

**WHOLESALE ELECTRICITY SPOT MARKET
RULES CHANGE COMMITTEE**

RESOLUTION NO. 2016-09

**Proposed Amendments to the WESM Market Manual on Management of Net
Settlement Surplus**

WHEREAS, on 24 February 2016, the Rules Change Committee (RCC) received the PEMC-Market Operator's (PEMC-MO) Proposed Amendments to the WESM Market Manual on Management of Net Settlement Surplus ("NSS Manual");

WHEREAS, the Net Settlement Surplus (NSS) is defined in the WESM Rules as the "settlement surplus remaining after all market transactions have been accounted for, including the assignment of transmission line rentals to Network Service Providers";

WHEREAS, ERC Resolution No. 6, Series of 2009 ("ERC NSS Rules") provides that the allocation of the NSS to the trading participants shall be on a pro-rata basis depending on the recipient's contribution to the total NSS;

WHEREAS, based on the ERC NSS Rules, the PEMC calculated the NSS allocation using the formula:

$$R_{j,k} = NSS_k \times \frac{\sum LLCC_{j,k}}{\sum LLCC_k}$$

Where,

- $R_{j,k}$ – rebate amount or NSS allocation for recipient j for trading interval k
- NSS_k – the Net Settlement Surplus for the trading interval k
- $\sum LLCC_{j,k}$ – sum of the line loss and congestion charges payments of recipient j for the trading interval k
- $\sum LLCC_k$ – sum of the line loss and congestion charges payments of all paying WESM customers for the trading interval k

WHEREAS, the Line Loss and Congestion Charges (LLCC) payments of each trading participant is calculated as follows:

$$LLCC_{j,k} = (LMP_{RTD,j,k} - MCP_{RTD,h,k}) \times EAQ_{j,k} + (LMP_{RTX,j,k} - MCP_{RTX,h,k}) \times (MQ_{j,k} - EAQ_{j,k})$$

Where,

- $LLCC_{j,k}$ – line loss and congestion charges payments of trading participant j for trading interval k
(Note: LLCC may only be negative or zero. If the formula results to a positive value, LLCC

is set to zero.)

- $LMP_{RTD,j,k}$ – locational marginal price from the ex-ante run of trading participant j for trading interval k
 $MCP_{RTD,h,k}$ – highest market clearing price from the ex-ante run for trading interval k
 $EAQ_{j,k}$ – ex-ante quantity of trading participant j for trading interval k
 $LMP_{RTX,j,k}$ – locational marginal price from the ex-post run of trading participant j for trading interval k
 $MCP_{RTX,h,k}$ – highest market clearing price from the ex-post run for trading interval k
 $MQ_{j,k}$ – metered quantity of trading participant j for trading interval k

WHEREAS, there is a need to amend the above formula to include bilateral contract quantities as they affect the total payment of trading participants to the market;

WHEREAS, the ERC NSS Rules established that the allocation of the NSS should depend on each recipient's contribution to the total NSS, and thus to be allocated to those that actually provided payments to the market;

WHEREAS, PEMC submitted to the RCC its proposed amendments to the NSS Manual to enhance the current NSS allocation methodology, through the following:

- Determination of LLCC payments attributed to each Trading Participant;
- Consideration of bilateral contract transactions when calculating the total LLCC of each trading participant; and
- Application of the lowest Market Clearing Price as the reference price for calculating the LLCCs of the trading participants.

WHEREAS, the proposal intends to specify in the NSS Manual the following:

- Methodology for calculating LLCC payments with consideration to bilateral contract transactions:

$$LLCC_{j,k} = LLCPR_{RTD,j,k} \times (EAQ_{j,k} - \sum BQC_{j,c,k}) + LLCPR_{RTX,j,k} \times (MQ_{j,k} - EAQ_{j,k}) + \sum \text{Line Rental}_{j,c,k}$$

Where:

- $LLCC_{j,k}$ - line loss and congestion charges payments of recipient j for the trading interval k
 $LLCPR_{RTD/X,j,k}$ - line loss and congestion price during the ex-ante or ex-post run of recipient j for trading interval k
 $EAQ_{j,k}$ - ex-ante quantity of recipient j for trading interval k
 $BQC_{j,c,k}$ - bilateral contract quantity of the bilateral contract between recipient j and counterparty c for trading interval k
 $MQ_{j,k}$ - metered quantity of recipient j for trading interval k
 $\sum \text{Line Rental}$ - line rental trading amount associated with the bilateral contract between recipient j and counterparty c for trading interval k (this amount may be zero if the trading participant is not the assigned payer of the line rental trading amount)

and

- b) Use MCP_{Lowest} instead of $MCP_{Highest}$ as the reference price for calculating LLCP for a more appropriate allocation to Trading Participants that paid more due to congestion

$$LLCP_{RTD/X,j,k} = LMP_{RTD/X,j,k} - MCP_{lowest,k}$$

WHEREAS, the proposal was presented before the RCC during its 111th meeting held on 03 March 2016, and was thereafter approved for posting in the Market Information Website to solicit comments from interested parties;

WHEREAS, the proposal was published on 11 March 2016 with the corresponding notice to participants;

WHEREAS, the DOE, Aboitiz Power Corporation (APC) and SN Aboitiz Power (SNAP) submitted their comments to the proposal;

WHEREAS, the RCC, during its 116th meeting held on 07 July 2016, deliberated upon the proposed amendments with the comments received from the aforementioned WESM Participants;

WHEREAS, APC and SNAP expressed their disagreement to the proposal, citing the following reasons:

- a) On the proposed LLCC formula:
- i. the proposed formula for LLCC limits the NSS to the load side, transferring the bulk of the NSS proceeds to the participant who paid the higher line rental charge
 - ii. the line rental charges do not accurately show the LLCC associated with the market participants
 - iii. the proposed LLCC formula considers the line rental charge in calculating the rebate for a load customer, but not for a generator
 - iv. the LLCC should be broken down into two components, spot quantity and bilateral contract quantity, rather than changing the line loss and congestion charges formula
- b) On the proposed change of the reference price of LLCP from $MCP_{Highest}$ to MCP_{Lowest} :
- i. the proposal to change the reference market clearing price arises from the interpretation that the NSS is only associated with those paying participants thus NSS should be allocated to those that were part of the collectibles (participants that provided actual payments to the market)

- ii. rather than using the lowest MCP as reference, it would be better to use the MCP of an unconstrained market solution which reflects the condition without the congestion

WHEREAS, the proponent, PEMC-MO, presented its responses to the arguments of APC and SNAP, as follows:

a) On the proposed LLCC formula:

- i. The ERC Resolution No. 6, Series of 2009 (NSS Rules) establishes that the NSS should be allocated based on the LLCC payment of each trading participant. Based on the analysis, the line rental charge is a form of LLCC payment. This is why it was proposed to be included in the formula.
- ii. The line rental charge would be considered in the LLCC of the counterparty that would pay the line rental charge.

b) On the proposed change of the reference price of LLCP from $MCP_{Highest}$ to MCP_{Lowest} :

- i. NSS arises, in the case of congestion, because lower-priced power is exported to the higher-priced region. As a result, customers in the higher-priced region are paying at a higher price for the imported power and results in NSS. The generators in the lower-priced region would have still been paid at or above its offer price.

WHEREAS, considering the inputs from the DOE, APC and SNAP, as well as PEMC-MO's response to the same, the RCC agreed to adopt the original proposal for the allocation of Net Settlement Surplus;

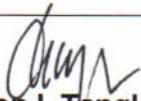
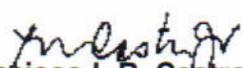
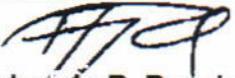
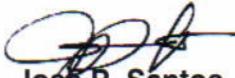
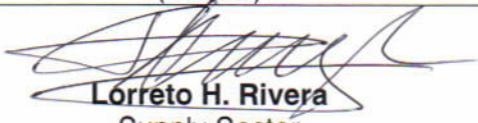
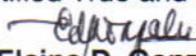
WHEREAS, the agreements of the RCC regarding the proposed amendments to the WESM Market Manual on the Management of Net Settlement Surplus are approved for endorsement to the PEM Board;

NOW THEREFORE, we, the undersigned and in behalf of the sector we represent, hereby resolve as follows:

RESOLVED, that the Proposed Amendments to the WESM Market Manual on Management of Net Settlement Surplus, as revised, is hereby approved by the RCC;

RESOLVED FURTHER, that the attached Annex A of the Proposed Amendments to the WESM Market Manual on Management of Net Settlement Surplus is hereby endorsed to the PEM Board for approval and endorsement to the DOE.

