



# MARKET OPERATIONS

# SETTLEMENT PROCEDURE

By

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# Contents

- INTRODUCTION
- Settlement software window
- Settlement Data
- Participants Obligations
- Current Vs Old Process
- Settlement statements
- Possible changes –Preliminary Vs Final Settlement statement
- MYTO Charges – 2014/2015(MYTO 2, FIRST MINOR REVIEW),NERC/I34
- Preparing the statement
- DisCos settlements- imbalance
- Energy sent out Vs Capacity credited to GenCos

# INTRODUCTION

- The ONEM settlement software deployed.
- fulfilled the requirement of MR.27.1.2
- Put to use in preparing settlement statement for the past six months.
- First review of MYTO 2
- Use of reviewed price from June 2014

# Settlement software window

The screenshot shows a software launcher window titled "Launcher" with the following content:

## ONEM Enterprise Settlement Software System

**Available User Functions**

- Log Off
- Security Utilities
- Users Setup
- Participant Management
- Trade Point Inventory Management
- Trade Point Association
- Transactions and Banks Profile Management
- Contracts Management
- Tariff Management
- Capacity and Generator Data Entry
- Meter Reading Data Entry
- AMR Data Import

**System and Licence Info**

- Operator of the Nigerian Electricity Market
- Enterprise Settlement Software System
- Private Version

**User Login Status**

- User: Ogbu, Benedict
- Tariff Management; Capacity and Generator Data Entry; Meter Reading Data Entry; Administrator; Settlement Management

# Settlement Data

- Metered data is obtained from GenCos and DisCos in respect of energy sent out and energy delivered.(MR: 27.6.4 )
- MO validates the metered data submitted by the participants with SO figures
- The capacity figures are obtained from the System Operator (see Second Interim Rules s. 8a).
- Capacity reading is taken every hour for each GenCo.
- The total is used for preparing monthly settlement

# Participants Obligation

DisCos (energy delivered)

GenCos (energy sent out)

submit (MR27.6.4.& Second Interim Rules s.18)

**Metered data**

Validate and correct (MR.27.6.5)

MO  
(Calculate  
(Settlement  
Statements))

SO (capacity  
figures)  
Energy figures

**Settlements Statements**

# Current Process VS Old process

Item	Current Process	Old process
<b>Capacity figures</b>	Hourly readings	Read at 6.00 hours
<b>Capacity charge</b>	N/MW/h	N/MW/month
<b>Capacity used for settlement</b>	Sum of hourly read capacity	Average of daily read capacity at 6.00 hrs
<b>Hours in a month</b>	Actual hours for every month	Average of 730 hrs
<b>Transmission loss (MR.27.8.2)</b>	GenCos takes 8.05%, TSP takes the difference	GenCos took the actual
<b>Imported Energy</b>	GenCos created and billed as a DisCo	Netted off from the energy exported.

# Settlement statements

- MO prepares two settlement statements in a month:

## Preliminary settlement statement

- participants are expected to check and raise complaint if they disagree with the content of the preliminary statement

## Final settlement statement

- Prepared after considering objections raised if any.
- Shows the final payable/receivable

Issue Preliminary Settlement Statement

9<sup>th</sup> to  
10<sup>th</sup>

Receive Complaints and effect  
corrections

10<sup>th</sup> to  
14<sup>th</sup>

Produce Final Settlement Statement

15<sup>th</sup> to  
17<sup>th</sup>

Dispatch Final Settlement Statement

18<sup>th</sup> to  
20<sup>th</sup>

Issue Invoices and Credit Note

20<sup>th</sup>

## Possible changes –Preliminary Vs Final Settlement statement

### Late submission of input data

- settlement data was estimated (MR.32.2.3).
- correct data obtained later and used.
- Results to delays

### Wrong input data submitted

- Corrected after verification and validation.
- Changes former inputs
- Changes allocations

