BEDC ELECTRICITY PLC

STANDARD OPERATING PROCEDURE (SOP)

FOR

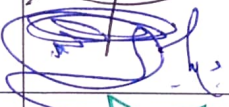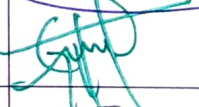## *ONBOARDING OF NEW DSS*

GIS & ENUMERATION DEPARTMENT

1. DOCUMENT DETAILS

Document Name	Onboarding of new DSS
Initiating Department	GIS & Enumeration
Document Owner	GIS & Enumeration; Billing Operations
Date	1th February 2025
Document Version	1.0
Effective Date	1th January 2025

2. DOCUMENT APPROVAL DETAILS

S/N	AUTHORISING OFFICERS' ROLE	JOB TITLE	NAME	SIGNATURE	DATE
1	Initiator	Head, GIS & Enumeration	Nkeki Felix Ndidi		13/01/2025
2	Concurrence (HOD BO)	Head, Billing Operations	Akintunde Akinlabi		13/01/2025
3	Concurrence (CRCM)	Chief Revenue Cycle Management	Collins Igwe		13/1/25
4	Concurrence (PPRC)	Chief Commercial Officer	Akinleye Ogunleye		14/1/25
5	Concurrence (Audit)	Chief Internal Audit	Gilbert Owoupele		14/1/25
6	Approval	MD/CEO	Deolu Ijose		28/02/2025

Note: *This sign-off authorizes the immediate implementation of this document.*

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3. TABLE OF CONTENT

4. STANDARD OPERATING PROCEDURE (SOP)

4.1 DEFINITION OF TERMINOLOGIES

ACRONYM	MEANING
DSS	Distribution Substation
ID	Identification
SOP	Standard Operating Procedure
GIS	Geographic Information System
BO	Billing Operations
TS	Technical Services
RES	Regional Enumeration Supervisor
RHT	Regional Head Technical
RA	Regional Auditor
HGIS	Head GIS
HBO	Head BO
CIA	Chief Internal Audit
CTO	Chief Technical Officer
RH	Regional Head
CCO	Chief Commercial Officer
QC	Data Quality Control
RMDM	Regional Maximum Demand Manager
CRCM	Chief Revenue Cycle Manager
HMD	Head Maximum Demand Customers
BHTO	Business Head Technical Operation
BM	Business Manager
SCO	Senior Commercial Officer

4.2 PURPOSE

The major purpose of this SOP is as follows:

I. to ensure an effective and controlled means of entering new DSS (both point load and public DSS) into the billing system;

II. ensure immediate enumeration of customers proposed to connect to such a new DSS for account creation.

4.2.1 BENEFITS

This will prevent losses, help to keep near real-time tracking of new DSS connections, and constrain the activation or connection of unidentified DSS to our network. It would also set up a platform for GIS to update their database regarding network asset enumeration and continuous customer enumeration.

4.3   SCOPE

This SOP is designed to capture and outline the processes of collecting new DSS data from the field, naming such DSS, and entering the same into the billing database. Through enumeration data, the customers connected to the DSS would be onboarded into the billing system by creating an account for them. The relevant and key players pertaining to this SOP are BO, GIS, and TS.

4.4   PREREQUISITES/REQUIREMENT

The required tools involved in the driving of this workflow are the BEDC Smart Power Billing App, Billing Database, BEDC New DSS Update App, BEDC Customer Enumeration App, Survey 123, and ArcGIS Portal.

The personnel required are the RMDM, BHTO, RHT, Billing Officers, the RES, Enumerators, RA, and HGIS. The sources of data for this workflow are primary or field data from the customer's installed DSS location, the customer's business, or residential premises. These datasets will be stored in the billing database, GIS geodatabase, and portal.

4.5   RESPONSIBILITIES

The HGIS and HBO are primarily responsible for the implementation and review of this SOP.

