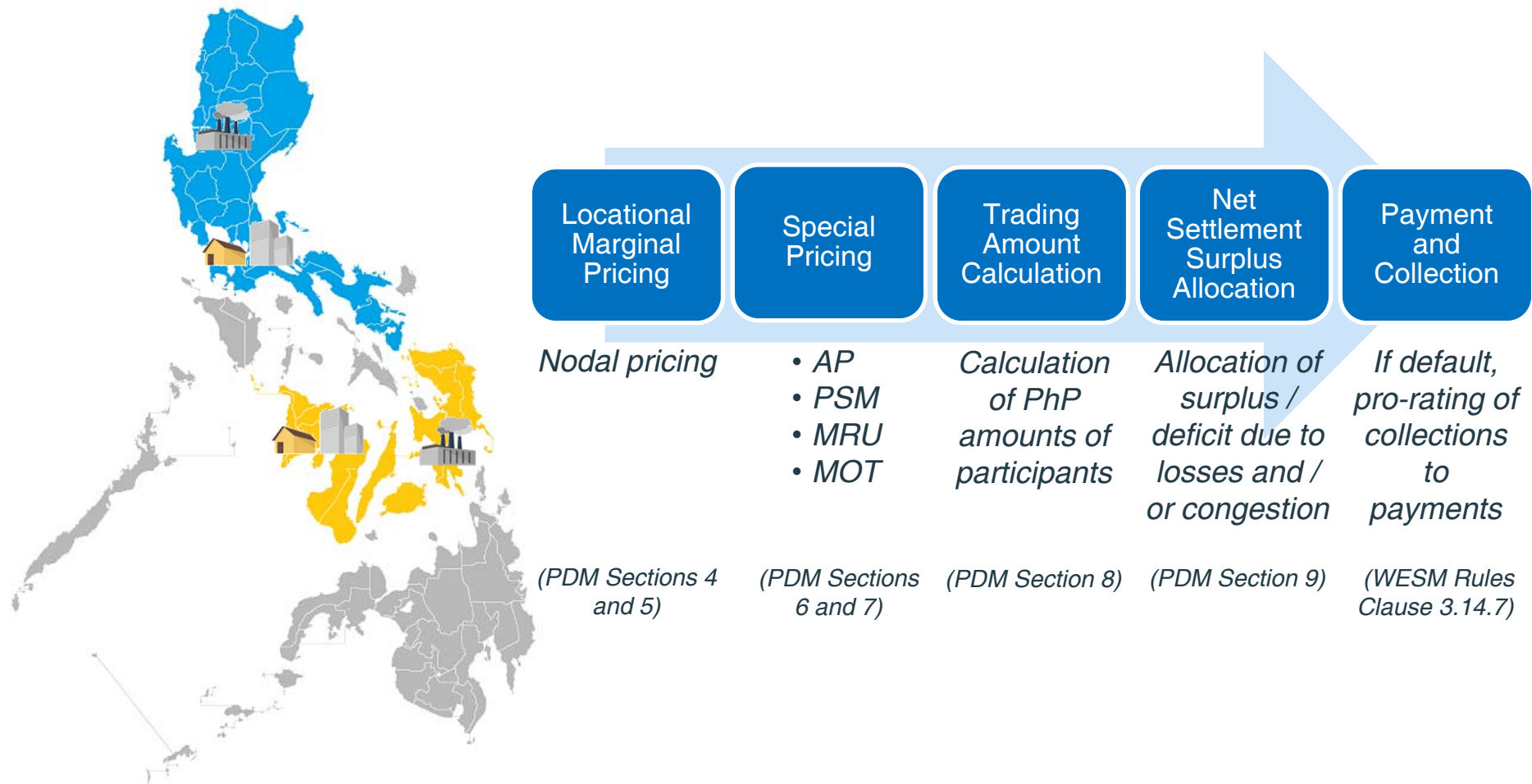




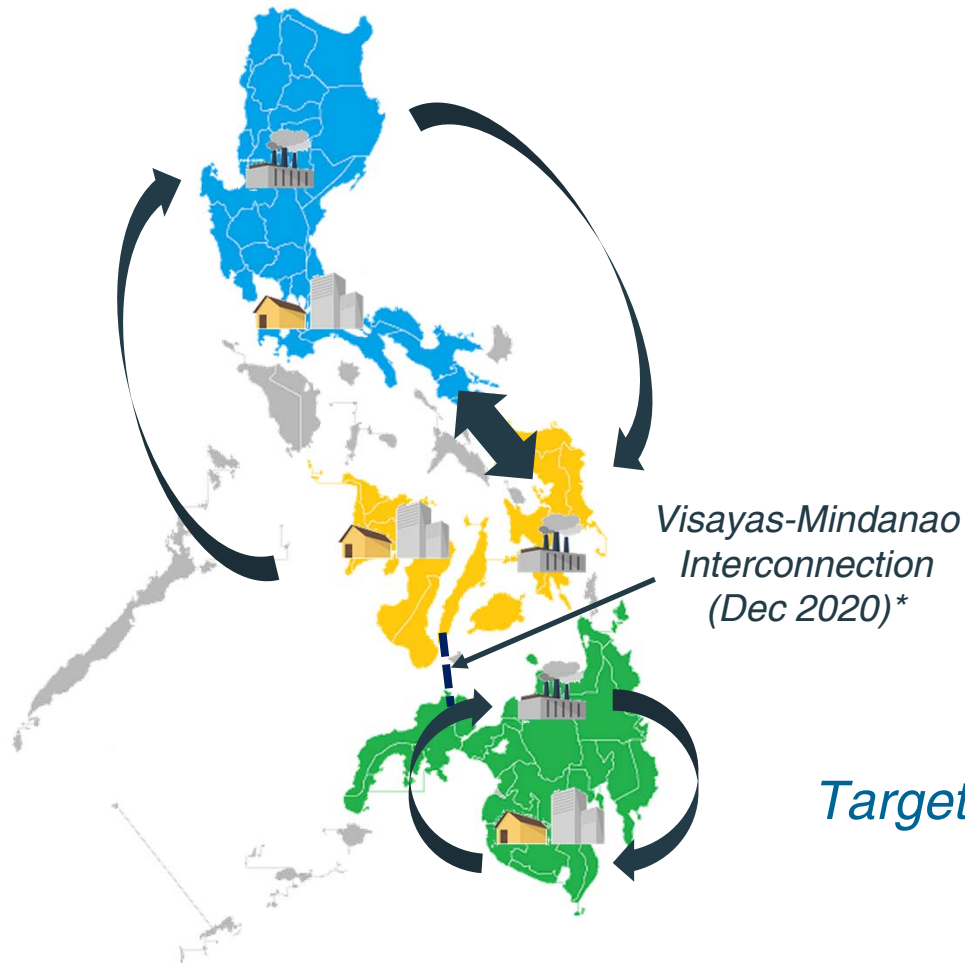
# **IMPLEMENTATION OF SETTLEMENT REGIONS (LUZON/VISAYAS AND MINDANAO)**

**08 MARCH 2018**  
**PDM Evidentiary Hearing**

# WESM PRICE DETERMINATION METHODOLOGY



# WESM MINDANAO IMPLEMENTATION



*During the 1<sup>st</sup> ~3 years of WESM Mindanao, the Mindanao grid is not interconnected with the rest of the system; hence, **no physical flow of electricity***

