

## MINUTES OF THE 49<sup>th</sup> MEETING OF THE RULES CHANGE COMMITTEE

Date : 22 June 2011  
Time : 9:00 A.M.  
Venue : PEMC Board Room  
18<sup>th</sup> Floor, Robinsons-Equitable Tower  
Ortigas Center, Pasig City

### **MEMBERS PRESENT:**

Epictetus E. Patalinghug	-	Acting Chairperson/Independent – UP
Cherry Aquino-Javier	-	Generation Sector – AES
Ralph T. Crisologo	-	Generation Sector – SNAP
Liberty Z. Dumlao	-	Generation Sector – PSALM
Ciprinilo C. Meneses	-	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:**

Cynthia R. Encarnacion	-	Generation Sector – NPC
Robinson P. Descanzo	-	Market Operator – PEMC

### **OBSERVERS PRESENT:**

Eduardo B. Fernandez	-	DOE (Alternate)
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### **OTHERS PRESENT:**

Isidro E. Cacho	-	PEMC – TOD
Phillip C. Adviento	-	PEMC – Legal
Roel B. Calano	-	PEMC – Billing and Settlement
Ambrocio R. Rosales	-	NGCP – SO
Fidel D. Dagsaan, Jr.	-	NGCP – SO

### **SECRETARIAT**

Chrysanthus S. Heruela	-	PEMC – MAG
Elaine D. Gonzales	-	PEMC – MAG
Geraldine A. Rodriguez	-	PEMC – MAG
Rheinhardt O. Banogon	-	PEMC – MAG

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As scheduled, members of the Rules Change Committee had their photoshoot for the WESM Annual Report at around 9:30 A.M, after which and after determining the presence of a quorum, the 49<sup>th</sup> RCC meeting was called to order by the Acting Chairperson Prof. Epictetus E. Patalinghug, at about 10:00 A.M.

### **1. Adoption of the Proposed Agenda**

The Proposed Agenda for the 49<sup>th</sup> RCC Meeting was presented and approved, as amended. Due to prior commitments of representatives from NGCP-SO, Mr. Raul Seludo requested that the SO presentation on security limit setting and overriding constraint be discussed ahead of Item 3 (Business Arising from the Previous Meeting) of the agenda, to which the RCC agreed.

## **2. Review, Correction and Approval of the Minutes of the 48<sup>th</sup> RCC Meeting**

The Minutes of the 48<sup>th</sup> RCC Meeting was reviewed and approved.

## **3. Business Arising from the Previous Meeting**

### **a. Exhaustive List of Suggested Revisions of the WESM Rules regarding the ERC-PEMC Protocol.**

As agreed upon in the previous meeting, the RCC was furnished with a copy of the exhaustive list of suggested revisions of the WESM Rules and Market Surveillance, Compliance and Enforcement Market (MSCEM) Manual which were previously drafted by PEMC-Legal.

Ms. Geraldine Rodriguez cited the previous agreement reached that the RCC shall request the Market Surveillance Committee (MSC) to incorporate the provisions of the said protocol in the WESM Rules. It was suggested, however, that perhaps the RCC could start off the integration on its own using the draft provided by PEMC-Legal as reference rather than endorse to the MSC, considering that the instruction of the Board was directed to the RCC.

Atty. Liberty Dumlao expressed reservation on the above recommendation as it would give the impression that the RCC was the one who crafted the suggested revisions of the WESM Rules and the MSCEM Manual.

Seeing that the PEMC only needs a basis by which the ERC could direct PEMC to conduct investigation as regards anti-competitive behavior, Mr. Ralph Crisologo proposed inserting a provision in the WESM Rules stating such authority of the ERC and simply attaching the protocol. Speaking from a personal point of view, he shared his disagreement against the protocol and his reluctance to interpret its provisions, citing that the protocol is open to a lot of interpretation.

On Atty. Dumlao's statement that the RCC needs a proponent for the subject matter, Ms. Elaine Gonzales clarified that the RCC does not always need a proponent in order for it to act on rules changes proposals and that the RCC can be the proponent. Atty. Dumlao argued, however, that the RCC can only be the proponent if at its own initiative, it wants to propose something.

