

MINUTES OF THE 84th (SPECIAL) MEETING OF THE RULES CHANGE COMMITTEE

Meeting Date & Time:	21 February 2014 – 09:00 AM to 3:00 PM		
Meeting Venue:	PEMC Board Room, 18 th Floor, Robinsons Equitable Tower, Ortigas Center, Pasig City		
Attendance List			
In-Attendance		Not In-Attendance	
Rules Change Committee Members			
Francisco L. R. Castro, Jr. --Independent--Tensaiken Consulting		Rowena Cristina L. Guevara --	
Concepcion I. Tanglao --Independent		Chairperson/ Independent --	
Joselyn D. Carabuena --Generation -- PSALM		UP	
Jose Ferlino P. Raymundo --Generation -- SMC Global		Maila Lourdes G. De Castro --	
Jose P. Santos --Distribution --INEC		Independent	
Isidro E. Cacho, Jr. -- Market Operator --PEMC		Lorreto H. Rivera --Supply --	
Ambrocio R. Rosales --System Operator --NGCP		TPEC	
Gilbert A. Pagobo -- Distribution --MECO		Theo Cruz Sunico --	
Ciprinilo C. Meneses --Distribution--MERALCO		Generation -- 1590 EC	
		Sulpicio C. Lagarde, Jr. --	
		Distribution --CENECO	
Rules Change Committee Alternate Members			
Erwil R. Bugaoisan			
PEMC – Market Assessment Group (MAG)			
Geraldine A. Rodriguez			
Romellen C. Salazar			
PEMC – Legal			
Maria Lourdes San Andres Sabundayo			
ERC Observer(s)			
DOE Observer(s)			
Ferdinand B. Binondo			
Others Present			

In the absence of Chairperson Dr. Rowena Cristina L. Guevara, the members present unanimously voted Mr. Francisco L.R. Castro, Jr. to be the acting Chairperson for the meeting.

There being a quorum, Mr. Castro called the meeting to order at around 9:00 AM.

1. Adoption of the Proposed Agenda

The Proposed Agenda for the 84th RCC Meeting was approved as presented.

Mr. Ferdinand Binondo gave an overview of the Reserve Market in view of PEMC's submission of the urgent amendments to the Dispatch Protocol and Constraint Violation Coefficient (CVC) Manuals. He stated that the DOE issued a Department Circular relative to the Secretary's directive on the implementation of the Reserve Market scheduled on 26 March 2014, which requires the necessary WESM Manual changes in relation to the detailed procedural requirements of the Reserve Market.

Mr. Cacho explained that there are already existing provisions in the WESM Rules relative to the Reserve Market. The urgent amendments to the subject Manuals being proposed by PEMC include the protocol in the determination of the level of reserve and the monitoring of reserve effectiveness factor (REF). He stated that the CVC proposal provides certain enhancements in the existing Manual relative to the implementation of the Reserve Market, including revisions in the ranking of CVCs in the CVC Manual.

Before commencing with the discussions on the proposal, the Secretariat briefly explained to the RCC the procedures for acting upon urgent amendments as specified under the Rules.

Noting the above information, the RCC gave the floor to PEMC for its presentation on the Proposal for Urgent Amendments to the Dispatch Protocol and the Constraint Violation Coefficient Manuals.

2. PEMC's presentation on the proposed urgent amendments to the Manuals on Dispatch Protocol and CVC

As a backgrounder, Mr. Edward Olmedo stated that the urgent proposals for amendments to the Dispatch Protocol and CVC Manuals are being made in view of the impending integration of the Reserve Market into the commercial operations of the WESM. The proposal for changes to the Dispatch Protocol Manual incorporates new processes involved once the Reserve Market is integrated into the Commercial Operations of the WESM, particularly the determination of the reserve requirement, and the reserve effectiveness factor. On the other hand, the proposed changes to the CVC Manual involve a new priority order and gradation levels between the different CVCs.

o Urgent Proposal for Amendments to the Dispatch Protocol Manual

Following are the highlights of Mr. Olmedo's presentation on the proposed amendments to the Dispatch Protocol Manual.