4.6   WORKFLOW

4.6.1   Onboarding of New Point Load DSS into the Billing System

4.6.2   Process Owners

WORKFLOW ACROYNYM	SOURCES OF DATA	INITIATORS DESIGNATION	1ST LEVEL APPROVAL	2ND LEVEL APPROVAL	PROCESSED BY
ONPLDSS	Directly from the field but transmitted with soft copy spreadsheet via email	RMDM/RH/BHTO/ RHT, HGIS	RMDM/RH/BHTO/ RHT/HGIS	CIA/Head Audit	GIS and Enumeration Dept

4.6.3   Procedures

ACTIVITY	DESCRIPTION	RESPONSIBILITY	TIMELINE
Overview	This workflow, on the one hand, is specifically designed to initiate a smooth trajectory through which all new point-load DSS legitimately installed on our network are captured and added to the billing system. On the other hand, it will serve as a framework for updating the GIS database for the purpose of enumerating the customer(s) that are connected to the DSS for account creation, subsequent billing, and customer realignment (if necessary).	RMDM/RH/BHTO/RHT, HGIS, HBO	N/A
Documentation and approval required	1. RMDM/BHTO/RHT email request for GIS mapping and profile for account creation (the email must carry approval to install from CTO and HMD). 2. Email from HGIS to CIA/Head, Audit carrying enumerated details of the captured DSS/customer(s) for review and concurrence. 3. Auditor's email detailing approval or concurrence for BO to create an account and add DSS to the billing database. 4. Feedback email from BO carrying the created account details and clearly stating what has been done, such as account creation, DSS	1. RMDM/RH/BHTO/RHT 2. HGIS 3. CIA/Head Audit 4. HBO/Billing Analyst 5. HGIS	N/A

	onboarding, and realignment effected. 5. Feedback email from HGIS to RMDM/RH/BHTO/RHT containing the created account details for further application.		

Procedure	**1. Naming of the New Point Load DSS**
	a) The first step in this workflow is to name the new DSS, in case this was not done during the application process and documentation. This workflow is designed to commence on the verge of the new DSS point-load commissioning/energization.
	
	b) The naming of a new point-load DSS falls within the domain of TS, and since the installation and commissioning initiator of this DSS is the BHTO/RHT, it becomes the responsibility of that office to provide a suitable name for such a DSS (see Appendix 1 for a guide to naming a DSS).
	
	c) Upon receipt of the completion note, the RH sends an email to the RMDM of the region to initiate the onboarding.
	d) The RMDM initiates the onboarding by sending an email to the HGIS to capture
		1.a) BHTO/RHT
		  b) BHTO/RHT
		  c) RH
		  d) RMDM
		
		2.a) HGIS
		  b) Enumeration Supervisor/GIS analyst
		3.a) Team lead, Backend Operations/Database Admin and QC
		4. HGIS
		5. Head Audit/CIA
		6. HBO/Billing Analyst
		7. HBO/Billing Analyst
		8.a) HBO/Billing Analyst
		  b) HBO/Billing Analyst
		  c) HGIS
			1. Immediately
			2. a) 1 day
			   b) 2 days
			3. a) 1 day
			4. 1 day
			5. 2 days
			6. 2 days
			7. 1 day
			8. 1 day

the DSS and the connected customer(s) for the purpose of billing database and GIS database updates and account number creation. The email should contain evidence of the approval to install. The following staff must be in copy: RH, RHT, BM, BHTO, CCO, CTO, CRCM, HMD, and any other relevant staff.

2. **Field Mapping of DSS and Customer(s)**
a) Upon receiving the initiating email from the RMDM, the HGIS assigns the field mapping task to the responsible enumeration supervisor or GIS analyst for action. The responsible officer will immediately email the HGIS after capturing the DSS for profiling in the customer enumeration app.

b) As soon as the field mapping (DSS and customer) is done, the Enumeration Supervisor/GIS analyst emails the HGIS and Database Admin for further action.

3. **Download and Processing of the DSS data**
a) The database administrator ensures the downloading, checking, and QC of the DSS data for compliance.

4. Send to Audit for Concurrence

a) The HGIS sends the processed data to the Head Audit/CIA for review and concurrence.

b) The data (DSS detail and customer detail) should be in spreadsheet format as it is sent to Audit, and the following staff should be in copy: RH, RHT, BM, BHTO, RMDM, CCO, CTO, CRCM, HBO, HMD, and other relevant staff.

5. During Audit's Review

a) If Audit concurs with the data, it is then forwarded to the HBO/Billing Analyst for creation in the database. The following officers should be in copy: RH, RHT, BM, BHTO, RMDM, CCO, CTO, CRCM, HBO, HMD, HGIS, and other relevant officers.

b) Non concurrence of the audit's department with highlights of all observed issues should be sent back to the HGIS for attention and resolution.

6. Topology and Data Integrity Check

a) After Audit has sent their concurrence to BO to act on the request, the HBO/Billing Analyst conducts all necessary data quality checks to ensure that standards are maintained.

b) Any observed issues in (a) above should be sent to HGIS for immediate correction and returned.

