

MINUTES OF THE 33rd MEETING OF THE RULES CHANGE COMMITTEE

Date : 05 May 2010
Time : 9:00 A.M.
Venue : PEMC Board Room
18th Floor, Robinsons-Equitable Tower
Ortigas Center, Pasig City

MEMBERS PRESENT:

Epictetus E. Patalinghug	-	Acting Chairperson/Independent
Gloria P. Gerilla-Teknomo	-	Independent
Cherry Aquino-Javier	-	Generation Sector – AES
Ralph T. Crisologo	-	Generation Sector – SNAP
Liberty Z. Dumlao	-	Generation Sector – PSALM
Alfredo L. Licudine, Jr.	-	Generation Sector – NPC
Vicente C. Sioson	-	Distribution Sector – MERALCO
Augusto D. Sarmiento	-	Distribution Sector – DECORP
Jose P. Santos	-	Distribution Sector – INEC
Raul Joseph G. Seludo	-	System Operator – NGCP
Conrado D. Pecjo	-	Supply Sector – Angeles Power, Inc.

MEMBERS NOT PRESENT:

Robinson P. Descanzo	-	Market Operator – PEMC
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ALTERNATE MEMBERS PRESENT:

Mario R. Pangilinan	-	Market Operator – PEMC
Cynthia R. Encarnacion	-	Generation Sector – NPC

OBSERVERS PRESENT:

Mylene C. Capongcol	-	DOE
Debora T. Layugan	-	ERC

OTHERS PRESENT:

Emmanuel M. Sotomil	-	RCC Metering Subcommittee
Renato B. Afurong	-	RCC Metering Subcommittee
Senen D. Fenomeno	-	PEMC – MO
Rachel P. Anosan	-	PEMC – MO
Isidro E. Cacho, Jr.	-	PEMC – MO
Roel B. Calano	-	PEMC – Billing and Settlement
Celina R. Encarnacion	-	PEMC – Legal
Gladys G. Nebab-Zamora	-	PEMC – Legal
Hilary Romeli C. Florendo	-	PEMC – ECO
Phillip C. Adviento	-	PEMC – MAG
Elise F. Milo	-	PEMC – MAG
Ruth C. Perez	-	DOE
Ferdinand B. Binondo	-	DOE
Michael L. Pascual	-	NGCP – SO
Yari Miralao	-	AES – MPPCL
Jennifer C. Go		

SECRETARIAT

Elaine D. Gonzales	-	PEMC – MAG
Karen D. Abregana	-	PEMC – MAG
Rheinhardt O. Banogon	-	PEMC – MAG

After determining the presence of a quorum, the 33rd Rules Change Committee meeting was called to order by the Acting Chairperson Mr. Epictetus E. Patalinghug, at about 9:15 A.M. The following agenda items were discussed:

1. Adoption of the Provisional Agenda

The Provisional Agenda for the 33rd RCC Meeting was presented and approved.

2. Reading and Approval of the Minutes

The Minutes of the 32nd RCC Meeting was presented and approved.

3. Matters Arising from the Previous Minutes

a. RCC's request for an MO alternate member. Following the RCC's request for an alternate member for MO, the PEM Board appointed Mr. Mario R. Pangilinan, EVP of the Market Operations Group, as RCC alternate member to Mr. Robinson P. Descanzo. He was appointed by the Board during the 47th Board meeting held on 27 April 2010.

b. MERALCO's Comments on the Proposed Amendments to the WESM Rules concerning Alternative Dispute Resolution Process. The RCC agreed to remand to the Dispute Resolution Group (DRG) the Proposed Amendments to the WESM Rules concerning Dispute Resolution provisions, for the DRG to deliberate the MERALCO's comments/suggestions on the said rules change proposal.

The RCC further agreed to invite the DRG during the next meeting to provide their views on the comments made by MERALCO.

c. Proposed Changes to Information Disclosure and Confidentiality Manual. Mr. Isidro Cacho presented the proposed revisions to Information Disclosure and Confidentiality Manual, which already incorporate the comments/suggestions made by the RCC in their previous deliberations.

- On Section 5.3 of the Manual, he presented the addition of new Sections 5.3.2 and 5.3.3.

Proposed Section 5.3.2 will read as follows: "Confidential information may also be disclosed by the Market Operator to parties other than those enumerated in the previous Section upon prior written permission given by the WESM Member or participant whose confidential information is sought to be disclosed."

On the other hand, proposed Section 5.3.3 will read as follows: "The confidential information disclosed pursuant to the foregoing Sections shall, however, retain its confidentiality status and the recipient is obliged to maintain confidentiality as provided for in this Manual."

- Upon the request of the RCC during the last meeting to incorporate in the Manual personal undertaking by entitled recipients that will preclude them from divulging any Market Information to unauthorized person/entity, the word "may" in Section 5.4.2 was replaced with "shall" to render the execution of the undertaking by the recipients mandatory. Section 5.4.2 will then read as follows: *"The Market Operator*

shall require the recipient to execute confidentiality and non-disclosure agreements or undertaking with terms and conditions consistent with this Manual and the WESM Rules."