- The proposal involves an additional Appendix A.12 in the DP Manual on the scheduling and dispatch of reserves. The new Appendix incorporated processes such as the determination of new reserve requirements.
- Part of the responsibilities of the SO is to determine the required reserve levels for each type of reserve traded in the WESM in accordance with its Ancillary Services Procurement Plan (ASPP), and to likewise inform the MO about these required levels. The SO is also responsible for the preparation, monitoring, and assessment of REF, and the adjustment of REF from time to time.
- Schedules for reserve are determined by the MO using the Day-Ahead Projection (DAP). Based on DAP, the MO determines the equivalent MW level of the 4% required reserve level provided by the SO in accordance with the Philippine Grid Code. For Regulating Reserve, the 4% required reserve pertains to $\pm 2\%$ range, as Regulating Reserves should provide upward and downward limits.
- The concept of "Headroom" indicates that the Regulating Reserves should be able to provide upward and downward limits, but should not be beyond the maximum or minimum operating limits of the SO.
- In market offers, the generator should be able to declare and nominate its full capacity, from which the capacity capable to respond as reserve will be netted out. Thus, because of the headroom constraint, a generator with full capacity of 180MW for instance, should declare the entire 180MW in the market. If its Pmin is 90MW, then it will be scheduled on top of its Pmin with consideration to the reserve requirements. The MMS will constrain the energy at a certain level to consider the upward and downward service of reserve.
- The latest DAP results shall be used as reference by the MO for the determination of the hourly reserve requirements of Contingency and Dispatchable Reserve. The DAP of the previous day shall be used for the hourly reserve requirements for the regulating Reserves.
- The REF is a factor which defines the effectiveness of reserve. The SO shall gather data it will use in determining the REF of each reserve provider (i.e. Energy schedule, Reserve schedule Supervisory Control and Data Acquisition /Energy Management System (SCADA-EMS) real time data, Circuit breaker status, ADC command/ status, System frequency, Dispatch instructions issued)
- The SO shall calculate the hourly, daily and monthly REFs of each reserve provider, and likewise formulate and maintain procedures for the calculation of the hourly REFs.
- The daily REF of each reserve provider is the average of all the hourly REFs of that reserve provider for the trading day, while the monthly REF is the average of the daily REF of each reserve provider for that billing period.



Below are the discussions which transpired relative to the presentation of Mr. Olmedo.

- Mr. Rosales stated that the difference between the reserve market set-up and the current SO scheduling is that the scheduling of the SO is done day-ahead, which schedule is considered binding. In the reserve market, although the scheduling is done day-ahead, the hour-ahead schedule is what will be considered as binding. During real-time, there can be changes in the schedules.
- Mr. Olmedo explained that in terms of market offers, the available capacity should be declared in full to include the capacity allotted as reserve. The MMS will take care of determining the capacity scheduled as reserve based on the generator's offer, which effectively, allows the MMS to constrain the energy at a certain level.
- Generator representatives raised that issues relative to double charging when it comes to settlement should be addressed before implementation of the Reserve Market as this issue may be raised by the public. Mr. Cacho responded that that PEMC intends to raise the issue with the ERC, noting that the ASPA should be harmonized with the on-going hearings relative to the Pricing and Cost Recovery Mechanism (PCRM). He pointed out, however, that the proposed Manual changes submitted by the PEMC is focused on the declaration of the reserve requirement level and the REF and does not yet touch on the settlement issues.
- Mr. Rosales commented that the reserve level is already defined. He stated that such level will not change unless there had been changes in the ASPP. The SO can do a one-time submission of the required level of reserve to MO. For instance, the 4% for the required level of Regulating reserve. This figure would not be changed unless the ASPP will be revised as approved by ERC. However, the determination of the MW level requirement for each trading interval would be the MO's responsibility, in which the amount in MW will be based on the MO's forecasted demand.
- Mr. Rosales stated that the reason for using as reference the latest DAP run of every 4 hours is that it is the most realistic and doable forecasted demand that can be provided by MO in identifying the required reserve level.
- Mr. Rosales clarified that DAP is based on the dispatch loading rather than that of the capacity of the generator.
- Mr. Gilbert Pagobo inquired how the transmission cost of NGCP will be charged once the Reserve Market is integrated into the WESM. Mr. Isidro Cacho responded that in the proposal submitted to the ERC for its evaluation, for Regulating Reserve, the Customer and Generator will each shoulder half of the total transmission cost. For Dispatchable and Contingency Reserve, 100% of the cost will be shouldered by the Generator.
- Mr. Ciprinilo Meneses commented that the REF does not seem to be mathematically defined. Mr. Cacho responded that the details of REF are part of the proposal on the PCRM submitted to the ERC. For the initial start of the Reserve Market, the REF can be set at 1.0. He explained that the REF is not



a simple ratio—based on the proposed provisions, it will be matched against the set criteria which includes accuracy, response time, and adequacy.