*Target WESM operations by 4Q 2018*

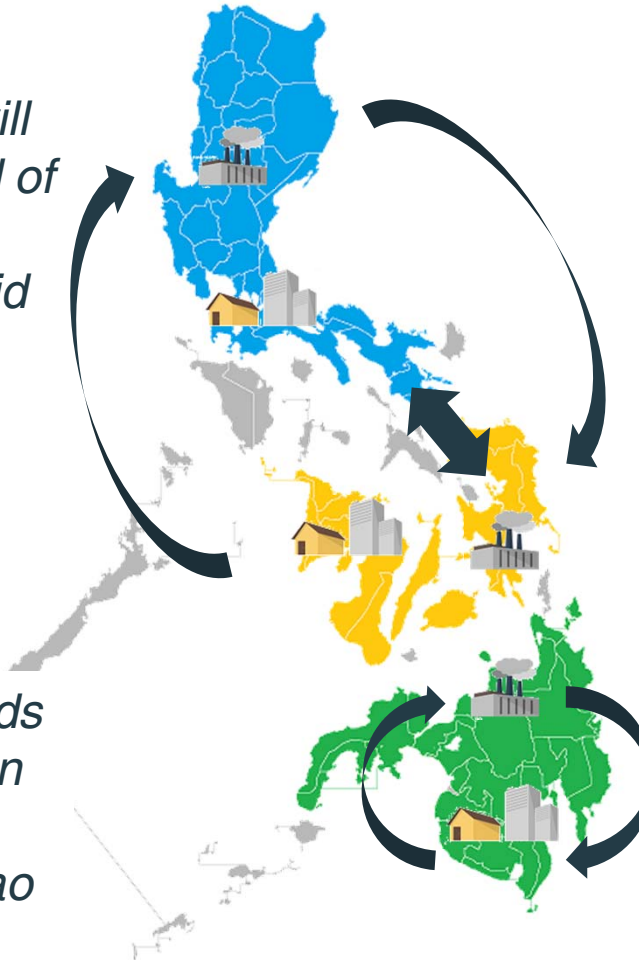
# IMPLICATIONS OF NO PHYSICAL FLOW



*Prices in Luzon-Visayas grids will only be based on supply-demand of Luzon-Visayas grids;  
Likewise, prices in Mindanao grid will only be based on supply-demand of Mindanao grid*



*Demand from Luzon-Visayas grids will be served only by generation from Luzon-Visayas grids ;  
Likewise, demand from Mindanao grid will be served only by generation from Mindanao grid*

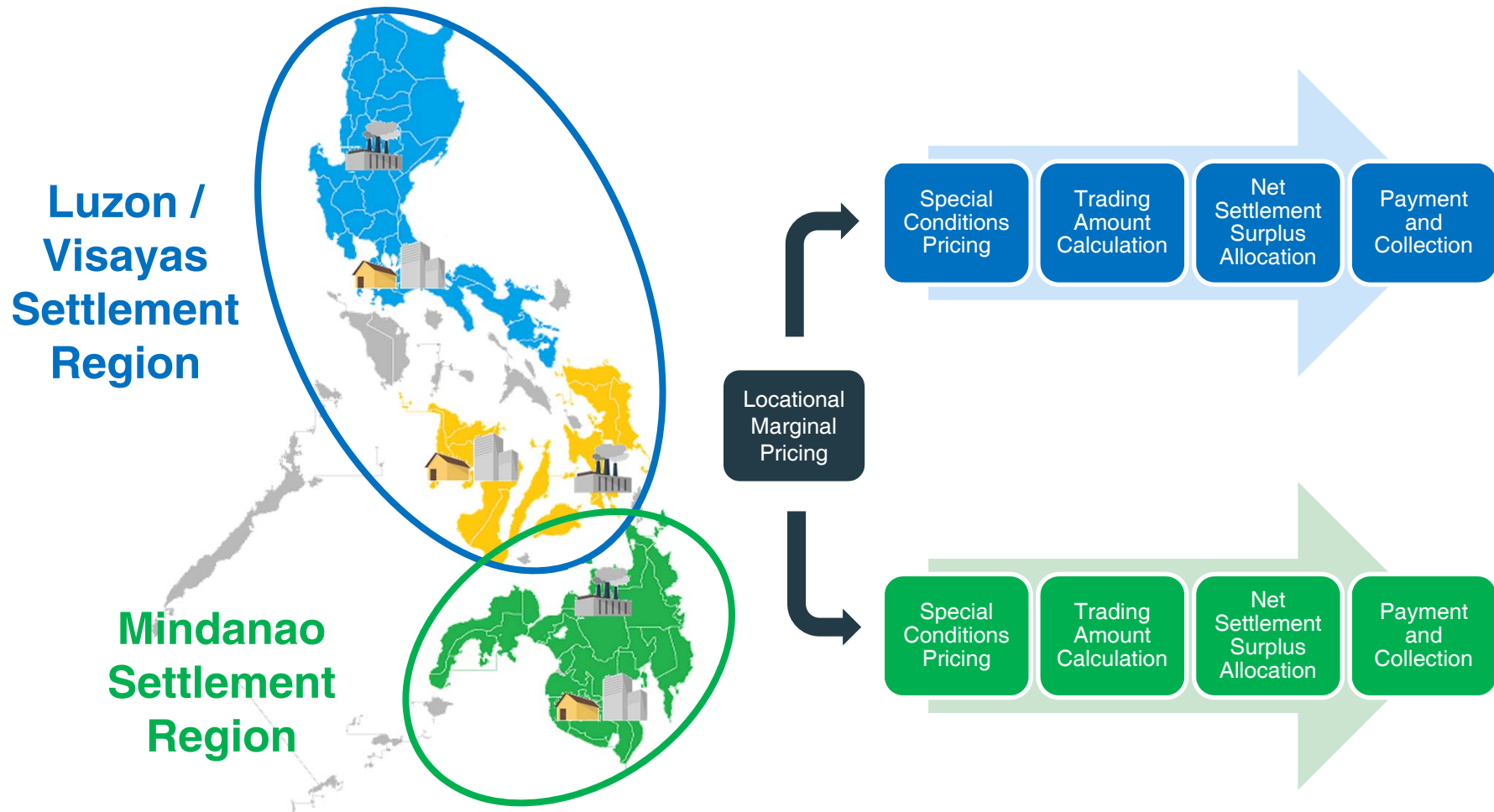


*There are special pricing and settlement mechanisms that allocate generation costs to customers.*