Admitting her lack of familiarity with the history of the ERC-PEMC protocol, Ms. Cherry Javier suggested that the incorporation of its provisions be proposed by someone or a group who is familiar and knowledgeable about the matter. On that note, Mr. Crisologo commented that the MSC is the best area through which this could be done.

Noting the reservations made by some members of the RCC to sponsor the exhaustive list of suggested revisions of the WESM Rules and the MSCEM Manual as drafted by PEMC-Legal regarding the ERC-PEMC protocol, Prof. Patalinghug recapped that due to the inadequacy of the RCC, the RCC resolved to refer to the MSC the PEM Board's directive. He then instructed the Secretariat to draft a memorandum to the MSC for this purpose.

In summary, the RCC reached the following agreements:

- The RCC expressed reservation in sponsoring the Exhaustive List of Suggested Revisions of the WESM Rules regarding the ERC-PEMC Protocol. The RCC



deemed that the review and interpretation of the ERC-PEMC protocol for incorporation in the WESM Rules is beyond its area of expertise and should therefore be referred to a more appropriate body with surveillance and investigative functions, i.e. the MSC. In this light, the RCC maintained its previous decision to request the MSC to propose the incorporation of the provisions of the ERC-PEMC Protocol in the WESM Rules and pertinent Manuals.

**b. Proposed Amendments to the WESM Manual on the Management of Must-Run Units**

Mr. Roel Calano presented the new MRU cost allocation formula which takes into account the suggestion made by the RCC in the previous meeting to remove from the previously proposed formula the HVDC parameter.

On the comments made by the RCC in the previous meeting to consider having regional computation for the Generation Price Index (GPI), Mr. Calano shared with the body the difficulties/problems encountered during the development of software for the segregation of GPI for Luzon and Visayas. He elaborated that since two components are being considered in the determination of the GPI, i.e. payment for spot and payment for bilateral, computing a GPI for each region may result in a cross-subsidy within the GPI rate itself because of the possibility that the declared bilateral contract quantities (BCQs) may have originated from the non-MRU region. Segregating the GPI will likewise raise complications on determining whether the parameter (in the equation) metered quantity only accounts for the metered quantities for the particular region where the must run units are declared or takes into consideration already the amount of power exported from the non-MRU region through the HVDC. To prevent these complications from developing, the PEMC BSMD thus proposed having a system-wide computation for the GPI.

Ms. Javier argued, however, that the GPI should be able to capture the concept of regional application considering that the cost allocation to the customers is regional. Simply put, she suggested calculating the GPI in the region where the power is generated, regardless of whether it is exported or not. On the other hand, she suggested that PEMC propose a new formula to replace the existing one considering that the current Time of Use (TOU) rate will, in time, no longer be applicable in view of the forthcoming expiration of the term of the NPC Transition Supply Contract (TSC).

On Mr. Ciprinilo Meneses' inquiry on whether having two separate GPIs would take too much resources and time, Mr. Calano responded that it would entail a complete overhaul of the settlement program which could take months.

To simplify the manner by which the GPI is calculated, Mr. Meneses suggested using the average monthly WESM price as the basis for its computation. He deemed that whatever index is used will become immaterial because of the succeeding claim for additional compensation.

Bearing in mind that the existing GPI compensation mechanism has already been approved by the ERC, Mr. Crisologo wanted to be clarified on whether the RCC has the authority to propose a new scheme, to which Ms. Javier explained that the RCC may propose, but any proposal from the RCC would have to be submitted to the ERC, for approval.

On the definition of parameters of the formula for the MRU cost allocation where parameter "m" is defined as the number of load resources with negative meter quantity, Ms. Javier proposed removing the word "negative". This is so to avoid redundancy as WESM convention has always been positive for generators and negative for load.

Ms. Rodriguez once again reminded the body of their respective assignments relating to the proposed amendments to the MRU manual. In response, Ms. Javier requested the body to give her two (2) weeks to submit the AES-MPPCL's proposed revisions, to which the RCC granted.

On MERALCO's proposed must-stop rule (as indicated in the 2011 RCC Work Plan), Mr. Crisologo viewed that this is not an operational but rather a compensation issue which requires changes in the Price Determination Methodology (PDM).

