility of utilities and a contractual obligation in their Performance Agreements with the Bureau for Public Enterprises ("BPE").

b. **Draft amendments to relevant clauses/sections of the MAP Regulations 2018** necessary to give effect to each of the identified options above.

The Commission will take into consideration responses to this document and other points or issues that may be raised by stakeholders in reaching a final decision on amendments to be made to the MAP Regulations 2018.

3. Legal Authority

The Nigerian Electricity Regulatory Commission ("NERC" or the "Commission") is an independent regulatory Commission established by the Electric Power Sector Reform Act 2004 ("EPSRA") whose principal functions 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 ensure that prices charged by licensees are fair to consumers and are sufficient to allow the licensees to finance their activities and to allow for reasonable earnings for efficient operations.
c. To ensure that regulation is fair and balanced for licensees, consumers, investors, and other stakeholders.

In exercise of the powers conferred on the Commission by section 96 of EPSRA and all other enabling powers; the Commission issues this Consultation Paper to seek stakeholders' input in the proposed amendment to the MAP Regulations 2018.

4. Proposed options for integrating NMMP and the MAP framework

This Consultation Paper recognises the implementation challenges and possible areas of conflict between the current MAP Regulations and NMMP and seeks to:

(i) identify options of implementing the subsisting MAP framework and the FGN's NMMP intervention to achieve this goal.

4.1 Option 1: To allow the implementation of both the NMMP and MAP frameworks to run concurrently.

This option envisages a comprehensive metering program that takes advantage of both MAP and NMMP frameworks in fast-tracking meter roll-out. It recognises the

MAP framework on a robust regulatory framework with significant level of success in meter roll out, though adversely impacted by extraneous factors. Under this option, therefore, the proposal is to leverage on the structure of the NMMP to mitigate the identified challenges of MAP while preserving the core function of the MAPs.

Under the concurrent framework all customers are expected to pay their bills without any specific reference to metering charge. The metering component shall be embedded in the energy charge. The payment framework under the MAP-NMMP concurrent implementation option shall require all customers on the same tariff classification in a DisCo to pay a uniform energy tariff that includes a metering cost that would enable DisCos recover the cost of meter and other associated expenses for the repayment of the NMMP facility and the services provided by MAP. The repayment of the NMMP facility would be a second line charge against DisCos' monthly collections in accordance with the term sheet for the financing. This option recognises the continued role of MAPs and the DisCos while strengthening the securitisation of payment to MAPs through a third line charge against the DisCos' monthly revenues. This option maintains all other provisions of the Meter Service Agreement ("MSA") except where both parties choose to make amendments to the agreements. The MAPs are thus required to make arrangements for the procurement, financing, delivery and installation of meters in line with approved deployment plans and the MSA.

Customers who choose not to wait to receive meters based on the deployment schedule of the NMMP shall continue to have the option of making upfront payments for meters which will be installed within a maximum period of ten working days. Such customers shall be refunded by the DisCos through energy credits. However, it is imperative to note that this option is an exception as all MAPs are required to deploy meters in accordance with the agreed meter roll out plan and consistent with the MAP framework. There shall be no option for meter acquisition through the payment of a monthly meter service charge.

In the determination of rates payable by customers, the Commission shall take into account the blend of "cost of debt" on account of the concessionary financing to DisCos under the NMMP. The adjustment will include a blend of NMMP meters with a 9% cost of capital and MAP meters with a different cost of capital. It is proposed that the meter assets paid upfront by customers under the current structure of the MAP regulation be recognised in the rate base of DisCos and the cost is refunded to the customer through energy credits. Customers will be compensated through one-off energy credits equivalent to the value of the meter. Where meters have already been deployed under the meter service charge (MSC) option, DisCos shall make one-off repayment to affected customers and associated MAPs. Such meters shall be recognised in the rate base of the DisCos.

The meters procured by a DisCo under the NMMP scheme shall be deployed by approved meter service providers (MSPs) or through MAPs based on new contractual arrangements.

4.1.1 Merits of concurrent implementation of the MAP and NMMP frameworks:

a. Preservation of the MAP framework which has started yielding results – a total of 611,231 meters have so far been installed under the MAP framework despite the extraneous challenges to its implementation;
b. The MAP framework is further strengthened by the securitisation of payment obligation of DisCos;
c. Amendments to the MAP Regulations are minimal thereby preserving regulatory certainty;
d. Provides broader financing options from both schemes rather than relying solely on the CBN funded NMMP;
e. The concurrent implementation option enables faster closure of the metering gap with the two streams complementing the meter roll out;
f. There is clarity in the tariff structure with customers metered under the MAP framework receiving refunds through energy credits;
g. Clear payment structure for MAPs through a third line charge against DisCos' collections including repayment of meters installed under the framework of a monthly meter service charge;
h. A concurrent implementation of the MAP and NMMP framework is likely to create more jobs especially in the area of meter assembly and installations.