The following were the comments/suggestions raised by the body:

- On Section 6.4 (a), Atty. Liberty Dumlao suggested to set a specific period for the review and update of the market information. Following Atty. Dumlao's comments, Atty. Debora Layugan recommended to change the phrase "from time to time" with "annually or as may be necessary", to read as follows: *"The Market Operator will review and update the market information catalogue annually or as may be necessary."*
- Mr. Vicente Sioson suggested for the MO to develop a standard form for written permission and undertaking.
- As in the previous RCC meeting, Mr. Ralph Crisologo expressed his reservation on the inclusion of the System Operator as one of the entitled recipients of confidential information under WESM Rules clause 5.3.2. He further opined that disclosure of confidential information must be limited to the SO and not to the entire NGCP.
- On Mr. Crisologo's comment to treat SO apart from NGCP, Mr. Raul Seludo countered that in reality, they belong to one company.
- Atty. Rachel Anosan remarked that Section 5.3.2 of the WESM Rules does not mean uniform disclosure but sharing of information among the entities for whatever purpose. It does not necessarily authorize the MO to disclose information to the SO that the ERC or DOE is entitled to, to which Mr. Sioson argued that it might be construed otherwise.
- To address the concerns raised by Mr. Sioson and Mr. Crisologo, Mr. Mario Pangilinan recommended to limit the information that the SO can access and/or to remove the System Operator from the Exceptions. In removing the SO as one of the entitled recipients of confidential information, he suggested to identify two (2) market information categories that the SO can access: (a) pertinent information that will help the SO effectively carry out its security and system planning functions; and (b) information that the SO cannot deprive its mother company, the NGCP.
- Following Mr. Pangilinan's recommendation, the RCC requested the MO to revise Section 5.3.2 of the WESM Rules, to incorporate said recommendations.

The RCC approved, in principle, the proposed revisions to the Information Disclosure and Confidentiality Manual and the Market Information Catalogue, subject to the revisions in Section 6.4 (a) of the IDC Manual and Section 5.3.2 of the WESM Rules.

- d. **Proposed Amendments to the Metering Manual regarding Metering Service Provider (MSP) Performance Measurement.** Following the RCC's request during its last meeting on 07 April 2010 to revise the language of the proposed Sections 11.7.2 and 11.7.3 in such a way that the trading participants will not be compelled to submit a Customer Satisfaction Rating for their Metering Service Provider/s, the RCC Metering Subcommittee presented to the body the proposed revisions to the said Sections, for the consideration and approval by the body.

Incorporating the suggestions made by the RCC, the proposed Section 11.7.2 will read as follows: *"Every six (6) months, the PEMC Metering & Settlement Department shall conduct a CSR on the MSP performance through the issuance of the CSR form to all the WESM trading participants to be accomplished and submitted back to PEMC. The CSR forms are to be accomplished every first week of July of the current year and January of the following year. The July rating comprises the MSP performance from January to June of the current year and the January rating correspond to the second half of the previous year (July to December)."*

Proposed Section 11.7.3 will read as follows:

"The Annual Performance Rating covers the billing periods January to December of each year. It shall consist of:

- 1. The annual Performance Measures under Sub- section 11.4.1 – Service Delivery (Average of the 12 months billing).*
- 2. The Customer Satisfaction Rating under Sub-sections 11.4.2 and 11.7.2.*

The annual MSP Performance Rating shall be submitted by the PEMC Metering & Settlement Department to PEMC Management."

On the proposed Section 11.7.3, Atty. Layugan inquired whether there is a corresponding action that the PEMC Management is authorized to take once it receives the result of the MSP Performance Rating.

Mr. Emmanuel Sotomil clarified that the proposed new section in the Metering Manual does not cover the subsequent actions that may be taken by the PEMC Management upon receipt of the performance rating. He suggested that the said matter be taken up by PEMC in one of its governance processes.

Atty. Layugan opined that in the absence of such procedure, how will then the process of MSP rating be enforced. She also wanted to know where the authority of the ERC would come in this instance considering that the ERC is the one who issues license to the MSP.

Mr. Sotomil disclosed that in one of the Metering Subcommittee's deliberations of the proposed MSP Performance Measurement, it was agreed to end the MSP rating process at the submission of the report to the PEMC management, as the Subcommittee does not want to pre-empt the subsequent actions that the PEMC management might take.

Atty. Layugan wanted to know the authority of the PEMC in imposing penalties or in taking any action and sanction over the MSP which is not performing at par.

Mr. Vicente Sioson, in response to Atty. Layugan's inquiry, cited Section 4.7.2 of the WESM Rules which states that: *"The Market Operator shall develop a process of penalties and sanctions for Meter Service Providers and WESM Participants whose meter data is incorrect beyond reasonable limits for whatever reason."* He further informed the body that there is no existing provision in the Grid Code on the MSP Performance. So as to address the issue on the role of the ERC in enforcing the MSP rating process, he suggested for the RCC Metering Subcommittee to draft a proposal on the inclusion of the MSP Performance Indicator in the Grid Code.

The RCC approved, as amended, the proposed New Section 11 in the Metering Manual which establishes the Metering Service Provider (MSP) Performance Measurement. Accordingly, the RCC approved and signed the Resolution on the said proposed amendments for endorsement to the PEM Board.

