

# ***METERING MARKET PROCEDURE:***

## ***THE RESPONSIBILITIES OF THE MARKET PARTICIPANTS***

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# THE MO AS METER REGULATOR

- *The Market Rule has been articulated and framed for the governance of the Nigerian Electricity Market by the Market Operator, in pursuant to **Sections 26 and 29** of the Power Reform Act of 2005.*
- *THE MARKET OPERATOR IS THE SOLE ADMINISTRATOR OF THE NIGERIAN ELECTRICITY MARKET WHOSE MAJOR RESPONSIBILITIES ARE SETTLEMENT AND PAYMENT IN THE ELECTRICITY MARKET, ACCORDING TO **SECT. 66(1) OF THE ACT AND AMPLIFIED BY THE SECT.10(1) OF THE MARKET RULE.***
- *TO ENSURE EFFECTIVE SETTLEMENT IN THE MARKET, EFFECTIVE METERING OF THE TRADING QUANTITIES IS VERY NECESSARY.*
- *THE MO, THEREFORE REGULATES THE METERING BUSINESS OF THE NEM TO ENSURE METER DATA INTEGRITY FOR BILLING AND SETTLEMENT PURPOSES.*

# *MARKET STRUCTURE*

- *DELINEATION*
- *GENERATION*
- *TRANSMISSION*
- *DISTRIBUTION*
- *TRADING POINTS*
- *METERED*
- *HANDED OVER TO MPs*

# METERING MARKET PROCEDURE (MMP)

**Ref: Market Rule:**

**Sect. 27.6.10; 10.2.1; 6.3.2**

***This is one of the three Market Administrative Procedures for the Nigerian Electricity Market. It is an extension of the Market Rule.***

## **MMP CONT.**

- \* This Procedure describes:**
- Tech. Specs for Metering Systems**
- Market Participants Metering Registration Process (MR:10.2.3; 15.1.1; 15.1.2-5)**
- Description of Trading Points**
- Treatment of Transmission Loss Factor (TLF)**

## **MMP CONT.**

- ***The Calendar and Procedures for Meter data collation, validation and reconciliation for Market Settlement***
- ***Administration of Special Conditions***
- ***Administration of Complaints***
- ***Violation of Metering Calendar and Penalties. (MR:27.6.4)***

# METERING CHALLENGES

- \* **ERRORS:**
  - **INTERNAL ERRORS:**
    - **FAULTY METER**
  - **EXTERNAL ERRORS:**
    - **VOLTAGE TRANSFORMER (VT)**
    - **CURRENT TRANSFORMER (CT)**
    - **THE CABLING**
    - **TERMINATION KIT**
    - **CABLE SHORTING;**
    - **PHASE REVERSAL;**
    - **EARTH-LEAKAGE etc**

# **GUARDING AGAINST ERRORS**

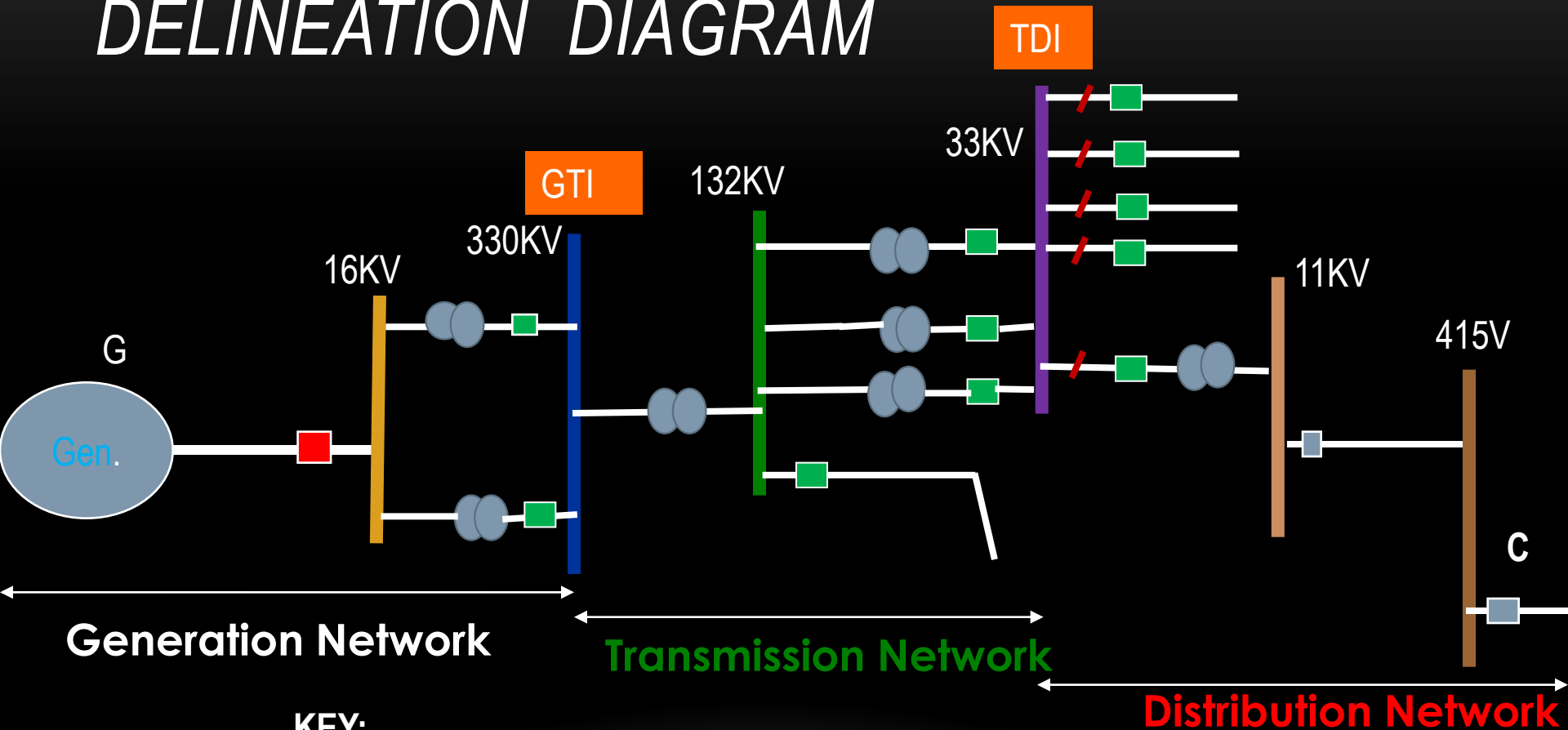
- ***Metering responsibilities have numerous challenges that must be resolved to maintain Market integrity. Trading Point meters require intensive care, trained staff and equipment***
- ***ALWAYS KEEP YOUR METER REF. PARAMETERS: VTR, CTR, MF, LOAD TREND;***
- ***MONITOR AND INSPECT YOUR METERS REGULARLY;***
- ***REPORT TO THE MO ON ANY OBSERVATIONS WRT YOUR METER;***
- ***YOU MUST NOT BE HINDERED FROM PHYSICAL INSPECTION OF YOUR METER.***