7. **Creating the New Point Load DSS and Customer in the Billing Database**
a) The DSS is then created in the billing database, and the customer(s) are also created and mapped to the DSS in the database.

b) The account no. is then generated.

8. **Feedback from BO to Stakeholders**
a) The HBO/Billing Analyst sends corresponding feedback via email to all stakeholders (specifically, those copied in the initiating email).

b) The feedback mail should contain created account details and clearly state what has been done, such as account creation, DSS creation, and realignment effected (if any).

c) The HGIS will then cascade the feedback information where necessary and initiate a GIS database update.

4.7 Onboarding a New Point Load DSS & their Corresponding Customer(s) into the Billing Database

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                    ┌──────────────────────┐
                    │  Pre-commissioning   │
                    │      Approval        │
                    └──────────────────────┘
                               │
                               ▼
                         ◇ Naming of DSS ◇ ──────────┐
                                                      ▼
                                          ┌────────────────────┐
                                          │   RMDM Initiate     │
                                          └────────────────────┘
                               ┌──────────────────┘
                               ▼
              ┌────────→  ◇ GIS Field Mapping of the DSS  ◇ ←────────┐
              │              and Customer(s)                         │
   ┌────────────────────┐       │                                   │
   │ GIS Network Database│      ▼                                   │
   │      Update        │   ◇ Download and Process ◇ ←──────────────┤
   └────────────────────┘     Point Load DSS &                      │
              │                Customer(s) Data                     │
              ▼                    │                                 │
   ┌────────────────────┐         ▼                                 │
   │  Profile DSS in GIS │   ◇ Send to Audit for ◇ ──No──→ ┌────────────────┐
   │ Customer Enumeration│      Concurrence                │ Highlight Issues│
   │        App         │         │                        └────────────────┘
   └────────────────────┘         │ Concurred
                                   ▼
                            ◇ Send to Billing ◇ ──→ ┌────────────────────┐
                                   │                │ Topology and Data  │
                                   │                │  Integrity Check   │
                                   │                └────────────────────┘
                                   ▼                          │
                    ◇ Add the Point Load & ◇ ←────────────────┘
                       Customer(s) in Billing
                            Database
                                   │
                                   ▼
                    ┌──────────────────────┐
                    │ Send Corresponding   │
                    │     Feedback         │
                    └──────────────────────┘
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4.8   WORKFLOW

4.8.1   Onboarding a New Public DSS and Associated Customers into the Billing System

4.8.2   Process Owners

WORKFLOW ACROYNYM	SOURCES OF DATA	INITIATORS DESIGNATION	1ST LEVEL APPROVAL	2ND LEVEL APPROVAL	PROCESSED BY
ONPDSS	Directly from the field but transmitted with a soft copy spreadsheet via email	BM/BHTO/RHT, HGIS	BM/BHTO/RHT/ HGIS	CIA/Head Audit	GIS and Enumeration Dept

4.8.3   Procedures

ACTIVITY	DESCRIPTION	RESPONSIBILITY	TIMELINE
Overview	This workflow, on the one hand, is specifically designed to initiate a smooth trajectory through which all new public DSS legitimately installed on our network are captured and added to the billing system. On the other hand, it will serve as a framework for updating the GIS database for the purpose of customer enumeration for account creation, subsequent billing, and customer realignment (if necessary).	BM/BHTO/RHT, HGIS, HBO	N/A
Documentation and approval required	1. BM/BHTO/RHT email request for GIS mapping of the new DSS and creation in the billing system, including enumeration of the hooked-up customers for account creation (the email must carry approval to install signed by the CTO and CRCM. 2. Email from HGIS to CIA/Head, Audit, carrying details of the	1. BM/BHTO/RHT 2. HGIS 3. CIA/Head Audit 4. HBO/Billing Analyst 5. HGIS	*N/A*