4. Main Business

Issues/ Topics Discussed	Remarks	Agreement/ Action Item
A. Presentation on the Billing and Settlement Calculation Processes	<p>Upon the request of the RCC during its previous meeting held on 07 April 2010 and to facilitate the RCC in the discussion of the Proposed Removal of Application of Site Specific Loss Adjustment (SSLA) for Generators, Mr. Roel Calano of the PEMC Billing and Settlement Department presented the Settlement Calculation Processes, particularly on the application of SSLA for generators (details of the presentation are provided and attached as Annex A).</p> <p>On Cases 1 and 2 where the treatment of transformers on the generator side as having negligible resistance, Mr. Sioson inquired how they differ from the transformers on the load side wherein the core-losses are taken into account.</p> <p>Mr. Calano explained that there is no available data for transformers on the generator side.</p>	
B. Proposed Removal of Application of SSLA for Generators	<p>Based on the presentation on the settlement calculation processes, Mr. Sotomil noted that the SSLA calculation process for generators is apparently being applied, however, zero values are being used in the absence of data that will reflect the loss figures for step up transformers.</p> <p>Mr. Crisologo suggested closing the discussion on the proposal as there is no more recommendation for removal of SSLA for generators.</p> <p>Mr. Pangilinan viewed that removing the SSLA on the generator side will not help towards the improvement of accuracies in the settlement and that to address this issue, plant owners must be required to submit and provide the MO with technical data/parameters on their generator step up transformers. He further related that the MO has already requested for but failed to obtain these data. He suggested to retain Section 9.8.2 in the Metering Manual.</p> <p>On Mr. Pangilinan's remark on making the metering point coincident with the RTUs, Mr. Sioson suggested</p>	<ul style="list-style-type: none"> The RCC closed the discussion on the proposed amendment by the Metering Subcommittee with the agreement to retain Section 9.8.2 in the Metering Manual.

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	<p>that the RCC recommends to the PEMC Board to petition the NGCP to address the issue on making the metering point coincident with the RTUs. He likewise reiterated his previous recommendation for the RCC Metering Subcommittee to look into the possibility of maintaining the metered quantities as measured and apply the SSLA on the pricing instead.</p> <p>Mr. Sotomil recommended that the study and drafting of the proposal be undertaken jointly by the RCC Metering Subcommittee and the Billing and Settlement Subcommittee.</p> <p>The RCC closed the discussion on the proposed amendments with the agreement to retain the application of SSLA for Generators in the Metering Manual that was proposed to be deleted by the RCC Metering Subcommittee.</p>	
<p>C. Proposed Changes to the WESM Manual on the Methodology for Determining Pricing Errors and Price Substitution due to Congestion for Energy Transaction in the WESM</p>	<p>Mr. Senen Fenomeno and Atty. Rachel Anosan of the Market Operations Group presented, for initial information of the RCC, the background and rationale of the proposed revisions to the WESM Manual on the Methodology for Determining Pricing Errors and Price Substitution due to Congestion for Energy Transaction in the WESM, which is still currently being reviewed by PEMC.</p> <p>As a backgrounder, Mr. Fenomeno explained that the formulation of the Price Substitution Methodology (PSM) was triggered by the outage of San Jose 600 MVA Transformer No. 2 on 11 July 2008. The following were the highlights of his presentation:</p> <ul style="list-style-type: none"> • Before the outage, San Jose Substation has 2400 MVA capacity. When complying with N-1 it has a capacity of 1800 MVA. With the outage of the second transformer and while complying with N-1, the capacity was reduced to 1200 MVA. • Since the San Jose transformers are included in the SO contingency list which is being simulated and considered in the generation of schedules and prices, the outage affected the market results. • The physical impact of the congestion were explained, as follows: <ul style="list-style-type: none"> ➢ Dispatch of generators in North Luzon was limited; ➢ Increase in dispatch of oil-based power plants 	<p>The RCC agreed that the details of the proposed revisions to the WESM Manual on the Methodology for Determining Pricing Errors and Price Substitution be deliberated during the next RCC meeting.</p>

Issues/ Topics Discussed	Remarks	Agreement/ Action Item
	<p>located in North/South to meet the demand;</p> <ul style="list-style-type: none"> ➤ Dispatch of Must Run Units (MRUs) to mitigate congestion and supply imbalance as well as to maintain the security of the Grid; ➤ Market information was limited and not readily available to the market participants due to the numerous pricing errors that ensued. <ul style="list-style-type: none"> • The economic impact of the congestion were likewise explained: <ul style="list-style-type: none"> ➤ Highly positive (or negative) prices; ➤ Extreme nodal price separation; ➤ High levels of net settlement prices and high net settlement surplus. • The declaration of the pricing error in the current price substitution methodology does not cover instances where there is an extreme congestion. <p>Mr. Fenomeno presented the salient features of the current Price Substitution Methodology (PSM) Manual:</p> <ul style="list-style-type: none"> • One of the features of the PSM Manual is the determination of network congestion through Price Triggers. The pricing error shall be issued and the price substitution methodology will be applied when the resulting prices show either of the following conditions: <ul style="list-style-type: none"> ➤ $LMP_H/MCP_H \geq F$; or ➤ $(LMP_H - LMPL)/MCP_H \geq F$ <p style="margin-left: 40px;">where: LMP_H – highest locational marginal price LMP_L – lowest locational marginal price MCP_H – highest marginal price F – trigger factor equivalent to 1.2</p> • Also included in the PSM Manual is the determination of Substitute Generator Prices. Substitute generator price is the market clearing price (MCP) derived from: (1) constrained solution for constrained-on generators; and (2) unconstrained solution for other generators. Using the methodology will ensure that: (a) the scheduled generators are guaranteed to get at least the market clearing price; (b) minimum cost will be charged to market participants; and (c) price separation is maintained. • In addition, the PSM detailed the determination of 	