On MERALCO's proposed treatment or categorization of MRU, Mr. Meneses explained that the intention is to differentiate the manner by which generating units that are called to run to address undergeneration and system security are compensated from those generating units that are called to run as part of regulatory or contractual requirements. He deemed that generating units that are required to run to comply with the regulatory or contractual requirements should not be paid using the GPI compensation scheme. By contrast Ms. Javier viewed that a distinction should not be made. Noting Ms. Javier's reservation and acknowledging the complexity of the proposed categorization, Mr. Meneses remarked that MERALCO would be willing to withdraw its proposal.

Following the discussion, the RCC reached the following agreements:

- Mr. Meneses was requested to draft the proposal on the use of average monthly WESM price as the new MRU compensation mechanism in lieu of the current GPI, for consideration and approval by the RCC and PEMC-BSMD.
- The RCC likewise agreed to await the AES-MPPCL proposed revisions to the MRU Manual, namely:
  - ✓ Redefine or limit criteria for MRU designation by the System Operator
  - ✓ Provide mechanism on how to evaluate MRU compensation exceeding GPI
  - ✓ Define SO protocol for MRU designation
- The RCC agreed to discuss further the proposed revisions to the MRU Manual, together with the comments/recommendations from interested parties and proposals of Mr. Meneses and AES-MPPCL.

#### **c. Proposed New Manual on the Segregation of Line Rental**

Mr. Calano presented to the RCC the minor corrections made on the proposed new Manual with regard to the derivation of formula for system marginal price computation. He explained that the system marginal price should be equal to the market clearing price (MCP) multiplied by the transmission loss factor (TLF) of the marginal plant less the shadow price corresponding to congestion multiplied by the TLF of the marginal plant. He stressed that the said corrections did not affect the logic and the resulting formula, to which the RCC noted.

Mr. Crisologo suggested conducting a simulation to determine the true congestion cost component of the line rental. As it is proposed now, the congestion component is the difference between the locational marginal price and the computed line losses, which he deemed does not truly reflect the actual cost of congestion.

There being no further comments, the RCC agreed to discuss further in the next meeting the proposed new WESM Manual, together with the comments/recommendations from interested parties.



#### 4. New Business

Issues/ Topics Discussed	Remarks	Agreement/ Action Item
<p>A. MO Presentation on the Issue of Ramp Rates</p>	<p>Since the SO (together with the MO), was supposed to give a presentation on ramp rates as requested by the RCC, Mr. Seludo clarified that an invitation was already extended to Mr. Raul Galano of SO-Visayas, considering that the issue was raised by him. However, due to time constraint, Mr. Galano requested that he present it in the next RCC meeting, to which the RCC acknowledged.</p> <p>Mr. Isidro Cacho gave a presentation on the procedure by which ramp rates are declared in the market as well as the manner by which they are applied in the dispatch optimization.</p> <p>The following were the highlights of his presentation as well as the discussion that ensued during the course of the presentation:</p> <ul style="list-style-type: none"> <li>• Ramp rate, as defined in the WESM Rules, is the rate of change in electricity production or consumption from a generating unit or scheduled load. Simply put, it is the change in the generator's injection to or withdrawal from the grid with respect to time.</li> </ul> <p>Mr. Cacho likewise emphasized that participants are required to register their maximum ramp up and down rates.</p> <ul style="list-style-type: none"> <li>• In the dispatch optimization, the constraints representing limitations on the ramp rate from the plant status are being considered. Besides the price and the energy quantity, ramp rates are also being submitted by the generators as part of the energy offer.</li> <li>• An illustration showing the effect of declaring a ramp down rate lower than the actual capability of the generating unit was presented. In effect, this results in the following: <ul style="list-style-type: none"> <li>✓ Bumping off more expensive generator offer, i.e., lowers the MCP;</li> <li>✓ In extreme cases, over-generation Constraint Violation Coefficient (CVC) since the market dispatch optimization model (MDOM) could not lower ramp-down limited generators; and</li> <li>✓ Higher energy output of ramp-limited generator</li> </ul> </li> </ul>	<p>SO-Visayas to present their issue on ramp rates in the next RCC meeting.</p>

Mr. Crisologo wanted to be clarified as to the reason why the ramping up and down by a generating unit should be linear and not be based on the capability of the unit and authority of SO to modulate it depending on the demand.