	captured DSS/customers for review and concurrence 3. Auditor's email detailing approval or concurrence for BO to create an account and enter the DSS into the billing database. 4. Feedback email from BO carrying the created account details and clearly stating what has been done, such as account creation, DSS addition, and realignment effected. 5. Feedback email from HGIS to BM/BHTO/RHT containing the created account details for further application		
Procedure	**1. Naming of the New Public DSS** a) The first step in this workflow is to name the new public DSS in case this was not done during application process and documentation. This workflow is designed to commence on the verge of the new public DSS commissioning/energization. b) The naming of a new public DSS falls within the domain of TS, and since the installation and commissioning initiator of this DSS is the BHTO/RHT, it becomes the responsibility of that office to provide a suitable name for such a DSS (see Appendix 1 for a guide to naming a DSS).	1. a) BHTO/RHT b) BHTO/RHT c) BHTO/RHT d) BM 2. a) HGIS b) Enumeration Supervisor/GIS analyst 3. a) Team lead, Backend Operations/Database Admin and QC 4. HGIS 5. Head Audit/CIA 6. HBO/Billing Analyst 7. HBO/Billing Analyst 8. a) HBO/Billing Analyst b) HBO/Billing Analyst c) HGIS	1. Immediately 2. a) 1 day b) 7 days 3. a) 2 days 4. 1 day 5. 3 days 6. 2 days 7. 1 day 8. 1 day

c) The RHT, upon the certification of a successful installation of a new public DSS, officially informs the responsible BM of the region to initiate the process of onboarding the public DSS into the billing system.

d) The BM will initiate the capturing process by sending an email to the HGIS to capture the DSS and the connected customers for the purpose of billing database and GIS database updates and account number creation. The email should contain evidence of the approval to install. The following staff must be in copy: RH, RHT, BHTO, SCO, CCO, CTO, CRCM, and any other relevant staff. The email must specify whether the customer's account to be created should be on inactive status pending commissioning of the DSS. If the accounts are created on inactive status, it is the responsibility of the BM and SCO through the RH to update BO to activate the customers' bills immediately the new public DSS is energized.

2. **Field Mapping of DSS and Customers**

a) Upon receiving the initiating email from the BM, the HGIS assigns the field mapping task to the responsible enumeration supervisor or GIS

analyst for action. The responsible officer will immediately inform the HGIS after capturing the DSS for profiling of such DSS in the customer enumeration app.

b) As soon as the field mapping (DSS and customers) is done, the enumeration supervisor or GIS analyst informs the HGIS and database Administrator for further action.

3) **Download and Processing of the New Public DSS and Customers data**
 a) The database administrator ensures the downloading, checking, and QC of the new public DSS and customer data for compliance and further processing.

4) **Send to Audit for Concurrence**
 a) The HGIS sends the processed data to the Head of Audit/CIA for review and concurrence.

 b) The data (DSS detail and customer detail) should be in spreadsheet format as it is sent to Audit, and the following staff should be in copy: RH, RHT, BM, BHTO, SCO, CCO, CTO, CRCM, HBO, and other relevant staff.

5) **During Audit's Investigation**
 a) The HBO/Billing Analyst receives the data via email for onboarding or database update if Audit finds the data to be accurate. Copy should be sent

to the following officials: BHTO, SCO, CCO, CTO, CRCM, HBO, HGIS, RH, RHT, RM, and other pertinent officers.

b) If, for any reason, the Audit does not concur as it is, the Auditor must highlight all the observed issues and send them back to the HGIS for attention and resolution of all highlighted issues, or the HGIS may send a rebuttal against any highlighted issues. This means that steps 2 or 3 may be applied here until the issues raised by the Audit are resolved/concurred.

6) Topology and Data Integrity Check
a) After Audit has sent their concurrence to BO to act on the request, the HBO/Billing Analyst conducts all necessary data quality checks to ensure that standards are maintained.

b) In a case of data quality issues that may be observed in (a) above, the HBO/Billing analyst is obligated to send it to HGIS for immediate correction or clarification and return it.