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	<p>the Generator Trading Amount which uses the substitute prices and is based on scheduled and measured quantities. In determining the generator trading amount, the bilateral contract quantity declarations are accounted for. The computed total generator trading amount is then allocated to all customers, thus the Customer Trading Amount.</p> <ul style="list-style-type: none"> • The PSM provided that the Notice on the Pricing Error Notice (PEN) and Substitute Price shall be issued immediately after end of the trading interval. Further, it requires that the daily summary of the PEN and Substitute Price be published in the WESM website after the trading day. <p>As a backgrounder, Atty. Anosan explained that since the PSM touched on the price methodology in the WESM, an application for its approval was filed with the ERC. There were two relevant ERC rulings on this matter: (1) Decision dated 02 April 2009, approving the PSM, with modifications, to be applied beginning 11 July 2008; and (2) Order dated 17 August 2009 issuing additional clarifications on the approved methodology.</p> <p>Atty. Anosan presented the highlights of the ERC Findings and Ruling on the PSM:</p> <ul style="list-style-type: none"> • On the identification of affected trading interval: <ul style="list-style-type: none"> ➢ The ERC upheld the PEMC's application that the price substitution should not apply in certain intervals where the price triggers are not met even if the cause of the congestion still exists during those intervals. ➢ The ERC ruled that the existence of actual network congestion shall be declared by PEMC relying on inputs from SO, but declaration is not a pre-requisite to application of PSM. ➢ The ERC modified the formulation for the price trigger such that it shall be the absolute value on the left side of the equation. • On the determination of the substitute generator prices: <ul style="list-style-type: none"> ➢ The ERC approved the original methodology which uses the marginal clearing price from the unconstrained solution for generators not affected by constraint. ➢ For constrained-on generators, the ERC approved the use of the generator's offer price for the last offer block that was cleared for dispatch instead of the market clearing price 	

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Issues/ Topics Discussed	Remarks	Agreement/ Action Item
	<p>from the constrained solution.</p> <ul style="list-style-type: none"> • On the settlement mechanism: <ul style="list-style-type: none"> ➢ The ERC declared that the two-settlement system (ex-ante and ex-post) shall be maintained in order to account for quantity imbalances. ➢ The ERC approved the methodology on the allocation of the trading amount to the customers. <p>Atty. Anosan enlightened the body of the following ERC directives to PEMC:</p> <ul style="list-style-type: none"> • Conduct consultation among stakeholders to review price trigger every three months or as may be necessary for the first year of implementation and to develop set of conditions which would set off review of trigger mechanism outside of the periodic review process. • Conduct of audit of the PSM software by an external auditor. • Review and submit proposals for amendment of WESM Rules to incorporate the following: (a) mechanism to evaluate each congestion event which triggers application of PSM; and (b) based on evaluation and if warranted, inclusion of congestion even as a ground for market intervention. • Conduct separate consultation process among industry stakeholders to explore the following: <ul style="list-style-type: none"> ➢ Advantages/benefits and costs to PEMC of using zonal pricing mechanism in consideration of pricing errors, price separation, spring washer effect occurring in the WESM; ➢ Constitution of zones within Luzon and Visayas grids; ➢ Simulations that should result in zonal prices vis-à-vis price separations occurring during the July and August billing periods. <p>The rationale of the proposed revisions of the PSM manual was explained as well:</p> <ul style="list-style-type: none"> • The manual should be made consistent with the modifications and other directives prescribed by the ERC to avoid confusion and misinformation. 	