Done this 07 July 2016, Pasig City.

<p>Approved by:</p> <p>RULES CHANGE COMMITTEE</p>  <p>Maila Lourdes G. de Castro Chairperson Independent</p>	
<p>Members:</p>	
 <p>Concepcion I. Tanglao Independent</p>	 <p>Francisco L.R. Castro, Jr. Independent</p>
 <p>Allan C. Nerves Independent</p>	<p>Isidro E. Cacho, Jr. Market Operator Philippine Electricity Market Corporation (PEMC)</p>
 <p>Ambrosio R. Rosales Transmission Sector National Grid Corporation of the Philippines (NGCP)</p>	<p>Joselyn D. Carabuena Generation Sector Power Sector Assets and Liabilities Management Corporation (PSALM)</p>
 <p>Jose Ferlino P. Raymundo Generation Sector SMC Global</p>	 <p>Theo C. Sunico Generation Sector Vivant Corporation</p>
 <p>Ciprinilo C. Meneses Distribution Sector (PDU) Manila Electric Company (MERALCO)</p>	 <p>Jose P. Santos Distribution Sector (EC) Ilocos Norte Electric Cooperative, Inc. (INEC)</p>
<p>for: </p> <p>Gilbert A. Pagobo Distribution Sector Mactan Electric Company (MECO)</p>	 <p>Ludovico D. Lim Distribution Sector Antique Electric Cooperative, Inc. (ANTECO)</p>
 <p>Lorreto H. Rivera Supply Sector TeaM (Philippines) Energy Corporation (TPEC)</p>	<p>Certified True and Correct:</p>  <p>Elaine D. Gonzales RCC Secretary PEMC</p>



Proposed Amendments to the WESM Manual on the Management of Net Settlement Surplus

Title	Section	Provision	Proposed Amendment	Rationale
FLOW BACK TO THE PARTICIPANTS	5.3.4 (new)	(blank)	<p>The line loss and congestion charges payments of each trading participant shall be calculated as follows:</p> $LLCC_{j,k} = LLC_{RTD/X,j,k} \times (EAQ_{j,k} - \square BCC_{j,c,k}) + LLC_{RTD/X,j,k} \times (MQ_{j,k} - EAQ_{j,k}) + \square \text{Line Rental}_{j,c,k}$ <p>Where: $LLCC_{j,k}$ = line loss and congestion charges payments of recipient j for the trading interval k $LLC_{RTD/X,j,k}$ = line loss and congestion price during the ex-ante or ex-post run of recipient j for trading interval k $EAQ_{j,k}$ = ex-ante quantity of recipient j for trading interval k $BCC_{j,c,k}$ = bilateral contract quantity of the bilateral contract between recipient j and counterparty c for trading interval k $MQ_{j,k}$ = metered quantity of recipient j for trading interval k \square Line Rental = line rental trading amount associated with the bilateral contract between recipient j and counterparty c for trading interval k (this amount may be zero if the trading participant is not the assigned payer of the line rental trading amount)</p>	To specify the methodology for calculating the line loss congestion charge payment of each trading participant with consideration of bilateral contract transactions
FLOW BACK TO THE PARTICIPANTS	5.3.5 (new)	(blank)	<p>The line loss and congestion price of each trading participant for the ex-ante or ex-post run shall be calculated as follows:</p> $LLC_{RTD/X,j,k} = LMP_{RTD/X,j,k} - MCP_{lowest,k}$	To specify the methodology for calculating the line loss and congestion price of

Title	Section	Provision	Proposed Amendment	Rationale
			<p>Where: $LLCP_{RTD/X,j,k}$ = line loss and congestion price during the ex-ante or ex-post run of recipient j for trading interval k $MCP_{lowest,k}$ = lowest marginal clearing price for trading interval k</p>	<p>each trading participant using the lowest marginal clearing price as the reference price</p>