4.12 Demerits of the concurrent implementation of the MAP and NMMP frameworks:

a. The option requires a robust securitisation framework in the form of a third line charge against DisCos' collections, making it difficult for some DisCos with very high collection losses;

b. The regulatory asset base (RAB) shall recognise the quantity of meters installed by the DisCo.

4.2. Option 2: To continue with the current MAP framework and allow meters procured under the NMMP be supplied only through MAPs (as off-takers from the local manufacturers/assemblers)

This option recognises the involvement of MAPs under Phase 0 of the NMMP and propose that this arrangement be replicated over Phases 1 and 2 of the NMMP with the only difference from Phase 0 arrangement being a competitive procurement of meters from local manufacturers/assemblers under Phase 1 and the procurement of meters by the World Bank under Phase 2. This option leverages on the smooth implementation of Phase 0 whereby the NMMP is complimentary to the MAP framework. Under the framework of the NMMP, direct financing is provided by the CBN to DisCos for the phased roll-out of meters with Phase 0 of the NMMP taking into account the meter inventory of the MAPs with additional quantities sourced from local meter manufacturers.

Based on the lessons learnt from Phase 0 implementation structure, it is proposed that phase 1 of the FGN metering intervention should be implemented through the existing MAP framework but without customers paying the MAP and/or DisCo directly for meters. Under phase 1 of the NMMP, it is planned that there shall be a competitive procurement process to determine local manufacturers with the technical capacity to meet up with the quality and specifications of the DisCos while establishing an optimised benchmark cost of the single and three phase meters. There shall be changes to the Meter Service Agreements (MSA) to reflect the new price of meters emerging from the outcome of the procurement process and a margin to cover the cost of finance, installation and maintenance. The MAPs appointed by

DisCos shall thereafter enter a meter supply and purchase agreement with local meter manufacturers for fully built meters.

The MAPs shall finance, procure, install and maintain the meters in line with their MSAs with DisCos and approved deployment plans. DisCos shall make payment to the MAPs from the funding provided by CBN under the NMMP. MAPs shall supply DisCos at the benchmark price plus a reasonable margin.

The entire funding of this Phase 1 process shall be through the CBN financing of the NMMP provided to DisCos as debt capital. The meters supplied and installed under this option shall be recognised as part of the DisCos Regulated Asset Base and this shall form the basis for cost recovery through rates paid by customers.

It is expected that Option 2 recognises the existing MAP framework and may also result in faster deployment of meters on account of current traction in the MAP program.

4.2.1 Merits of supplying NMMP meters through existing MAPs only:

a. The option ensures the preservation of the MAP framework which has started yielding results;

b. The bankability of MAPs would be enhanced due to reduced exposure to payment default;

c. Amendments to the MAP Regulations are minimal thereby preserving regulatory certainty;

d. There is clarity in the tariff structure with customers metered under the MAP framework receiving refunds through energy credits;

e. Clearer repayment structure for MAPs through the NMMP facility rather than relying on DisCos' monthly collections.

f. The potential reduction in the cost of meters due to the competitive procurement from local manufacturers/assemblers will result in lower tariff for consumers.

g. It minimises foreign exchange fluctuations risk from the price of meters. The CBN funding can ensure bulk purchase/import of foreign components with clear re-order level thereby ensuring minimal forex risk.

4.2.2 Demerits of supplying NMMP meters only through existing MAPs:

a. The option of channelling NMMP meters only through existing MAPs instead of allowing side-by-side implementation would limit available windows for financing meter deployment;
b. The option could result in slower closure of the metering gap and possibly fewer job opportunities in comparison with the option for concurrent implementation of the two schemes;
c. Relying solely on this route removes the protection of having an alternative strategy; and
d. The complexity of computing meter cost breakdown to ensure a fair return to manufacturers and MAPs could delay contract finalisation and meter deployment.
e. It would necessitate a review of the CBN funding framework for the NMMP as the framework does not envisage any role for the MAPs under Phase 1 & 2.

4.3. Option 3: To wind down the MAP framework and allow the DisCos to procure their meters directly from local manufacturers/assemblers (or as procured by the WB), and enter into new contracts for the installation and maintenance of such meters.