Mr. Cacho clarified that the generators are required to follow the required linear ramping so as to minimize reserve requirement. He is unsure, however, if there is a certain penalty for generators who do not comply with the linear ramping requirement.

Mr. Crisologo wanted to know whether it would be safe to assume, if all generators will follow the linear ramping, that any deviation from the demand will be handled by the ancillary services. Mr. Seludo replied that it would depend on the system demand.

To ensure clear delineation between ancillary services and Merit Order Table (MOT), Mr. Crisologo viewed that the SO should develop a procedure for this purpose. He likewise recommended for SO to develop a system/criteria as basis by which they designate generating units that must or must not run, depending on the ramp rates. He added that there should be a MOT for ramp rate.

On Mr. Crisologo's query on whether there is an existing rule of "transfer pricing" between generators if generators are found to be deviating from their declared ramping rates, Mr. Cacho and Ms. Javier clarified that as long as they do not go beyond the range of their declared ramp rates, then there is no violation.

- An illustration showing the effect of declaring a ramp up rate lower than the actual capability of the generating unit was presented. Impact of the ramp-up limited generation on the scheduling and pricing are as follows:
  - ✓ Decreases output of cheaper generator (i.e. increases MCP); and
  - ✓ In extreme cases, may result to under-generation CVC since the MDOM cannot increase output of ramp-up limited generators (this is especially manifested during tight supply conditions, resulting in the demand not being met).

Mr. Meneses inquired on whether the generator's



	<p>inability to meet the linearity of ramp rate is still a prevalent issue. In response, Mr. Cacho explained that SO has issues still on generator's deviating from the linear ramping during the intra-hour. Mr. Seludo clarified, however, although this is no longer an issue on the part of SO-Luzon, this is still a matter of concern for SO-Visayas.</p>	
<p>B. SO Presentation on Security Limit Setting and Overriding Constraint</p>	<p>As instructed by Prof. Patalinghug during the last RCC meeting, representatives from NGCP-SO were invited to give a presentation on the criteria on what constitutes an overriding constraint and security limit.</p> <p>The following were the highlights of the presentation given by Mr. Fidel Dagsaan:</p> <ul style="list-style-type: none"> <li>• Found in Appendix A.5, Section 4.2.8 of the WESM Dispatch Protocol Manual, Security Limits are defined as often used to reflect system stability limits but vary under different system condition. Security limits include: <ul style="list-style-type: none"> <li>✓ Generator operating limits, e.g. Pmin, Pmax. These operating limits are being altered due to system reliability reasons as well as during MRU nomination by SO.</li> <li>✓ Transmission branch group limit which reflect the system stability constraints. It is the sum of power flow on the group of transmission lines that shall not exceed the limit. This is, however, not being considered during real-time.</li> <li>✓ HVDC transmission limits, however, these are no longer being used in the security limits with the commercial operation of the Visayas market and with the implementation of free-flowing HVDC.</li> </ul> </li> <li>• Mentioned in Appendix A.6, Section 4.4 of the Dispatch Protocol Manual, the overriding constraints are the adjustments made in the operating constraints of the MDOM for a particular trading interval. Initially, these were supposed to be solved by the MDOM, however, due to certain deficiencies, SO is currently doing this particular imposition. The overriding constraints include the following: <ul style="list-style-type: none"> <li>✓ Nomination of MRUs</li> <li>✓ Emergency de-rating /outage of specific transmission lines</li> <li>✓ Additional reserve requirements</li> <li>✓ Generating unit limitations</li> <li>✓ Other types as may be recommended by the System Operations such as the transmission</li> </ul> </li> </ul>	<p>The RCC agreed to request from SO documented and detailed procedures as well as guidelines/criteria on the imposition of security limit and overriding constraint, designation of real-time MRU and implementation of MOT.</p>

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limits which are the thermal limits of individual transmission lines, transformers, and related facilities.