- Mr. Cacho emphasized that the Trial Operations Period (TOP) for the Reserve Market shall be implemented for better understanding of the Generators.

o **Urgent Proposal for Amendments to the Dispatch Protocol Manual**

Before proceeding with the presentation, Mr. Cacho noted the email of Dr. Guevara on her reservations about the CVC Table in Section 8. In her email, Dr. Guevara expressed her reservations on the CVC Table as there is no explanation on how the costs indicated in the Table were established. She said that she expects that a simulation will be presented by the Proponent for the RCC's better understanding of the impact of the proposal on the market, in order for the RCC to make the right recommendation to the PEM Board. Mr. Cacho expressed that the concern raised by Dr. Guevara will be addressed by the succeeding presentation.

Mr. Cacho stated that CVC is a penalty or price which is included in the MDOM. He explained that when the MDOM is not able to come out with a price or schedule because of insufficient interruptible load or reserve, or when there is under generation, as a consequence, the MDOM will not be able to produce an optimal solution. Under the Rules, the CVC is taken into consideration in order for the MDOM to come out with an optimal solution, which reflects the constraint being violated. He emphasized that CVC's are resulting prices which indicate the market condition when a certain constraint has been violated. He added that CVCs are prices which give signal to participants on which constraint is violated. The CVC table is indicative of the hierarchy of constraints--which constraint should be violated first and which should be violated last. On the other hand, the gradation of prices is structured such that the prices will not overlap with one another. Mr. Cacho stated that the prices indicated in the table are just price signals. He expressed that the selection of the hierarchy and gradation is quite arbitrary. He noted, however, that the CVC table is structured such that each time there is a violation, it will be clearly provided to the participants which constraints have been violated, and if multiple CVCs occur, it will be flagged which CVC was violated last.

Mr. Olmedo further explained that the order of priority means choosing between two related constraints and that the prioritization is based on the operating requirements of the SO. Gradation level, on the other hand, means distinguishing the priorities using price signals. He exemplified the CVC price for undergeneration, stating that under such condition, there is no market clearing price. Thus, a pricing error notice shall be issued where the basis of re-run is the actual offer price of the generator.

Mr. Meneses commented that choosing a priority over another has an impact which could be the difference in prices in the ex-post run. Mr. Olmedo stated that ex-ante results are based on the operational priority implemented by the SO, while ex-post results are determined based on actual prices in the market.

Mr. Rosales commented that although the ranking of constraints can be identified, and that the number one in rank is the one that has the greatest impact in the market, its price does not seem to have any bearing since during settlement, it will still be the clearing price that will be applied. Mr. Cacho clarified in response that the purpose of

the CVC is not to mitigate price spikes or mitigate the clearing of P62,000/MWh, but rather, to give a signal to participants about the market condition and the constraints that have been violated.

Ms. Concepcion Tanglao commented that if CVCs are just signals of market condition, then why is there a need to use prices as signals. She inquired whether it is possible to use other signals.

Mr. Binondo responded that if price signals are not used, it will be impossible to come out with a maximized solution. A value on the cost for a particular constraint violated is assigned in order to determine a maximized and minimized solution. Mr. Cacho added that the Rules provide for the publication of prices. Aside from this, he stated that the MO also issues an advisory to Participants in cases of PENs on the constraint that was violated.

Mr. Rosales commented that the MO's advisory on the constraints violated may impact on prices. For instance, if the MO issues an advisory that there is undergeneration, which may not necessarily be "true undergeneration," it causes some participants to take advantage when making offers. Thus, some changes in the Rules must be considered to address such concern. Mr. Cacho expressed that they will expect the SO to propose the necessary Rules changes on the matter, but, as far as the current Rules is concerned, an advisory must be issued by the MO to the Participants.

In relation to the CVC Priority table, Mr. Rosales commented that undergeneration should be of higher priority than the nodal value of lost load as undergeneration has a systemwide effect. Mr. Meneses added that in prioritizing the value of lost load over undergeneration, given the proposed CVC priority, it is likely that all the P62,000/MWh offers will clear in the market, which has greater impact in the market and the economy.