This option proposes the winding down of the MAP's role as envisaged by the MAP Regulations due to its incompatibility with the NMMP. It brings to fore the continued viability of MAPs as envisaged under the MAP Regulations, considering the significant role of NMMP meter suppliers/manufacturers in Phases 1 and 2 and the possible apathy of consumers providing financing for meter acquisition.

The completion of Phase 0 of the NMMP in which all the meter inventory of MAPs is procured by DisCos would mark the transition to phases 1 and 2 of the roll out whereby the meter assets shall be procured through competitive bids from local manufacturers and international bids respectively. This arrangement provides that MAPs who are not also local manufacturers are excluded from direct participation under the Phase 1 procurement process.

4.3.1 Merits of winding down the MAP scheme and holding the DisCos wholly accountable for metering:

a. There shall be no more excuses for non-performance in metering by DisCos because:
   (i) Long term low interest funds are being provided to the DisCos including a moratorium period of two (2) years;
   (ii) DisCos can no longer blame MAPs as reason for failure to meet their approved meter roll out plans;
b. The administration of one metering scheme in NESI is less challenging.

4.3.2 Demerits of winding down the MAPs role and holding the DisCos wholly responsible for metering:

a. Disengagement of workforce and MAP structures could increase unemployment, disrupt businesses and result in avoidable revenue losses in the industry;
b. Cancellation of the MAP framework would limit the available platforms for financing meter deployment;
c. The option could result in slower closure of the metering gap;
d. A reliance solely on the NMMP removes the protection of having an alternative meter roll out strategy, in the event of a policy shift;
e. The potential of benefitting from the impact of MAPs that have performed very well may be lost with a premature termination of the MAP framework.

5.0 Key Consultation Questions

On the basis of the above analysis of the various options for restructuring the framework for metering in the NESI, the Commission hereby presents the following issues for consultation and seeks response from the general public:

5.1 Questions regarding NMMP & MAP frameworks running concurrently:

5.1.1. Should the NMMP and MAP frameworks run concurrently?

5.1.2. Provide reasons for your response to 5.1.1 above.

5.1.3. Do you agree with the modalities being proposed in this consultation paper? If NO, please suggest possible reviews or provide other ways of achieving the same goal.

5.2 Questions on NMMP meters to be supplied through MAPs acting as off-takers from meter manufacturers/assemblers:

5.2.1. Should NMMP meters be supplied only through MAPs rather than directly to DisCos by winning bidders as contemplated in the CBN's NMMP financing framework?

5.2.2. Provide reasons for your response to 5.2.1 above.

5.2.3. Do you agree with the modalities being proposed in this consultation paper? If NO, please suggest possible reviews or provide other ways of achieving the same goal.

5.3 Questions on winding down the current MAP scheme/framework:

5.3.1. Should the MAP scheme be wholly wound down and DisCos allowed to procure meters directly from meter manufacturers/assemblers and entering new contracts for installation and maintenance?

5.3.2. Provide reasons for your response to 5.3.1 above.

5.3.3. Do you agree with the modalities being proposed in this consultation paper? If NO, please suggest possible reviews or provide other ways of achieving the same goal.

5.4 Should local meter manufacturers/assemblers be prohibited from operating as MAPs to avoid conflict of interest and enable them focus on manufacturing as many meters as possible?

5.5 Do you have any other option or suggestion regarding metering that is not captured in this consultation paper? If yes, provide details of the modalities of implementation.

6.0 Proposed Amendments to the MAP Regulations 2018

The following table shows proposed changes to the MAP Regulations 2018 along with an explanation of the rationale and the options under which the amendment is relevant:

Section	Proposed Amendment	Rationale	Applicable Option
Definition	Amend the definition of "Metering Service Charge" to mean: "the periodic payments made by an electricity distribution company to cover the cost of metering services."	This change is necessary because customers are no longer required to pay the monthly meter service charge as the cost will form part of the energy charge.	Option 1 and Option 2
Regulation 5	Addition: h. Evidence of payment of Annual Returns	It is now a requirement of the Corporate Affairs Commission (CAC)	Option 1 and Option 2
Regulation 7	All technology systems deployed by MAPs shall be capable of interfacing with the vending platforms of Distribution Licensees. Evidence of applicable certifications shall be provided at the time of submitting applications for permit to the Commission.	Proposed changes are corrections of typographical errors in the MAP Regulations.	Option 1 and Option 2
Regulation 8(4)	The Commission shall "grant" conduct. Delete "grant."	Same as above	Option 1 and Option 2
Regulation 12(3)	Last line: add- "any other Regulations of the Commission that may be applicable from time to time."	To ensure clarity	Option 1 and Option 2