*If performed under one settlement region, costs from Luzon-Visayas grids will be allocated to Mindanao grid or vice-versa.*

# PRICE DETERMINATION METHODOLOGY

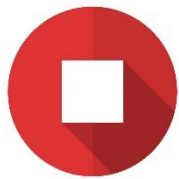
## Proposal Prior to Interconnection of Mindanao



# PRICE DETERMINATION METHODOLOGY

## Items for Clarification

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Administered Price  
Determination Methodology

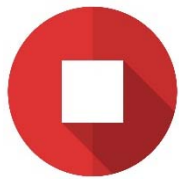


Net Settlement Surplus  
Allocation

# PRICE DETERMINATION METHODOLOGY

## Items for Clarification

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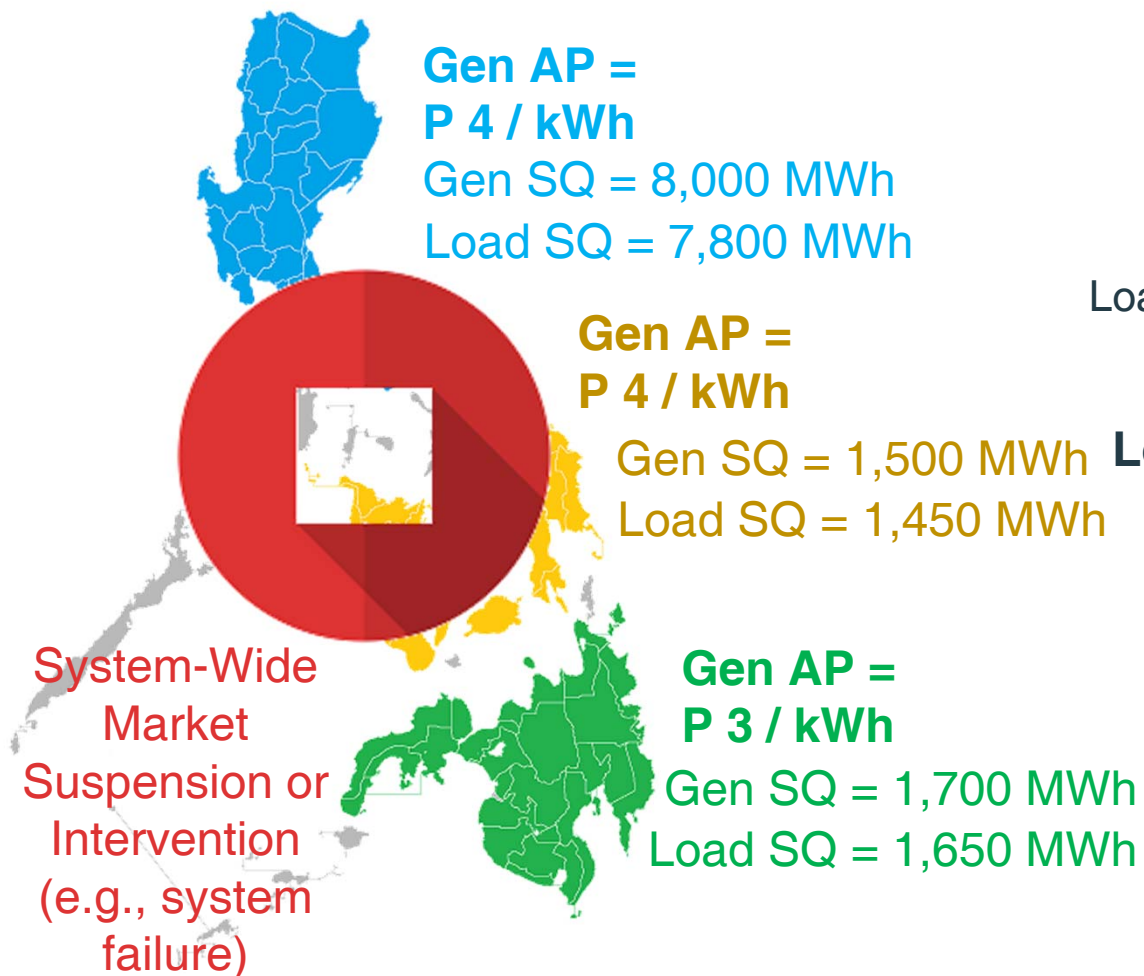