- Criteria for the designation of MRUs
  - ✓ Planned Criteria
    - Thermal Limits of Transmission Line and Power Equipment (during maintenance)
    - System Tests of NGCP Facilities/ Equipment
    - Regulatory Requirements
    - Commercial Operation Requirements
  - ✓ Real-time Criteria
    - Thermal Limits of Transmission Line and Power Equipment (unplanned)
    - Inadequate Levels of Reserve
    - Local Calamities and Emergencies
    - System Voltage Requirement
    - Insufficient Offers from Generators
- Security Limits/Overriding Constraints are imposed using the SO-MO Data Interchange Program (SOMODIP) which considers the encoding of the following parameters:
  - ✓ Imposition of Pmin/Pmax
    - Start-up
    - MRU application
    - Application Reserve Requirement
  - ✓ Outage Scheduling - start/end time of outage generator, T/l, transformer, s/s facilities
  - ✓ HVDC transmission limits – vary constraining power transmission from one region to another and are modeled (this process is implemented prior to commercial operation of Visayas Market)

The following were the comments/salient points raised by the body during the course of the presentation:

- Recognizing the fact that there is an interface in the MDOM through which the SO could enter the security limit information, Mr. Crisologo asked what processes/corrections are being done by the MO with the information encoded by SO.

Mr. Ambrocio Rosales explained that the MO solution in the real-time dispatch schedule is supposed to be security-constrained dispatch schedule already. However, there are instances (when SO finds violations) where SO has to coordinate with MO and use the security limit



functionality so as to impose the limitations.

- On Mr. Crisologo's question on whether the HVDC could already withstand having a variable power flow every hour, Mr. Seludo clarified that initially, the limits were set because the equipment was encountering failures, but further tests conducted by NGCP show that the HVDC is capable of operating the free-flowing direction. He enlightened the body that the HVDC needs ten (10) minutes before switching to the other direction. He further clarified that the switching of power flow is not automatically done.
- Mr. Crisologo inquired how the overriding constraint differs with the security limit, to which Mr. Dagsaan replied that from SO's point of view, they are the same.

Mr. Rosales further expounded that the overriding constraint and security limit are defined separately in the Dispatch Protocol Manual; thus, he stressed the need to amend the said manual.

- Citing the absence of the real-time designation of MRUs in any WESM manual and laying emphasis that they should have been designated before the RTD run, Ms. Javier wanted to be clarified as to the basis of the SO's discretion to nominate a MRU during real-time.

Mr. Rosales explained that such nomination is still made based on the defined criteria for MRU. It just so happens that certain generators are called to run during real time due to security reasons. As part of its responsibility, the SO could not allow putting the system security at risk by compelling these generators to run in the next trading interval.

Mr. Rosales further expounded that there are cases that the SO nominates a MRU which does not necessarily follow the MOT ranking. These units are being called to run because they are deemed critical to the system. He likewise shared that the SO is contemplating on removing the insufficiency of offer as one of the MRU criteria as the SO deems that it is not system security-related.

Both Mr. Crisologo and Ms. Javier argued, however, that this type of threat during real-time (as mentioned by Mr. Rosales) calls for an SO

intervention and not MRU designation. Ms. Javier added that this particular action of SO during real time impacts the ex-post price results, i.e. reduced ex-post price.

While Mr. Crisologo acknowledged the mandate of the SO to maintain the security of the system, he nevertheless raised the concern of the generators that the prices be reflective of the actual operation relative to system security. He opined that the SO should be able to find a means to address it, when the need arises, without influencing the results of the prices.

Mr. Meneses opined that the solution perhaps to address the concerns of the generators is to revise the PDM and pricing mechanism for MRUs in such a way that those generators that are being designated as MRUs are sufficiently compensated.

Mr. Seludo posed that the RCC should likewise look into the reasons why the MO is able to generate a dispatch schedule that necessitates the interference of the SO when under the Grid Code, the MO is required to prepare a dispatch schedule that already takes into account all security constraints (security-constrained economic dispatch schedule).

Mr. Eduardo Fernandez inquired whether the establishment of a reserve market will address the issue on system security, to which Mr. Crisologo clarified that the main issue is that the SO is using the concept of MRUs to force certain plants to run during instances where there is insufficiency of energy. The reserve market, on the other hand, is comprised of different ancillary services as defined under the Grid Code and the Ancillary Services Procurement Plan (ASPP), which include Frequency Regulating Reserves, Reactive Power Support and Black Start Capability. Unless otherwise its definition is revised, the ancillary service is not intended to address the insufficiency of energy.