# MYTO Charges – 2014/2015(MYTO 2, FIRST MINOR REVIEW),NERC/I34

	N/MWh	
MO	80.22	
SO	304.93	
Auxiliary Services	32.61	
TSP	1903.12	
NBET	37.16	
	<b>Regulatory CHARGES</b>	
FROM TCN	59.51	
FROM DISCOS	124.23	
FROM GENCOS	1.5% OF GENCO REVENUE	
<b>PLANTS</b>	<b>CAPACITY CHARGES (N/MW PER HOUR AVIALABLE)</b>	<b>ENERGYCHARGES N/MWh</b>
Thermal	4303	5555
Hydro including Hypadec charge		
hypadec charge		
Net Hydro Charge		
IPPS	According to their contracts	

# Capacity Shared, Energy Shared- what is the meaning?

Capacity Volumes  
credited to all  
GenCos

- Allocated to Distributors according to the percentage of energy delivered to each .
- Guided by S.5.7 of MD, capacity on the basis of s. 5.4

Energy sent out  
by each GenCos

- Adjusted by TLF
- Allocated to Distributors also in the ratio of energy delivered

In settlement  
statements

- GenCos view the DisCos that shared from their adjusted energy
- DisCos view the GenCos that contributed the energy delivered.

# Preparing the statement

- The MYTO charges are applied on the capacity and energy volumes to produce the settlement statement (ORDER NO. **NERC/I34, PG4 – 6**)
- Actual energy credited to GenCos are the energy sent - out less 8.05% Transmission loss (**NERC/I34, PG5**).
- NERC, TSP, SO, MO, and NBET earn their revenue based on total energy delivered to DisCos (**NERC/I34, PG6&7**).
- The transmission loss is the difference between the total energy sent out by all GenCos and the total energy delivered to all Distributors.
- TSP is created as DisCos for purpose of Transmission loss.
- It bears excess transmission above 8.05% (**NERC/MCR/I4/215 of 20<sup>th</sup> May 2014**)

## Energy Allocation to the Discos (MYTO Distribution s.5.4)

- Basis of vesting contract for DisCos
- Ensure fairness in energy allocation.

	2012	2013	2014	2015	2016
Abuja	11.50%	11.50%	11.50%	11.50%	11.50%
Benin	9.00%	9.00%	9.00%	9.00%	9.00%
Enugu	9.00%	9.00%	9.00%	9.00%	9.00%
Ibadan	13.00%	13.00%	13.00%	13.00%	13.00%
Jos	5.50%	5.50%	5.50%	5.50%	5.50%
Kaduna	8.00%	8.00%	8.00%	8.00%	8.00%
Kano	8.00%	8.00%	8.00%	8.00%	8.00%
Eko	11.00%	11.00%	11.00%	11.00%	11.00%
Ikeja	15.00%	15.00%	15.00%	15.00%	15.00%
Port Harcourt	6.50%	6.50%	6.50%	6.50%	6.50%
Yola	3.50%	3.50%	3.50%	3.50%	3.50%
Total	100%	100%	100%	100%	100%