Administered Price  
Determination Methodology



Net Settlement Surplus  
Allocation

# ADMINISTERED PRICE DETERMINATION METHODOLOGY



## One Settlement Region

Gen AP – based on last 4 weeks (locational)

$$\text{Load AP}_{\text{LVM}} = \frac{\text{Total LVM Admin Gen PhP}}{\text{Total LVM Load}}$$

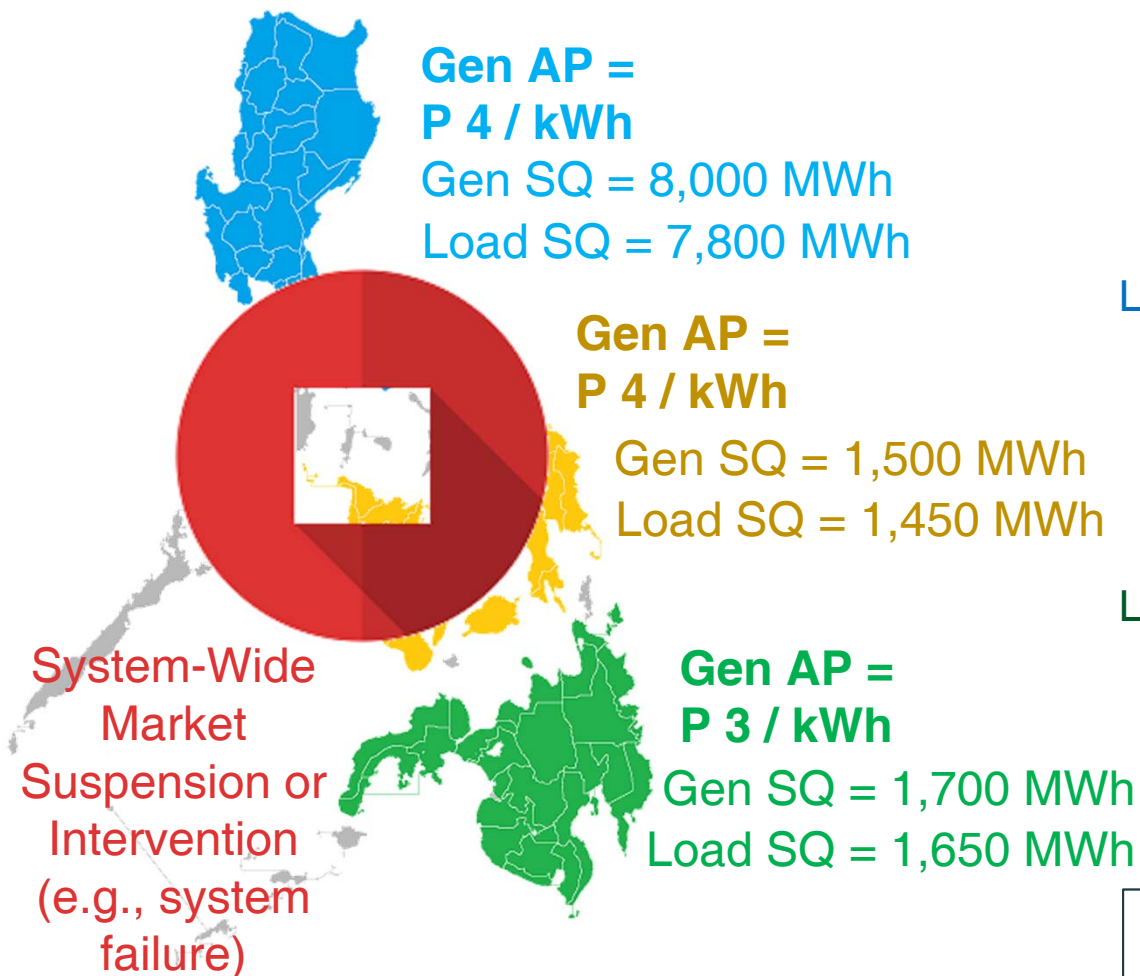
$$\text{Load AP}_{\text{LVM}} = \frac{43.1 \text{ M}}{10.9 \text{ GWh}} = \text{P } 3.85 / \text{kWh}$$