Mr. Cacho expressed that the subject proposed amendment to the CVC Manual did not change the prioritization of nodal value of lost load and undergeneration, but noted from the comments that there is a recommendation to change the prioritization. He explained, however, that the logic of the current prioritization of CVCs goes back to the first urgent amendment to CVC in relation to San Jose substation. The NGCP prioritized the implementation of load dropping before its line overloads and trips.

Mr. Rosales commented further that base case should be of higher priority than Transmission Constraint Group (TCG). He recommended re-arranging the priorities as follows: 1- base case; 2 - TCG constraint; 3 - undergeneration; and 4 - nodal value of lost load; 5) contingency and so on. Mr. Cacho noted the recommendation, but explained that the impact of nodal voll, being of lower priority than undergeneration, is that Zapote will always be limited to 600MW, which means it will have to drop 50MW. Mr. Meneses agreed with the recommendation of Mr. Rosales, stating that it is the proper way to go, but also agreed with Mr. Cacho that load dropping of 50MW will always be experienced, unless the MERALCO network can be modeled. He further commented that it is cheaper for the country to drop Zapote than have each customer pay the P62,000/MWh when there is undergeneration. On this note, the RCC agreed to revise the order of CVC priority, as recommended.

In relation to the concerns raised by Dr. Guevara in her email, Mr. Cacho stated that although the CVCs are not used in the settlement, the MO can provide the simulation

requested by Dr. Guevara to justify the CVC priority. Mr. Castro noted that the presentation and RCC discussions relative thereto already justify the CVC prioritization. The RCC further noted that whatever the RCC will recommend will still undergo the PEM Board approval. On a final note, Mr. Cacho reminded the RCC that per the Rules, the urgent amendment will have to be re-submitted by the Proponent as a regular proposal within the 6-month prescribed period, which the RCC can once again deliberate upon.

3. Proposed Changes on the Manuals on Dispatch Protocol and CVC

The RCC reviewed the proposed changes to the two Manuals. Following are the discussions and agreements made on the proposal.

o CVC Manual

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
4.0 (a)	Deficit Interruptible Load Reserve - This signals insufficient Interruptible Load reserve, when the Interruptible Load reserve that may be scheduled is below the Interruptible Load requirements. Operationally interruptible loads can be compensated by sufficient dispatchable reserves and hence will not provide significant risk in the power system even if the interruptible load requirement is not met. In this case, it should		Deficit Interruptible Load Reserve - This signals insufficient Interruptible Load reserve, when the Interruptible Load reserve that may be scheduled is below the Interruptible Load requirements. Operationally interruptible loads can be compensated by sufficient dispatchable reserves and hence will not provide significant risk in the power system even if the interruptible load requirement is not met. <u>In this case, it should be least prioritized than deficient regulation, contingency and dispatchable reserves.</u>	<ul style="list-style-type: none"> • Relative to the earlier presentation and discussions on the proposed amendments, the RCC agreed to revise the prioritization of CVCs in the CVC table in the Manual. • The RCC further agreed to revise and simplify the definitions of CVCs, as discussed. • -The RCC agreed to veer away from the use of penalty price or prices in relation to the CVCs. Thus, the RCC recommended the use of the term CVC instead of CVC

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
	be least prioritized than deficient regulation, contingency and dispatchable reserves.			prices and remove the "P/MHh" unit used for the CVC. <ul style="list-style-type: none"> • Mr. Raymundo raised that if the unit "P/MWh" will be removed in the CVC, then it should likewise be removed and excluded from the computation of LWAP, for the purpose of consistency. • -in relation to the suggestion on the comments of • Mr. Raymundo, Mr. Meneses stated that if the CVC will be removed from the LWAP computation, only the PEN will be published in the website. He formally recommended removing the CVC computation in LWAP and the publication
4.0 (b)	Deficit Dispatchable Reserve - This signals insufficient dispatchable reserve, when the dispatchable reserve that may be scheduled is below the dispatchable reserve requirements. Deficit dispatchable reserve may be compensated by sufficient interruptible load. However, as dispatchable reserves are more flexible than interruptible load reserve, deficit dispatchable reserve should be prioritized over deficit interruptible load reserve.		Deficit Dispatchable Reserve - This signals insufficient dispatchable reserve, when the dispatchable reserve that may be scheduled is below the dispatchable reserve requirements. Deficit dispatchable reserve may be compensated by sufficient interruptible load. <u>However, as dispatchable reserves are more flexible than interruptible load reserve, deficit dispatchable reserve should be prioritized over deficit interruptible load reserve.</u>	