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	<ul style="list-style-type: none"> • There is a need to harmonize the PSM with the pricing error and substitution rules provided for in WESM Rules clause 3.10.5 (a) and (b) to address the gaps in the PSM that have been identified in the course of its implementation. <p>Atty. Anosan briefly summarized the proposed revisions in the PSM Manual which include the following:</p> <ul style="list-style-type: none"> • Incorporation of the ERC directive on the identification of affected trading intervals: <ul style="list-style-type: none"> ➢ Clarification that the PSM will apply in cases where the resulting MCP is equal to Php 0.00, but it is determined that there is actual network congestion; ➢ Inclusion of requirement to review value of price trigger ➢ Clarification of what constitutes network congestion as opposed to localized congestion • Harmonization with the ERC directive that the substitute price for constrained on generators is their respective offer prices for the last offer block that was cleared for dispatch. • Harmonization with the ERC directive to change the formula for the determination of customer settlement amounts. • Harmonization with WESM Rules Clause 3.10.5 (a) & (b) to provide guidelines as to which methodology will apply in cases where congestion and non-congestion related pricing errors occur in the same market run or same trading interval. <p>Atty. Anosan advised the body that she hoped to submit the proposed revisions to the PSM Manual before the next RCC meeting.</p> <p>In light of PEMC's ongoing review of the proposed revisions to the PSM Manual, the RCC agreed to discuss and deliberate the details of the proposed revisions during the next RCC meeting.</p>	
D. Proposed Amendments to the WESM	Mr. Yari Miralao, the Marketing and Regulatory Officer of the AES MPPCL, presented the background and rationale of the Proposed Amendments to the WESM	<ul style="list-style-type: none"> • The RCC approved the publication of the

Issues/ Topics Discussed	Remarks	Agreement/ Action Item
<p>Rules regarding the Creation of IPP Administrator as Another Category of WESM Membership</p>	<p>Rules regarding the Creation of IPP Administrator as Another Category of WESM Membership submitted by the AES-MPPCL.</p> <p>The following were the highlights of the presentation:</p> <ul style="list-style-type: none"> • Under the WESM Rules, a WESM Member is categorized as either a Customer of a Generation Company where they are defined as follows: <ul style="list-style-type: none"> ➢ “A Generation Company is a person or entity authorized by the ERC to operate facilities used in the generation of electricity, and registered with the Market Operator in that capacity in accordance with clause 2.3.1.” ➢ Likewise, a Customer is defined as “A person or an entity that engages in the activity of purchasing electricity that is supplied through the transmission system or a distribution system to a connection point.” • Mr. Yari Miralao explained that there is a need to update the WESM Rules on the following grounds: <ul style="list-style-type: none"> ➢ To reflect recent developments in the market; ➢ Current definition of Generation Company misrepresents the current market members; and ➢ To recognize the existence of a new type of Market Participant, the IPP Administrators, which do not specifically meet the description of neither a Generation Company nor Customer as currently defined in the WESM Rules. • IPP Administrators differ from the Generation Companies in that: <ul style="list-style-type: none"> ➢ They are given an opportunity to trade in the WESM without the risk or expense of building and/or operating a generation facility. ➢ They enjoy most of the benefits of owning a generation station without the costs of maintenance or capital upgrades. ➢ Many of the risks of owning a plant are explicitly managed through the Administration Agreements. ➢ No upfront capital or operational expertise is required of the IPP Administrator. • The AES-MPPCL proposed to include IPP Administrator as an additional category for Trading Participant, and thus will now have the following categories: 	<p>rules change proposal submitted by AES-MPPCL in the RCC web forum to solicit comments from the market participants and other interested parties; and</p> <ul style="list-style-type: none"> • The RCC Acting Chairperson requested the members of the RCC to submit their comments on the said proposed changes to the Secretariat for consolidation.

Issues/ Topics Discussed	Remarks	Agreement/ Action Item
	<ul style="list-style-type: none"> ➤ Customers; ➤ Generation Company; and ➤ IPP Administrator <ul style="list-style-type: none"> • The proposed rules change intends to: <ul style="list-style-type: none"> ➤ Harmonize the definitions of the IPP Administrator under the EPIRA and the Generation Company in the WESM Rules. ➤ Give separate and distinct representation to Generation Companies that own generation facilities and IPP Administrators that have rights over generation facilities. ➤ Give separate and distinct representation to the different Risk Profiles of Generation Companies and IPP Administrators. ➤ Create a PEMC Board that is reflective of the developments in the market. <p>While Atty. Layugan posed no particular objection on the proposal by MPPCL, she questioned the practicality of the proposal considering that IPPA is only a temporary mechanism.</p> <p>Pending the publication of the proposed changes to the WESM Rules regarding the creation of IPP Administrator as another category of WESM membership in the RCC forum, the RCC agreed to defer the deliberation of the said proposed changes. The RCC Acting Chairperson moved for the publication of the proposal in the RCC forum to solicit comments from the market participants and other interested parties. Likewise, he requested the body to submit their comments to the Secretariat for consolidation and for discussion in the next RCC meeting.</p>	

5. Other Matters

The RCC Acting Chairperson gave an update on the following RCC-Approved Amendments which were presented to the PEM Board during its meeting on 27 April 2010, for approval:

- a. **Proposed Amendments to the WESM Rules and PEM Audit Manual concerning Software Changes.** The PEM Board remanded to the RCC the proposed changes to the WESM Rules and PEM Audit Manual concerning the implementation of new or modified software, to review the limits of the liability of the PEM Board and MO concerning the implementation of software changes.
- b. **Proposed Amendments to the Market Surveillance, Compliance and Enforcement Market (MSCEM) Manual regarding a Prescribed Form for Requests for Investigation (RFI).** The PEM Board approved the Prescribed RFI Form subject to minor revision.

6. Next Meeting

The RCC agreed to hold its 34th meeting on 02 June 2010.