7) Creating the New Public DSS and Customers in the Billing Database
a) The DSS is then created in the billing database, and the customers are also mapped to the DSS in the database.
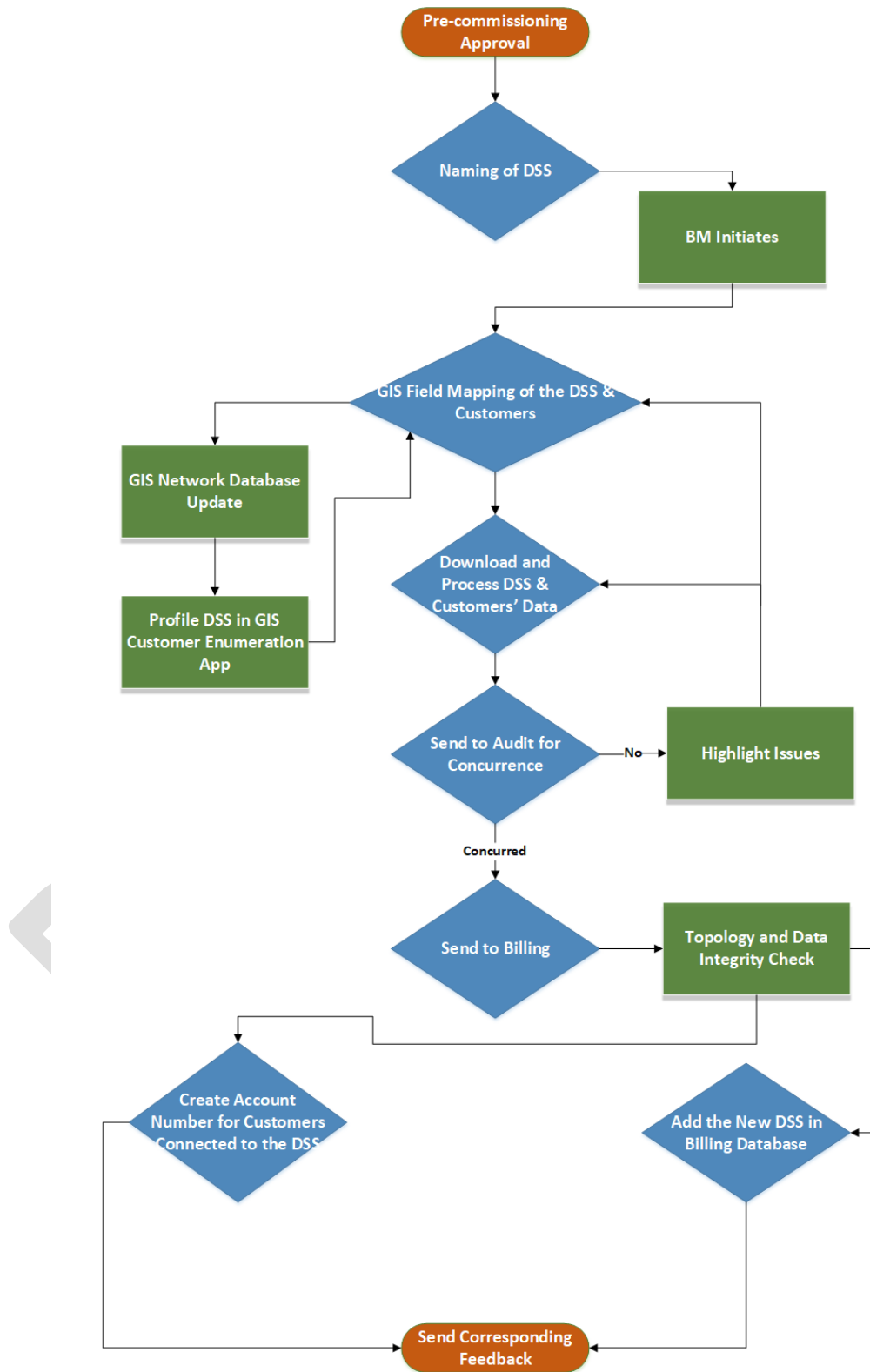
	b) Using the enumeration data, the public DSS customers are created, and the account nos. are generated. The request for account. creation may be on inactive account status since the new public DSS may not yet be commissioned or energised. This must be specified by the BM/BHTO at the point of initiation. **8) <u>Feedback from BO to Stakeholders</u>** a) The HBO/Billing Analyst should send feedback via email to all stakeholders (specifically, those copied in the initiating email). b) The feedback mail should contain the created account detail and clearly stating what has been done such as account creation, DSS creation, and realignment effected (if any). The mail should contain attachment of the list of customers initially sent to BO, this time with corresponding created account nos. c) The HGIS is will then cascade the feedback information to the BM/BHTO/RHT for further application, such as seeking for commissioning/energization approval, cluster metering, etc.		