# *ADMINISTRATION OF DEROGATION*

- *DEROGATION MAY BE ON:*
- *FAULTY METERING SYSTEMS*
- *ABSENCE OF A METERING SYSTEM*
- *METERS WRONGLY POSITIONED*
- *NON COMPLIANT METERS*
- *ANY OTHER TECHNICAL ISSUES.*

# GRID NET-WORK SINGLE LINE DELINEATION DIAGRAM



**KEY:**

GTI – Generation/Transmission Interface

TDI - Transmission/Distribution Interface

C - Customer interface

■ - Metering points ; ● - Transformer

— - Representing: Isolators-Breakers-Relays



# MO'S METERING RESPONSIBILITIES

- *MO shall have an unhindered access to every Trading Point Meter for purpose of inspections and cross-checks as situation demands*
- *Receiving and Reconciling Energy Meter Data from the Participants for Monthly Settlement purposes. (MR:27.6.4)*
- *AMR REINVIGORATED for greater settlement efficiency*
- *Certification of Trading Point Metering Systems*
- *Review and Upgrade of TP Metering specifications.*

# RESPONSIBILITIES

- *Resolving Metering Issues between Participants*
- *Administration of Metering Systems Derogation*
- *Carrying out on-the-spot Meter Tests on any meter suspected to be giving wrong reading*
  
- *The MO Technical team will also be involved in Net-Dependable Capacity Tests of the Generators as well as adjudicate the technical aspects of all the PPAs.*

# **PARTICIPANTS RESPONSIBILITIES**

- ***The Participants assume full responsibilities for Providing their Meters, Installation, Maintenance, Security, Integrity and reading of the Meters with the SO staff pending when the Remote Reading would be achieved.***
- ***The following conditions must apply in order to maintain the integrity of metering data and that of the NEM:***
- ***The MO must be notified of any new Metering Installation for Certification before it is accepted for Trading.***
- ***New Substations must be Metered before Commissioning and Loading.***

## **RESPONSIBILITIES CONT.**

- ***All necessary Stakeholders must be informed before VTs and CTs are replaced in any Transmission Station.***
- ***CT Ratios must not be changed without first informing the necessary stakeholders in the Trading Point involved.***
- ***To Reprogram any meter, the MO and the other necessary Stakeholders must be present.***
- ***On no account should the TSP maintenance staff shut out the VT or CT terminals.***

## **RESPONSIBILITIES.**

- *The MPs should manage their Inter-Disco Feeders;*
- *The Participants (Discos) are at liberty to take the already installed Feeder Meters as their check-meters at the **Trx/Disco** interface or opt for installation of new compliant meters in series with the Incomer Meters - (Main Trading Point Meters) **(MR:27.6.2)***
- ***The success of the TEM will largely depend on Metering Integrity. Metering Discipline is inevitable !!!***

# ***THANK YOU***

- **QUESTIONS ?**



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