Regulation 14(3)	Delete Clause 3: "The customer shall not be liable for the payment of metering service charge for the billing period and the customer shall be compensated appropriately for loss of supply unless such delays were as a result of inaccessibility to the customer's premises.	To be removed as the metering charge will be embedded in the tariff	Option 1 and Option 2
Regulation 16(5)	Where a MAP is unable to "replace" a meter. Delete "provide a replacement meter".	Correction of a typographical error	Option 1 and Option 2
Regulation 22(1)(d)	Delete- "Any other payment security structure as may be agreed between the parties".	Deleting this clause removes ambiguity and limits the payment security requirement to only those provided under the preceding clauses in sub-regulation (1) (a)-(c)of Reg. 22.	Option 1 and Option 2
Regulation 22 (1) (a-c)	Delete the securitization options and replace with "Repayment of the MAP shall be through a third line charge against the DisCos' monthly revenue collections after the NEMS and NMMP facilities"	This amendment is necessary to ensure bankability of the MAP scheme under Option-1 given DisCos' failure to provide satisfactory options for securitization to the MAPs	*Option 1*
Regulation 25(1) & (2)	1. Rename Clause 25 from "Transitional Arrangement" to "Financing Framework" 2. Delete Clause 25(1) and replace it with "all meters installed by MAPs and Distribution licensees shall form part of the Regulatory Asset	The introduction of this clause also resolves the confusion as to whether meters under MAP will form part of the Regulatory Asset Base (RAB of the DisCos as well as the issue of compensation to MAP customers which have been pending for too long.	Option 1 and Option 2

	Base of the Distribution licensee."		
New Clause (Termination of MSA and withdrawal of Permit)	"Upon provision of necessary securitization, a DisCo shall terminate an MSA with any MAP that fails to perform optimally in accordance with the terms of its contract. The Commission shall upon verification of non-performance withdraw permits issued to non-performing MAPs."	This clause is required to clarify the grounds for termination of MSAs and withdrawal of permits. It is expected that such clarity will facilitate performance improvement by MAPs.	Option 1 and Option 2
New Clause (Removal of MAP exclusivity)	"Distribution Licensees shall ensure metering of customers either directly or through meter asset providers or a combination of the two methods"	This clause is necessary to allow DisCos to allow provide meters directly to customers and not necessarily through MAPs as contemplated in Options 1 and 3	Option1
New Clause Compensation to MAP Customers	"The Distribution Licensee shall refund all customers who have made upfront payments or Meter Service Charge instalment payments to MAPs through a one-off energy credit .for the value of the meter or total instalment payments made respectively".	This is necessary to ensure fairness as all customers whether previously metered or not will be having a uniform energy charge that has a metering component. Such meter asset will also be recognized in the RAB of the Disco.	Option 1 and Option 2
New Clause Repayment of MAPs	"The Distribution Licensee shall refund MAPs for all outstanding payments hitherto due from customers in respect of every meter installed under the amortization framework. "	This is necessary to ensure repayment of amount due to MAPs in respect meter deployment under the amortization methods since customers would no longer be	Option 1 and Option 2

		paying fixed monthly repayments based on the proposed amendments to the MAP Regulations. Such meter asset will also be recognized in the RAB of the Disco.	
New Clause Prohibition of Manufacturers from operating as MAPs	"Local meter manufacturers shall not be permitted to participate as MAPS"	The prohibition of local meter manufacturers from operating as MAPs will encourage separation of functions, business focus and foster fair competition.	Option 1 and Option 2
Repeal of the MAP Regulations	Repeal of the MAP Regulations.	The MAP Regulations may have to be repealed or substantially amended if the option of winding down the MAP Scheme becomes the preferred option	Option 3

7.0 Response to consultation

NERC has prepared this document to facilitate as open consultation as possible and has provided the merits and demerits of the proposed changes as well as the potential impact of the changes on the MAP Regulations 2018. Therefore, and accordance with the Business Rule of the Commission, stakeholders are expected to provide comments, objections, and representations on the proposed amendments within 21-days of this publication.

Respondents may propose either a modification or an alternative to the proposals, assumptions, and expectations expressed by NERC for further consideration by the Commission. There will be a virtual public hearing on the proposed review at the expiration of the response period.

At the end of the consultation process, the Commission will publish its decision on the proposed amendments to the Meter Asset Provider ("MAP") Regulations 2018. It shall also fix the date on which the amended Regulations shall come into effect.

All reactions, comments, and further enquiries should be sent for consideration by the Commission via info@nerc.gov.ng and copy mapreview2021@nerc.gov.ng.

DATED AT ABUJA THIS 24TH DAY OF FEBRUARY 2021

Sanusi Garba
CHAIRMAN