*Some of the generation costs in Luzon/Visayas was allocated to Mindanao resulting in:*

- Lower  $AP_{\text{Load}}$  (3.85) for Luzon/Visayas compared with  $AP_{\text{Gen}}$  (4.00)
- Substantially higher  $AP_{\text{Load}}$  (3.85) for Mindanao compared with  $AP_{\text{Gen}}$  (3.00)



# ADMINISTERED PRICE DETERMINATION METHODOLOGY



## Two Settlement Regions

Gen AP – based on last 4 weeks (locational)

$$\text{Load AP}_{LV} = \frac{\text{Total LV Admin Gen PhP}}{\text{Total LV Load}}$$

$$\text{Load AP}_{LV} = \frac{38.0 \text{ M}}{9.25 \text{ GWh}} = \text{P } 4.11 / \text{kWh}$$

$$\text{Load AP}_M = \frac{\text{Total M Admin Gen PhP}}{\text{Total M Load}}$$

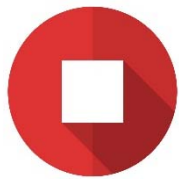
$$\text{Load AP}_M = \frac{5.1 \text{ M}}{1.65 \text{ GWh}} = \text{P } 3.09 / \text{kWh}$$

*AP<sub>Load</sub> generally reflects generation cost in the same settlement region plus cost of losses*

# PRICE DETERMINATION METHODOLOGY

## Items for Clarification

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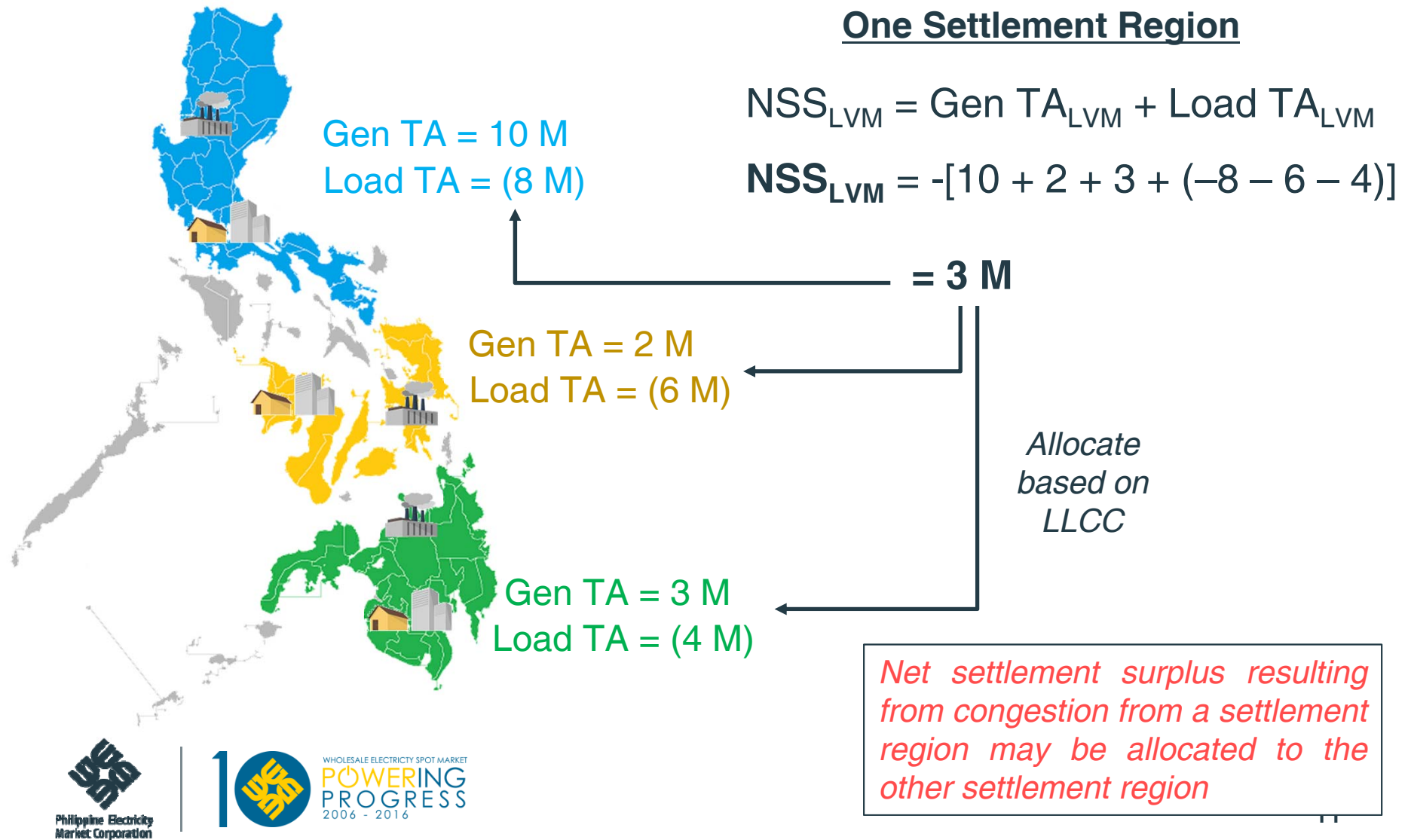