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
4.0 (c)	Deficit Regulating Reserve - This signals insufficient regulation reserve when the regulation reserve that may be scheduled is below the regulation requirements. Where there is a trade-off decision between interrupting supply though shedding load or shutting down generation, it would be better to accept lower reserve margins. Therefore, the constraint violation coefficient for deficit regulation reserve should be lower than that for nodal voll or deficit generation but higher than deficit interruptible load and dispatchable reserve.	Deficit Regulating Reserve - This signals insufficient regulation reserve when the regulation reserve that may be scheduled is below the regulation requirements. It is of utmost importance that this type of service be always available, even in cases of insufficient supply in compensating for the energy requirement Where there is a trade-off decision between interrupting supply though shedding load or shutting down generation, it would be better to accept lower reserve margins. Therefore, the constraint violation coefficient for deficit regulation reserve should be lower than that for nodal voll or deficit generation but higher than deficit interruptible load and dispatchable reserve.	Deficit Regulating Reserve - This signals insufficient regulation reserve when the regulation reserve that may be scheduled is below the regulation requirements. <u>It is of utmost importance that this type of service be always available, even in cases of insufficient supply in compensating for the energy requirement .</u> Where there is a trade-off decision between interrupting supply though shedding load or shutting down generation, it would be better to accept lower reserve margins. Therefore, the constraint violation coefficient for deficit regulation reserve should be lower than that for nodal voll or deficit generation but higher than deficit interruptible load and dispatchable reserve.	of the same.

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
4.0 (d)	Deficit Contingency reserve - This signals insufficient contingency reserve, when the contingency reserve that may be scheduled is below the contingency requirements. Similar to the deficient regulation reserve, the constraint violation coefficient for deficit contingency should be lower than that for deficit generation however it is prioritized over deficit regulating reserve as contingency reserves are spinning reserves which can be used to support operational reserves.	Deficit Contingency reserve - This signals insufficient contingency reserve, when the contingency reserve that may be scheduled is below the contingency requirements. <u>Similar to the deficient regulation reserve,</u> t The constraint violation coefficient for deficit contingency should be lower than that for deficit generation however it is prioritized over deficit regulating reserve as contingency reserves are spinning reserves which can be used to support operational reserves	Deficit Contingency reserve - This signals insufficient contingency reserve, when the contingency reserve that may be scheduled is below the contingency requirements. <u>Similar to the deficient regulation reserve, the constraint violation coefficient for deficit contingency should be lower than that for deficit generation however it is prioritized over deficit regulating reserve as contingency reserves are spinning reserves which can be used to support operational reserves.</u>	
4.0 (e)	Contingency Constraint - This signals the risk resulting from transmission line overflow during single outage conditions. Similar to Base		Contingency Constraint - This signals the risk resulting from transmission line overflow during single outage conditions. Similar to Base Case Constraint, deficiency leading to	



Section	Provision	Proposed Amendment	RCC Discussion	Remarks
	Case Constraint, deficiency leading to a line flow violation could alternatively result in an artificial nodal violation. To avoid artificial nodal violation, the constraint violation coefficient for contingency constraint should be lower than the value of Nodal VoLL.		a line flow violation could alternatively result in an artificial nodal violation. <u>To avoid artificial nodal violation, the constraint violation coefficient for contingency constraint should be lower than the value of Nodal VoLL.</u>	
4.0 (g)	Under Generation - This signals the risk of load shedding in the system, as this signifies load is greater than the amount of energy injected to the system. In this case, it is prioritized over deficit reserves and contingency constraint.		Under Generation - This signals the risk of load shedding in the system, as this signifies load is greater than the amount of energy injected to the system. <u>In this case, it is prioritized over deficit reserves and contingency constraint.</u>	
4.0 (h)	Base Case Constraint - This signals the security risk resulting from transmission line or transformer overflow. Generally the deficiency leading to a		Base Case Constraint - This signals the security risk resulting from transmission line or transformer overflow. Generally the deficiency leading to a line flow violation could alternatively result in a nodal violation - load could be shed at the receiving end rather	