7. Adjournment

There being no matter to be discussed, the meeting was adjourned at 1:22 P.M.

Prepared by:

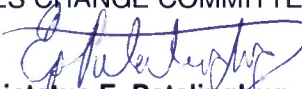

Rheinhart O. Banogon

Noted by:



Elaine D. Gonzales




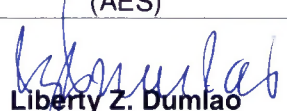
Approved by :
RULES CHANGE COMMITTEE

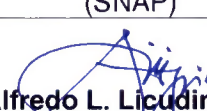

Epictetus E. Patalinghug
Acting Chairperson
Independent
University of the Philippines
(UP)

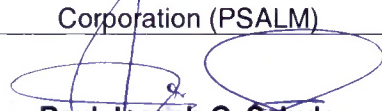
Members:


Cherry Aquino-Javier
Generation Sector
AES Philippines
(AES)

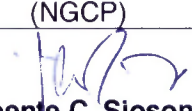

Ralph T. Crisologo
Generation Sector
SN Aboitiz Power
(SNAP)

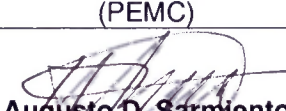

Liberty Z. Dumlao
Generation Sector
Power Sector Assets and Liabilities Management
Corporation (PSALM)

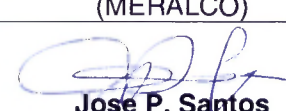

Alfredo L. Licudine, Jr.
Generation Sector
National Power Corporation
(NAPOCOR)



Raul Joseph G. Seludo
Transmission Sector
National Grid Corporation of the Philippines
(NGCP)


Robinson P. Descanzo
Market Operator
Philippine Electricity Market Corporation
(PEMC)


Vicente C. Sioson
Distribution Sector (PDU)
Manila Electric Company
(MERALCO)


Augusto D. Sarmiento
Distribution Sector (PDU)
Dagupan Electric Corporation
(DECORP)


Jose P. Santos
Distribution Sector (EC)
Ilocos Norte Electric Cooperative
(INEC)


Conrado D. Pecjo
Supply Sector
Angeles Power, Inc.


Gloria P. Gerilla-Teknomo
Independent
CPI-Energy Phils., Inc.

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Annex "A"



Settlement Computation Process

Total Trading Amount

$$TTA_i = \text{Ex-Ante Amount} + \text{Ex-Post Amount}$$

Without Bilateral

$$TTA_i = \text{EAQ} * \text{EAP} + (\text{MQ}' - \text{EAQ}) * \text{EPP}$$

With Bilateral

$$TTA_i = \text{EAQ} * \text{EAP} + (\text{MQ}' - \text{EAQ}) * \text{EPP} - \text{BCQ} * \text{EAP}_G$$

Where

TTA_i - Total Trading Amount MQ' - Total Meter Quantity

EAQ - Total Ex-Ante Quantity $EAQ = \frac{1}{2}(\text{Initial} + \text{Target})$

EAP - Total Ex-Ante Price EPP - Ex-Post Price

i - Trading Interval (1 Hour) BCQ - Total Bilateral Quantity



Total Trading Amount

TTA for Generator

$$TTA_i = (EAQ_G - BCQ_{G-L}) * EAP_G + (MQ'_G - EAQ_G) * EPP_G$$

$$TTA_i = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G - XAPBABUY$$

TTA for Load

$$TTA_i = EAQ_L * EAP_L + (MQ'_L - EAQ_L) * EPP_L - XAPBABUY$$

$$TTA_i = (EAQ_L - BCQ_{G-L} + BCQ_{G-L}) * EAP_L + (MQ'_L - EAQ_L) * EPP_L - XAPBABUY$$

$$XAPBABUY = BCQ_{G-L} * EAP_G$$

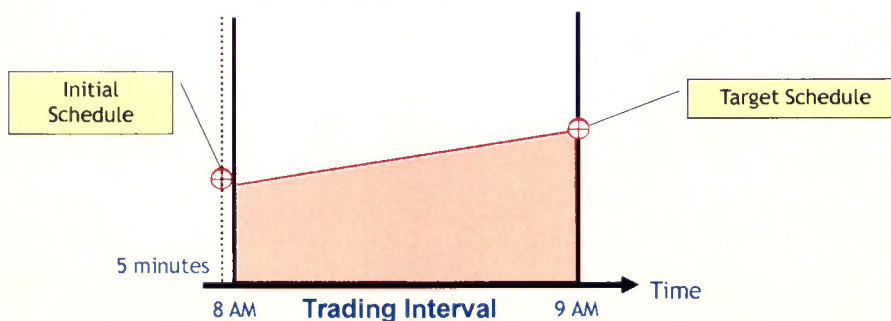
$$TTA_i = (EAQ_L - BCQ_{G-L}) * EAP_L + (MQ'_L - EAQ_L) * EPP_L + (BCQ_{G-L} * EAP_L - BCQ_{G-L} * EAP_G)$$

$$\text{Line Rental} = (BCQ_{G-L} * EAP_L - BCQ_{G-L} * EAP_G)$$



Determination of EAQ

RTD (Ex-Ante) run for H 0900



$$\text{Ex-Ante Quantity} = \frac{1}{2} (\text{Initial Schedule} + \text{Target Schedule})$$