Administered Price  
Determination Methodology

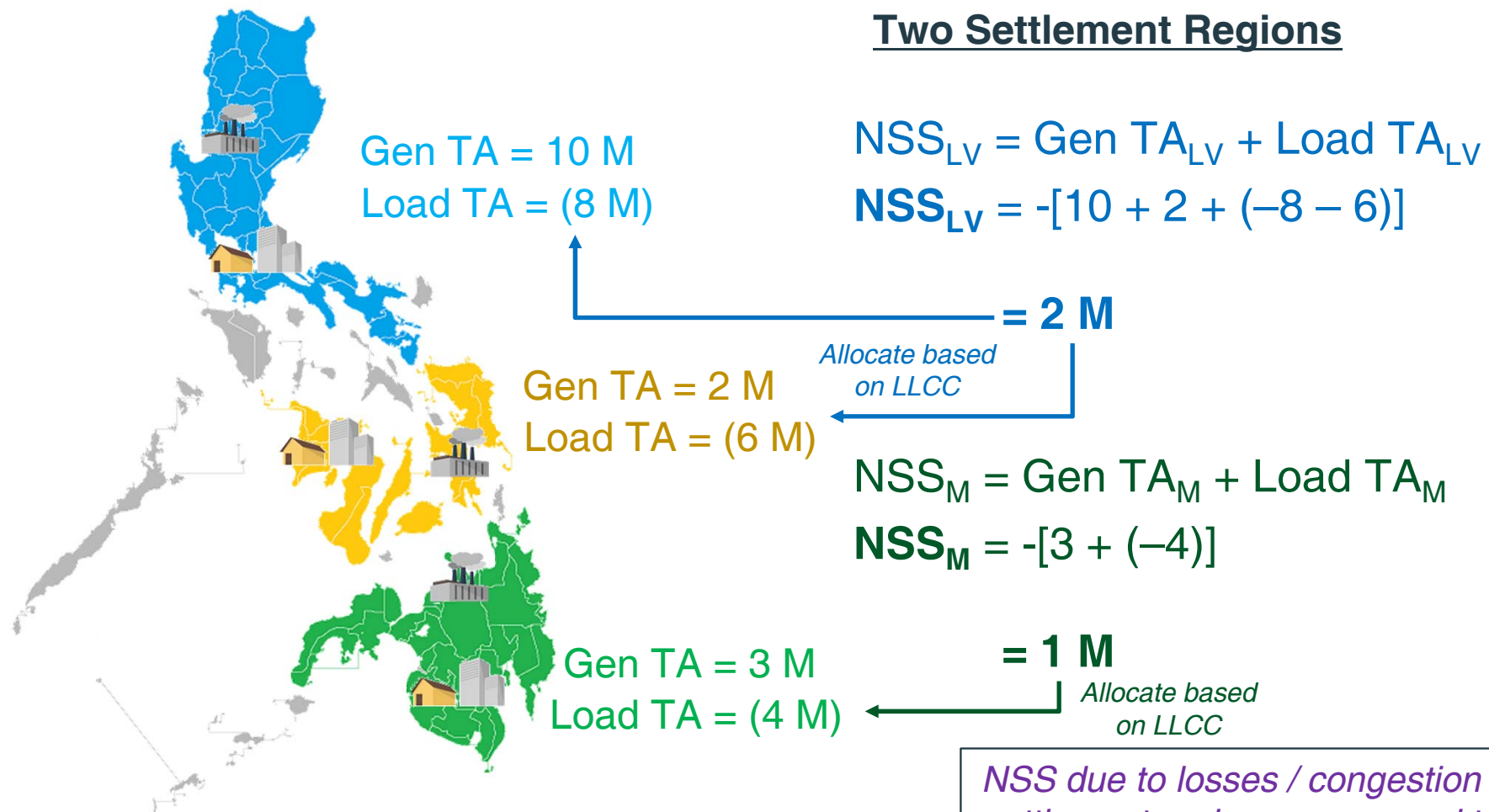


Net Settlement Surplus  
Allocation

# NET SETTLEMENT SURPLUS ALLOCATION



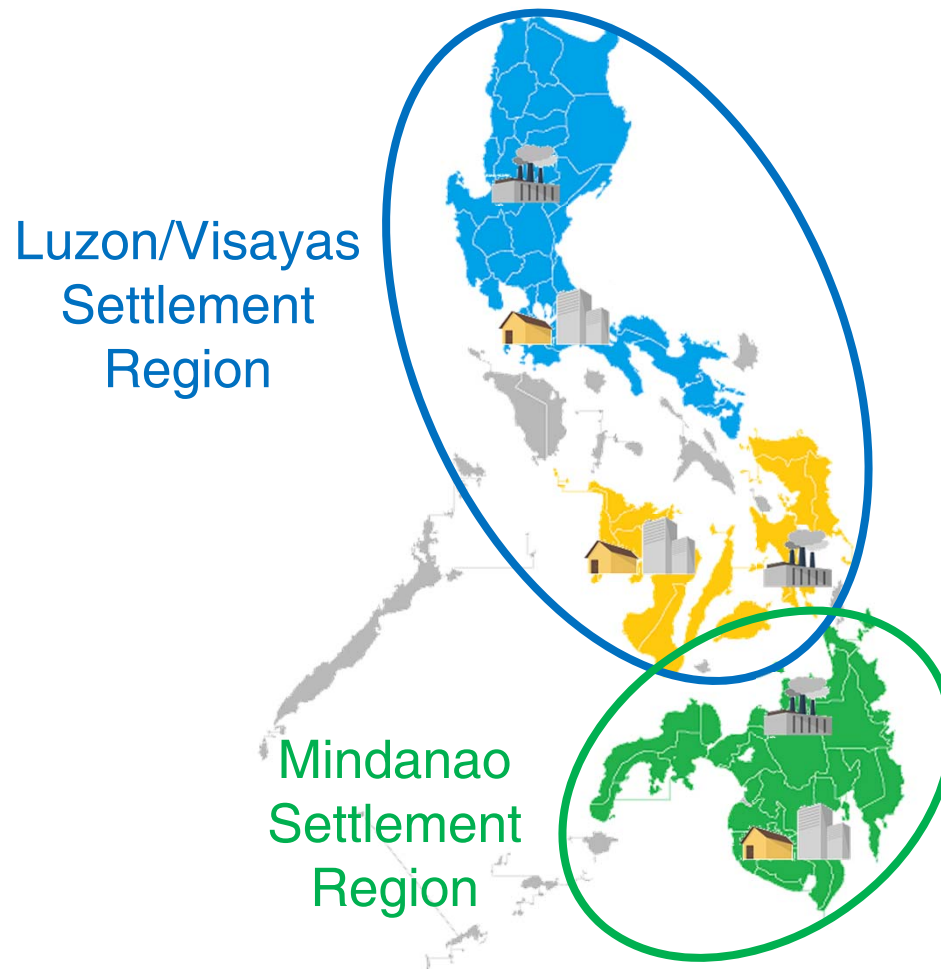
# NET SETTLEMENT SURPLUS ALLOCATION



*NSS due to losses / congestion of a settlement region are ensured to be allocated to the participants that paid for the losses / congestion*

# PRICE DETERMINATION METHODOLOGY

## Summary



- Locational marginal pricing using the MDOM will be uniformly applied to the whole system.
- However, it is proposed that special pricing (i.e., AP) and settlement (i.e., NSS) mechanisms be performed per settlement region to ensure that costs and revenues are driven by actual market conditions.
- Inter-settlement region bilateral contract declaration will not be allowed with this proposal.



# END OF PRESENTATION

***WESM Works.***



WESM Helpdesk Ticketing System  
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