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	<p>line flow violation could alternatively result in a nodal violation - load could be shed at the receiving end rather than violating the flow limits. In reality, the best way to manage this risk is for load to be shed at the receiving end of the line rather than risking overloading the lines to a point where it is burnt out, resulting in greater disruption to the transmission system and the economy. However, from the operational viewpoint if this is prioritized over the nodal violation, artificial load shedding may be encountered in the market. To prevent this, Base Case Constraint should be of lesser priority than Nodal VoLL CVC.</p>		<p>than violating the flow limits. In reality, the best way to manage this risk is for load to be shed at the receiving end of the line rather than risking overloading the lines to a point where it is burnt out, resulting in greater disruption to the transmission system and the economy.</p> <p><u>However, from the operational viewpoint if this is prioritized over the nodal violation, artificial load shedding may be encountered in the market. To prevent this, Base Case Constraint should be of lesser priority than Nodal VoLL CVC.</u></p>	



Section	Provision	Proposed Amendment	RCC Discussion	Remarks
4.0 (i)	Transmission Constraint Group (TCG) Constraint - This signals risks to the power transfer capability between regions in the transmission system. TCGs pertain branch groups or interconnection between regions in the power system. As this CVC signals possible violation to import/export or power transfer between areas in the grid which impacts on the security and reliability of the whole transmission system, it should be of higher priority than deficit reserves, deficit generation/excess generation, contingency and base case constraint.		Transmission Constraint Group (TCG) Constraint - This signals risks to the power transfer capability between regions in the transmission system. TCGs pertain branch groups or interconnection between regions in the power system. <u>As this CVC signals possible violation to import/export or power transfer between areas in the grid which impacts on the security and reliability of the whole transmission system, it should be of higher priority than deficit reserves, deficit generation/excess generation, contingency and base case constraint.</u>	

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
4.0 (j)	Nodal VoLL - This signals risks to localized shedding of load due to line or transformer loading limitations. As it is more appropriate to violate reserve margins than shed load, Nodal VoLL should be higher than reserve CVCs. In order also to prevent the occurrence of artificial load shedding as a result of artificial deficit generation/excess generation, contingency, base case and TCG constraints, Nodal VoLL is prioritized over these CVCs..		Nodal VoLL - This signals risks to localized shedding of load due to line or transformer loading limitations. <u>As it is more appropriate to violate reserve margins than shed load, Nodal VoLL should be higher than reserve CVCs. In order also to prevent the occurrence of artificial load shedding as a result of artificial deficit generation/excess generation, contingency, base case and TCG constraints, Nodal VoLL is prioritized over these CVCs.</u>	
6.1	Based on Section 4 above and in consultation with SO, the following will be the revised priority order of the CVCs in an ascending manner: 6.1.1 VoLL 6.1.2 TCG Constraint 6.1.3 Base Constraint 6.1.4 Under	Based on Section 4 above and in consultation with SO, the following will be the revised priority order of the CVCs in an ascending manner: 6.1.1 <u>Nodal</u> VoLL 6.1.2 TCG Constraint 6.1.3 <u>Base Case</u> Constraint 6.1.4 <u>Deficit Regulating Reserve Under Generation</u>	Based on Section 4 above and in consultation with SO, the following will be the revised priority order of the CVCs in an ascending manner: 6.1.1 <u>Base Case Constraint VoLL</u> 6.1.2 TCG Constraint 6.1.3 <u>Deficit Regulating Reserve Base Constraint</u> 6.1.4 Under	