Ms. Javier stressed the need for transparency in SO's processes, data and protocols, in particular, the criteria and procedure for the designation of MRUs during real time, to which Mr. Crisologo seconded. Accordingly, he requested from SO documents pertaining to MRU, implementation of the MOT and imposition of security limit and overriding constraint with the end in view of later



	<p>proposing rules changes.</p> <p>Ms. Javier shared that the AES-MPPCL will be proposing revisions on the criteria for the designation of MRU and thus requested the SO to provide inputs/necessary revisions on the same.</p> <p>Mr. Crisologo likewise requested SO to reevaluate the support services to harmonize the grid security requirement with the commercial and financial component, to which Mr. Augusto Sarmiento seconded. He remarked that the true cost of power will be based on the technical requirements set by SO.</p> <p>Following the discussion, the RCC reached the following agreement:</p> <ul style="list-style-type: none"><li>• The RCC agreed to request from SO documented and detailed procedures as well as guidelines/criteria on the imposition of security limit and overriding constraint, designation of real-time MRU and implementation of MOT.</li></ul>	
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## 5. Next Meeting

The RCC agreed to hold its next meeting on 06 July 2011 with the following agenda:

- a. Comments on the Proposed Amendments to the MRU Manual and Proposed New Manual on the Segregation of Line Rental;
- b. Summary of Issues (Governance, Settlement, Operations) Arising from the Group Focused Discussion during the WESM Participants' Meeting (*upon the suggestion of Mr. Crisologo*);
- c. Proposed WESM Rules Change on Customer Settlement Calculations by AES-MPPCL;
- d. Market Re-Run Procedures in relation to the issue raised during the WESM Participants' Meeting (*upon the suggestion of Mr. Crisologo*);
- e. MO Presentation on SO-MO Data Interface Program (DIP) (*upon the suggestion of Mr. Crisologo so as to provide the RCC with a comprehensive view on the process by which certain parameters are encoded/entered by and interchanged between the MO and SO through the SOMODIP*);
- f. Presentation from the Billing and Settlement on the Current Additional Compensation Mechanism in Excess of GPI (*upon the suggestion of Ms. Javier so as to provide comparison with the alternative additional compensation mechanism being contemplated and to be proposed by AES-MPPCL*); and
- g. SO-Visayas Presentation on Ramp Rates

## 6. Adjournment

There being no matter to be discussed, the meeting was adjourned at 1:40 P.M.

Prepared by:

*Rheinhardt O. Banogon*  
**Rheinhardt O. Banogon**

Reviewed by:

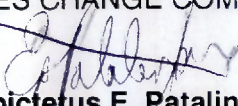
*Geraldine A. Rodriguez*  
**Geraldine A. Rodriguez**

Noted by:

*Elaine D. Gonzales*  
**Elaine D. Gonzales**





Approved by:  
RULES CHANGE COMMITTEE

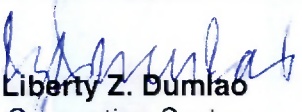
  
**Epictetus E. Patalinghug**

Acting Chairperson  
Independent  
University of the Philippines  
(UP)

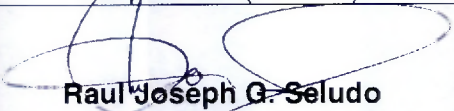
Members:

  
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AES Philippines  
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**Ralph A. Crisologo**  
Generation Sector  
SN Aboitiz Power  
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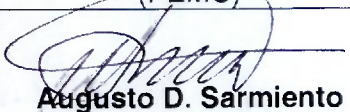
  
**Liberty Z. Dumiao**  
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Power Sector Assets and Liabilities Management  
Corporation (PSALM)

**Cynthia R. Encarnacion**  
Generation Sector  
National Power Corporation  
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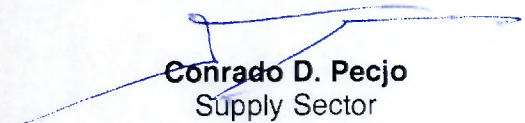
  
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**Ciprinilo C. Meneses**  
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