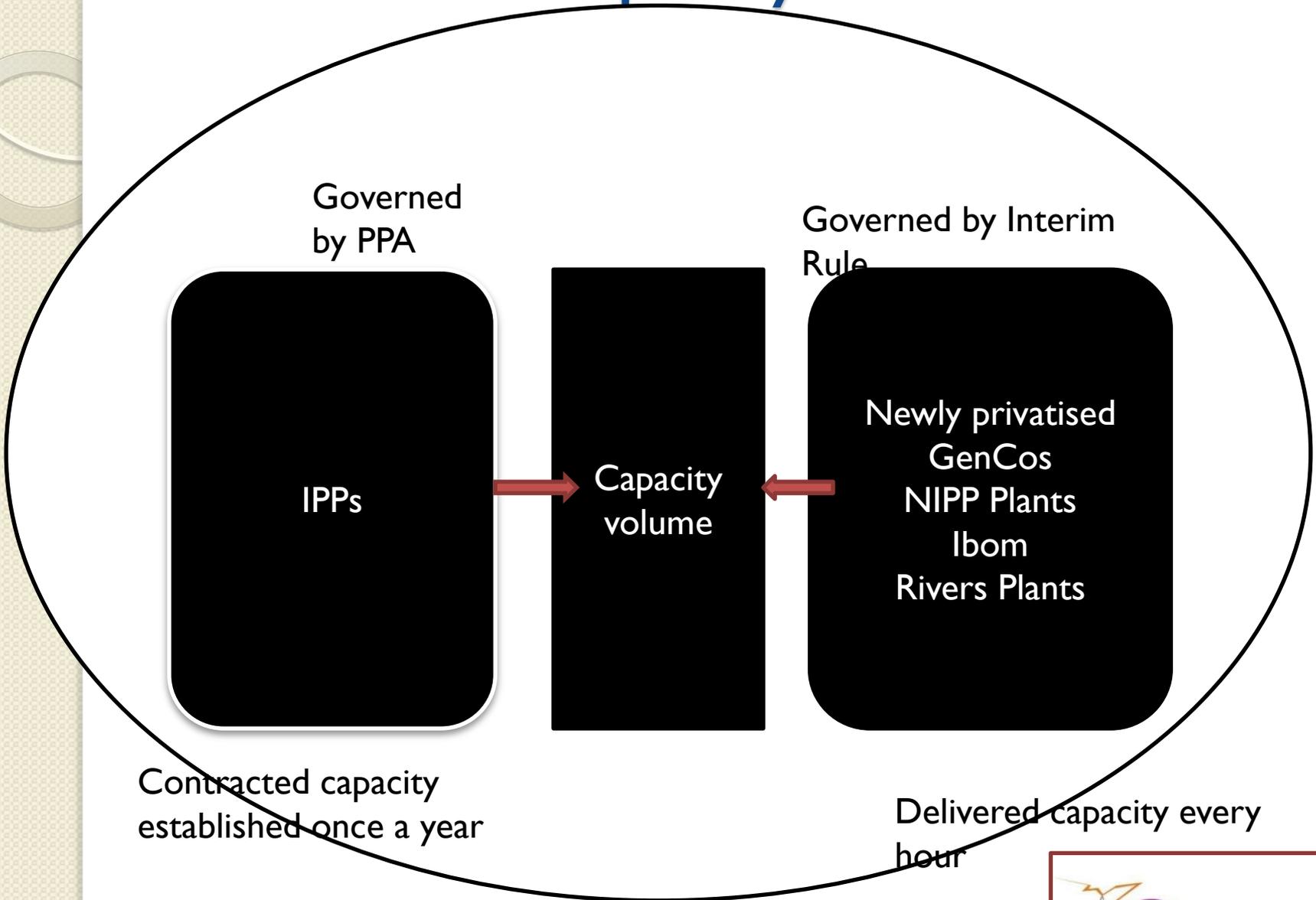
# DisCos settlements- imbalance

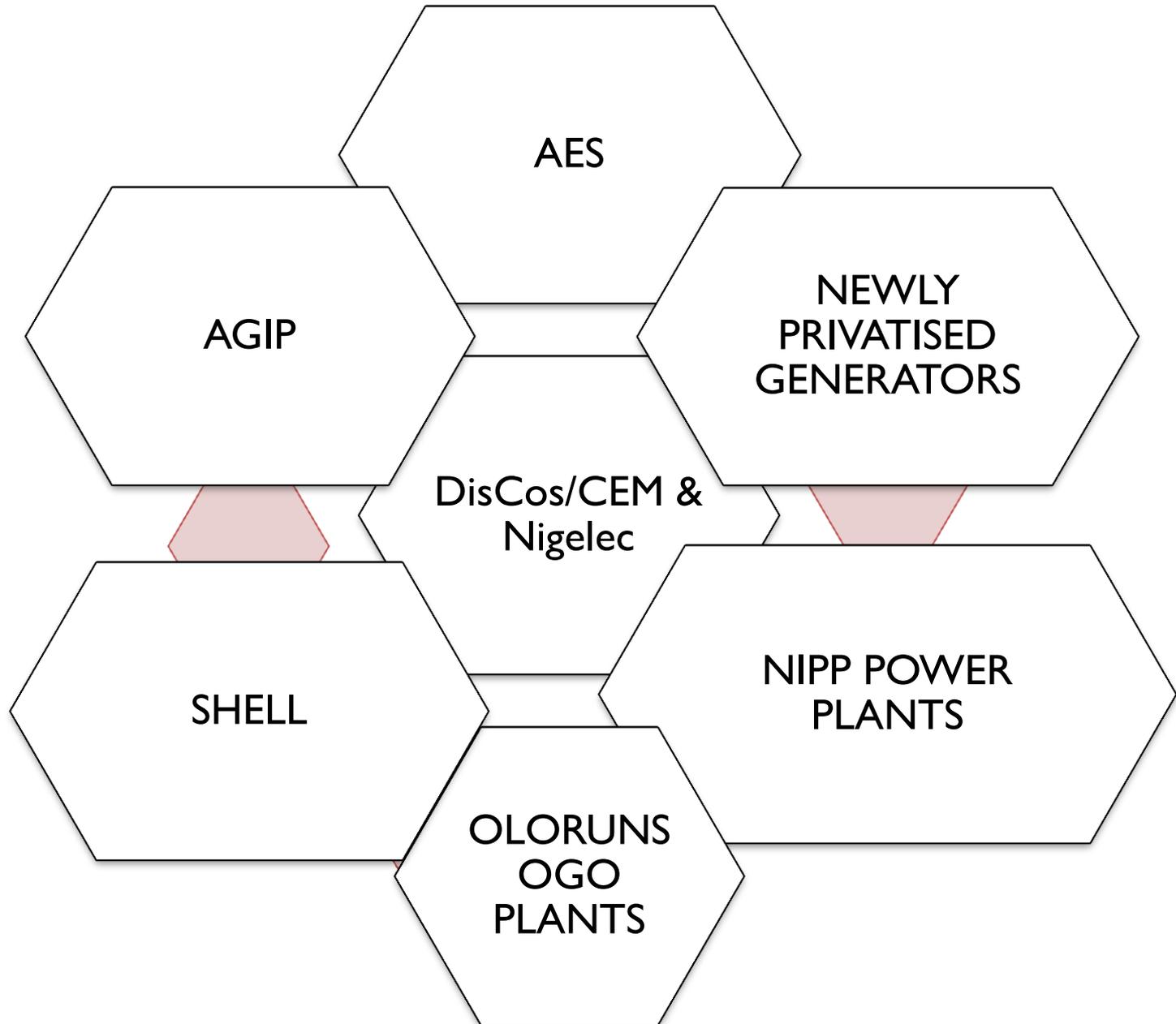
- Percentages of energy delivered to each DisCo is compared to MYTO- 2 load allocation.
- DisCos that took more than their MYTO -2 load allocation pay imbalance charges to the DisCos that received energy less than their MYTO 2 load allocation (s.5.7 of MYTO – Dtn).
- The imbalance charge is 60% MYTO 2 charge (Interim Rules 32)
- The imbalance energy is also discounted by 21.4% (ATC&C loses) [A.xlsx](#)

# Energy sent out Vs Capacity credited to GenCos

- ORDER NO. NERC/I 34, pg.5 reads:
- “fixed or Capacity Charge- N/MWh of capacity made available daily by the generator and certified by the SO(using the formula for converting MW in MWh set in the Wholesale Generation worksheet of the MYTO financial Model”
- Implications: DisCos have interpreted this to mean that their capacity volume should be equal to the energy volume.
- ❖ The generators in the present market are a mixture of IPPs, namely: AES, Agip, Shell, Olurunsogo plants. These plants have pre existing PPA which allows them to get paid even when their production capacity is impaired or constrained.
- ❖ The DisCos fail to take cognizance of this clause in recalculating their capacity volumes.
- ❖ MYTO -2 review pg 4 stated that pre-existing PPA remains intact.

# Contribution to capacity volume





• **Thanks  
for  
listening**