4.9 Capturing New Public DSS & their Corresponding Customers into the Billing Database

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Pre-commissioning
Approval
        │
        ▼
   Naming of DSS ──────────────► BM Initiates
        │                             │
        ▼                             ▼
GIS Field Mapping of the DSS & Customers
   ┌────┴─────────────────────┐
   ▼                          ▼
GIS Network Database    Download and Process
Update                  DSS & Customers' Data
   │                          │
   ▼                          ▼
Profile DSS in GIS      Send to Audit for ──No──► Highlight Issues
Customer Enumeration    Concurrence
App                          │
                          Concurred
                             │
                             ▼
                        Send to Billing ──────► Topology and Data
                             │                  Integrity Check
              ┌──────────────┘                       │
              ▼                                       ▼
        Create Account                          Add the New DSS in
        Number for Customers                    Billing Database
        Connected to the DSS
              │                                       │
              └──────────────► Send Corresponding ◄───┘
                               Feedback
```

5. DESCRIPTION OF APPENDIX

Appendix 1: Guidelines for Naming New DSS

Before a DSS is named it is pertinent to check the selected name(s) against the Smart power or billing database. This will help to remove duplication as much as possible.

Guidelines for Naming a Private (Point Load) DSS

Point Load is a DSS that is privately owned or feeding an individual customer.

1. Point load for residential use: *This should as much as possible be named after the owner of the residence e.g., Godwin Obaseki, E. A. Adeyemi.*
2. Point Load for commercial, administrative and religious use: *This should be called or named after the company/business name. e.g., Sunny and Sons*
    i. *If it is a company that have branches, it should be named after the company including the branch position, e.g., BEDC Head Office; CBN Akpavapava; St. Paul Airport Road.*
    ii. *When it is observed that a bank, a church, or any other company have more that one branches on the same road, street or locality, they should be named after the business or church just like in 2(i) but must be distinguished with numbers or digits in the sequence of locational arrangement, e.g., UBA Akpakpava 1, UBA Akpakpava 2, UBA Akpakpava 3. Note that it is preferrable to use numbers (1, 2, 3, etc.) to distinguish between DSS with same names. Avoid using Roman numerals or alphabets.*

Guidelines for Naming a Public DSS

A public DSS may have many customers connected to them, which may range from 3 to 500.

1. Public DSS: *It is most appropriate to name a public DSS after the street or road name where such DSS is installed e.g., Lawani Street, Ezewani Avenue, Chief Brimah Road, etc.*
    i. *If it is installed on a junction, the nomenclature should be the street name followed by the word junction, e.g., Lawani Street Junction, Chief Brimah Road Junction, etc.*
    ii. *If it is a relief DSS for an existing public DSS, the name should be the same as the existing but must carry the word relief, e.g., Lawani Street Relief, Ezewani Avenue Relief, etc.*
    iii. *When there are more than 1 public DSS on the same street, road or avenue, they should be distinguished with numbers or digits, e.g., Obakpe Street 1, Obakpe Street 2, etc. If it is a relief DSS it should follow same pattern like Obakpe Street Relief 1, Obakpe Street Relief 2, etc.*
2. Public community DSS: *As much as possible newly installed community DSS should be named after the community, e.g., Iwu Community, Ogheghe Community, etc.*

   i. If there is more than 1 of such community DSS, it should be named sequentially using numbers or digit to distinguish them, e.g., Ogheghe Community 1, Ogheghe Community 2, Ogheghe Community 3, etc.

   ii. If more than 1 relief DSS is installed, then they should be named, Iwu Community Relief 1, Iwu Community Relief 2, etc.

3. Estates or Barracks DSS: *Public DSS installed in an estate of barrack should be named after such estate or barrack, e.g., Odjegba Estate, Ogida Barracks, Oregbeni Military Cantonment, etc.*

   i. If a more than 1 DSS are installed in an estate with no other sectional nomenclature within the estate, such as block, quarter, etc. numbers or digits should be used to distinguish them, e.g., Odjegba Estate 1, Odjegba Estate 2, etc.

   ii. If there are more than 1 DSS installed in an estate or barrack with clear sectional nomenclature within the estate or barrack such as block or quarter, the additional DSS should be named with the estate or barrack name followed by the sectional name, e.g., Oregbeni Military Cantonment block 1, Oregbeni Military Cantonment block 2, Oregbeni Military Cantonment Senior Staff Quarters, Oregbeni Military Cantonment Junior Staff Quarters, etc.

6. PPRC MEMBERS RATIFICATION

S/N	Name	Designation	Position	Signature	Date
1	Akinleye Ogunleye	CCO	Chairman		14/1/25
2	Evwienure Agama	CFO	Member		13-01-2025
3	Collins Igwe	CRCM	Member		13/1/25
4	Gilbert Owoupele	CIA	Member		14/1/25
5	Jonathan Lawani	CTO	Member		13/1/25
6	Opeoluwa Afolabi	Head, TS&CP	Member		13/01/2025
7	Felix Ndidi Nkeki	Head, GIS	Secretary		13/01/205