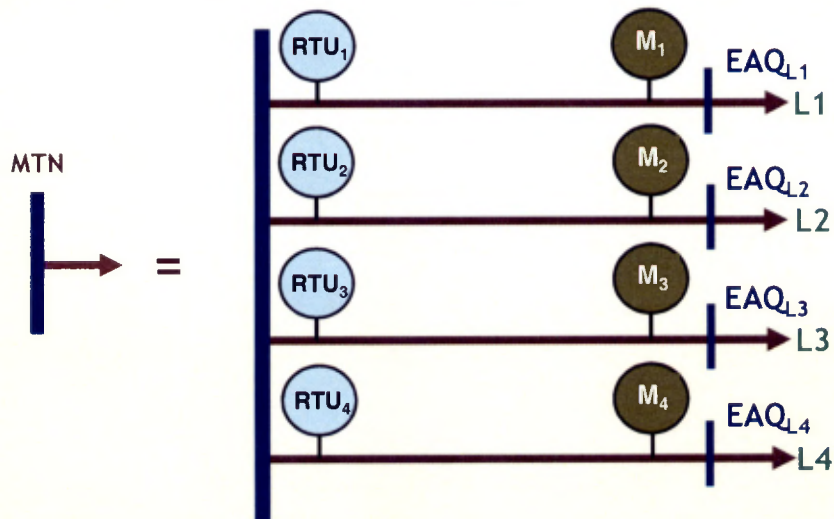
$$\text{Initial Schedule} = \text{EAQ-initial}$$

$$\text{Target Schedule} = \text{EAQ-target}$$



out

Determination of EAQ-Initial

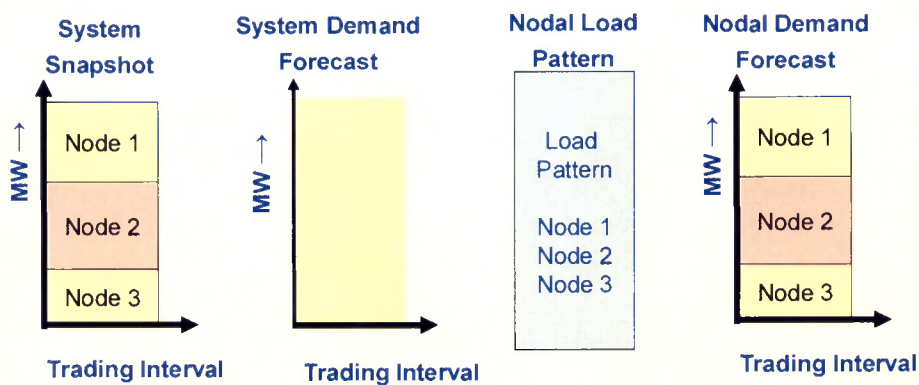


Wholesale Electricity
Spot Market

EAQ initial = snapshot reading at RTU points

Determination of EAQ-Target

Load Forecast



EAQ target is based on load forecast



Wholesale Electricity
Spot Market

Site Specific Loss Adjustment Factor

Section 3.2.2 of WESM Rules

- Each market trading node defined under clause 3.2.2.1 shall:
 - Be associated with a revenue metering and remote tele-metering facilities capable of measuring all relevant incoming and outgoing energy deliveries for the purpose of dispatch and settlement in the WESM;

Section 3.10.6 of WESM Rules

- The *ex-post nodal energy price* for each market trading node shall be determined as the *shadow price* on the *energy balance equation* or equivalent mathematical formulation for that market trading node



Site Specific Loss Adjustment Factor

Section 3.2.3 of WESM Rules

- If the connection point of the Trading Participant could not be represented in the market network model or if a particular market trading node must be assigned to more than one Trading Participant because the conditions set in clause 3.2.2.2 are not met, the affected Trading Participants, the Metering Services Provider and the Network Service Provider will mutually agree on adjustments that will be implemented by the Market Operator and the System operator.



Site Specific Loss Adjustment Factor

Section 4.3.1.1 of WESM Rules

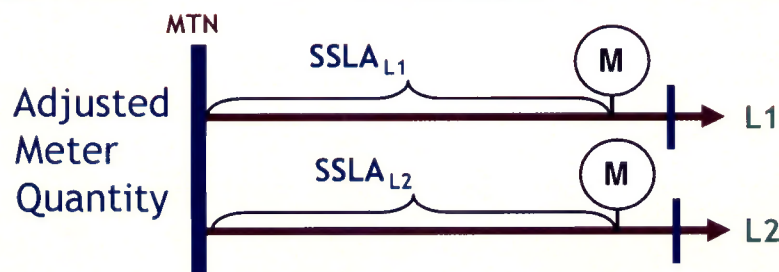
- Each of its assigned market trading node has a metering installation

Section 4.5.2.2 of WESM Rules

- The Trading Participant, the Network Service Provider and the Market Operator shall use their best endeavors to agree to adjust the metering data to allow for physical losses between the actual metering point and the relevant market trading node.