Section	Provision	Proposed Amendment	RCC Discussion	Remarks
	<p>6.1.5 Generation Contingency Constraint</p> <p>6.1.6 Deficit Contingency Reserve</p> <p>6.1.7 Deficit Regulating Reserve</p> <p>6.1.8 Over Generation</p> <p>6.1.9 Deficit Dispatchable Reserve</p> <p>6.1.10 Deficit Interruptible Load</p>	<p><u>6.1.46.1.5</u> Under Generation / <u>Over</u> <u>Generation</u></p> <p><u>6.1.56.1.6</u> Contingency Constraint <u>6.1.66.1.7</u></p> <p>Deficit Contingency Reserve <u>6.1.7Deficit</u> <u>Regulating</u> <u>Reserve</u> <u>6.1.8Over</u> <u>Generation</u></p> <p><u>6.1.96.1.8</u> Deficit Dispatchable Reserve <u>6.1.106.1.9</u> Deficit Interruptible Load</p>	<p>Generation / <u>Over</u> <u>Generation</u></p> <p>6.1.5 <u>Nodal VoLL</u> <u>Contingency</u> <u>Constraint</u></p> <p><u>6.1.56.1.6</u> Contingency Constraint <u>6.1.66.1.7</u> Deficit Contingency Reserve <u>6.1.7Deficit</u> <u>Regulating Reserve</u> <u>6.1.8Over</u> <u>Generation</u></p> <p><u>6.1.96.1.8</u> Deficit Dispatchable Reserve <u>6.1.106.1.9</u> Deficit Interruptible Load</p>	
6.2	<p>Penalty Price Level</p> <p>The initial economic estimate used in the determination of VoLL for the WESM pegged the value of lost load at P100,000/MWh. However, considering the priority order on the application of CVC and to provide sufficient grading in between them</p>	<p><u>Penalty Price</u> <u>Level Gradation</u> <u>Levels between</u> <u>CVCs</u></p> <p>The initial value of the Deficit Interruptible Load, which is of the lowest priority, was set at P100,000/MWh, <u>an arbitrary value that is far from any reasonable price that may be derived in the WESM. As such, the priority order shall start at the original value for Deficit Interruptible Load with</u></p>	<p><u>Penalty Price Level</u> <u>Gradation Levels</u> <u>between CVCs</u></p> <p>The initial value of the Deficit Interruptible Load, which is of the lowest priority, was set at <u>CVC of P100,000/MWh, an assigned value that is far from any that may be derived in the WESM. As such, the priority order shall start at the original value for Deficit Interruptible Load with 100,000. However, considering the priority order on the application of</u></p>	

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	so that the pre-defined order of violation priority is maintained and resolve possible dispatch conflicts between the different constraint types, it is proposed that this value (P100,000) be associated instead with deficit interruptible load which is the least priority. To provide sufficient grading between the penalty prices, it is proposed that a grading equivalent to P100,000 be also used. Section 8 details the priority order of the CVC and their corresponding penalty price.	<u>P100,000/MWh.</u> <u>However,</u> <u>considering</u> <u>Considering</u> the priority order on the application of CVC and to provide sufficient grading in between them so that the pre-defined order of violation priority is maintained and resolve possible dispatch conflicts between the different constraint types, <u>it is proposed that this value (P100,000) be associated instead with deficit interruptible load which is the least priority. To provide sufficient grading between the penalty prices, it is proposed that a grading equivalent to P100,000 be also used.</u> Section 8 details the priority order of the CVC and their corresponding penalty price	<u>CVC and to provide sufficient grading in between them so that the pre-defined order of violation priority is maintained and resolve possible dispatch conflicts between the different constraint types, it is proposed that this value (P100,000) be associated instead with deficit interruptible load which is the least priority. To provide sufficient grading between the penalty prices, it is proposed that a grading equivalent to P100,000 be also used.</u> Sufficient grading in between CVCs are made so that the pre-defined order of violation priority is maintained, and to resolve possible dispatch conflicts between the different constraint types should they occur simultaneously. Section 8 details the priority order of the CVC and their corresponding <u>penalty price. CVC values.</u>	

o Dispatch Protocol Manual

In relation to the proposed amendments to the Dispatch Protocol Manual, Mr. Jose Ferlino Raymundo shared that there were comments and discussions from among the generators relative to the same. However, most of these comments are related to settlement, while the others were already covered and addressed in the earlier discussions on the matter.

Moving forward, Mr. Rosales requested that the comments of NGCP be taken up by the body, particularly on the Responsibilities of the System Operator relative to the implementation of the Reserve Market.

The NGCP-SO gave the following general comments -

- The required level of reserve should not be fixed at 4%. Instead, the proposal should refer to it as that prescribed in the ASPP duly approved by the ERC to avoid the need to change the provisions in the Manual every time the required level in the ASPP is revised.
- The submission of nominations and offers shall be based on per single unit per single type of reserve service.
- The System Operator, upon receipt from the Market Operator of the Real Time Reserve Dispatch Schedules, shall implement said schedule. The System Operator should likewise monitor the compliance of each generator to the schedules and submit a compliance monitoring report to the Market Operator for the purpose of settlement.

Below are the discussions which followed NGCP's presentation of its comments on the proposal.