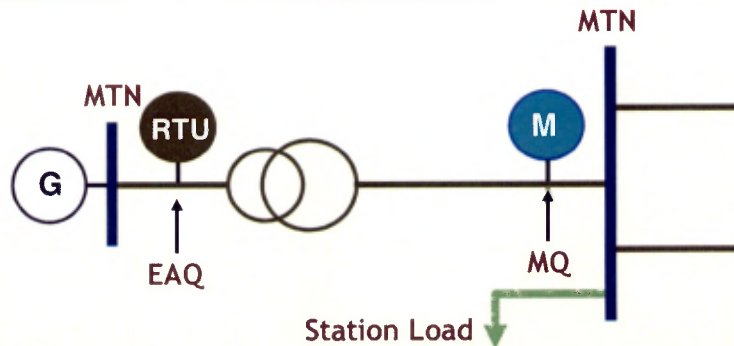
Site Specific Adjustment Factor for Load



$$TTA_{\text{Participants}} = EAQ_L * EAP_L + (MQ * SSLA - EAQ_L) * EPP_L$$



Settlement Processes for Generator



$$TTA_G = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G$$

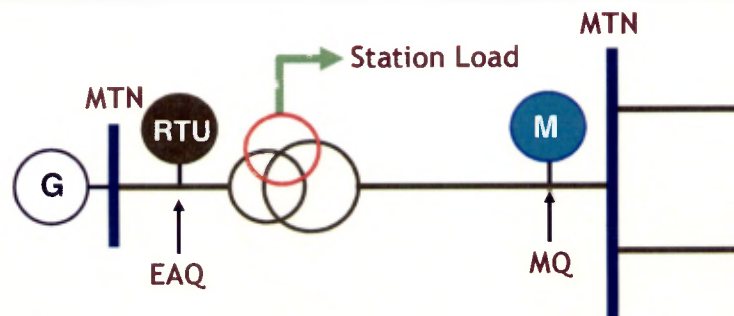
$$TTA_{SL} = EAQ_{SL} * EAP_{SL} - EAQ_{SL} * EPP_{SL}$$

$$TTA_{Participants} = TTA_G - TTA_{SL}$$

$$TTA_{Participants} = (EAQ_G - EAQ_{SL}) * EAP_G + (MQ_G - EAQ_G + EAQ_{SL}) * EPP_G$$



Settlement Processes for Generator



$$TTA_G = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G$$

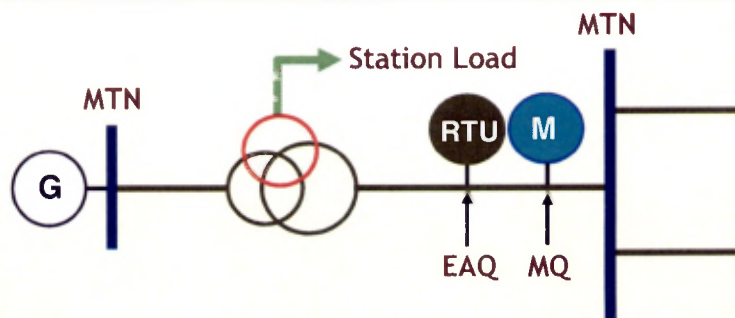
$$TTA_{SL} = EAQ_{SL} * EAP_{SL} - EAQ_{SL} * EPP_{SL}$$

$$TTA_{Participants} = TTA_G - TTA_{SL}$$

$$TTA_{Participants} = (EAQ_G - EAQ_{SL}) * EAP_G + (MQ_G - EAQ_G + EAQ_{SL}) * EPP_G$$



Settlement Processes for Generator

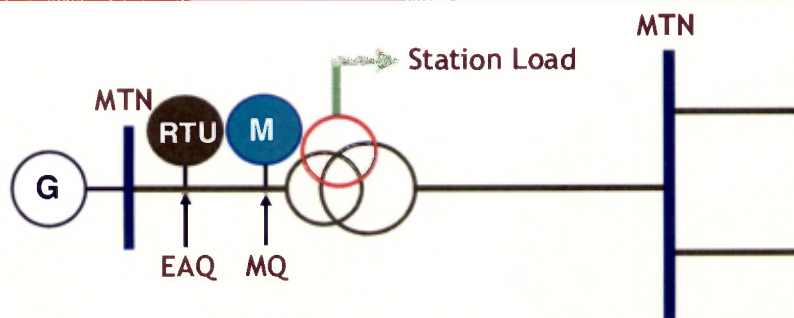


$$TTA_G = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G$$

$$TTA_{Participants} = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G$$



Settlement Processes for Generator



$$TTA_G = EAQ_G * EAP_G + (MQ_G - EAQ_G) * EPP_G$$

$$TTA_{SL} = EAQ_{SL} * EAP_{SL} - EAQ_{SL} * EPP_{SL}$$

$$TTA_{Participants} = TTA_G - TTA_{SL}$$

$$TTA_{Participants} = (EAQ_G - EAQ_{SL}) * EAP_G + (MQ_G - EAQ_G + EAQ_{SL}) * EPP_G$$