- In relation to the SO's submission of the compliance monitoring report to the MO, Mr. Raymundo opined that a feedback mechanism should likewise be provided to the generators to make them aware of their violations, without having to wait for a long period (i.e. one month). Mr. Cacho responded that in terms of the REF, the proposed provisions in the Manual indicate a weekly and monthly timeline for the submission of reports. Mr. Rosales opined in relation to the timeline that an hourly reporting may not be possible since the data will have to be retrieved first.
- The RCC suggested revising the provision on the level of reserve requirement, to indicate that it should be based on the latest ASPP duly approved by the ERC, rather than fixing it at 4%, noting that the level indicated in the ASPP can be revised at anytime by the approving body.
- Mr. Rosales stated that currently, the definition of contingency and dispatchable reserve is based on the highest unit online, but this can still be revised once the approval of the new ASPP is issued by the ERC. Mr. Cacho clarified that under the ASPP, this is based on energy plus reserve.
- In relation to the SO's proposal to include other types of reserves, Mr. Rosales stated that this includes the dispatchable reserve and interruptible load. He shared that in their proposed ASPP, the Dispatchable Reserve is only required during peak and not during off-peak, since it is most likely that most plants are dispatched at their maximum during peak. He related the "other types of reserve" to the system security requirements of the SO. The RCC however commented that since "other types of reserves" is not yet part of the ASPP, it cannot be included as part of the proposal since it will not be

compliant with the ASPP. Mr. Meneses further commented that it is possible that the new ASPP may require the dispatchable reserve during off peak, so it is safer to just refer to the latest approved ASPP.

- Relative to the proposed nomination of capacities, Mr. Rosales stated that under the current ASPP, nomination of reserves is based on per unit per single type of reserve. He therefore expressed disagreement with the PEMC's proposal to allow the generator to submit offers for all types and likewise be scheduled for all types of reserves for a single unit, because in the end, the actual provision of reserve service will only be for a single type of reserve. He added that if multiple type of reserves was scheduled for a single unit, the customers would have to pay all types of resereserves even in reality, there is no actual provision of the reserve. He added that the SO is not capable of monitoring the REF of each type of reserve scheduled at the same time for a single unit. It would be very difficult to identify and monitor on which type of reserves was being provided actually. Likewise, this does not also include the monitoring of the reserve effectiveness factors for multiple types of reserves for a single unit. Mr. Raymundo agreed with the comments of Mr. Rosales, stating that it is better if the generator is clear on what type of reserve is being required of it. Mr. Cacho noted the comments and responded that these concerns may be assessed and addressed during the TOP.
- Mr. Cacho clarified that the regulating reserve is based on the SO's 4% reserve level requirement. On the other hand, the contingency and dispatchable reserves are based on the highest and second highest unit online. These numbers are, thus, predetermined. Based on the previous DAP schedule, the MO will determine the MW equivalent of the 4% reserve level requirement for RR, while for Contingency Reserve and Dispatchable Reserve requirement, the MO shall use the latest DAP run, to identify the highest and 2nd to the highest dispatch loading of the generators for every trading interval.
- In relation to the use of DAP for reserve, Mr. Raymundo inquired on how they will be able to determine the system demand based on DAP, in order for them to know whether or not it is still necessary for them to offer their capacity for dispatchable reserve, for instance. Mr. Rosales commented further that the 4% requirement should be based on the hourly forecasted demand for it to be realistic. He noted however that based on the MO's proposal, the closest and most realistic schedule that the MO could provide to be able to determine the Contingency Resrve and Dispatchable Reserve requirement is the latest 4-hour DAP run.
- With regard to the issue on Malaya, Mr. Cacho stated that the DOE already issued a Department Circular exempting Malaya from the must-offer rule and declaring Malaya as a Must-Run unit. Ms. Joselyn Carabuena stated, however, that there are still some interpretation issues with regard the DOE Circular and thus requested if the matter can be discussed through a meeting with PEMC and the DOE.

Noting the discussions above, the RCC passed a Resolution approving the urgent proposal on the Manuals on Dispatch Protocol and CVC, with revisions, as discussed by the RCC. The Secretariat, with the help of the MO, was requested to finalize the



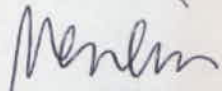
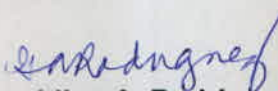
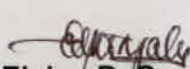
proposal based on the discussions (attached as Annex A), before the same is endorsed to the PEM Board for its approval.

4. Next Meeting

The RCC were reminded of the next meeting scheduled on 12 March 2014, as previously agreed.

5. Adjournment

There being no other matter to be discussed, the meeting was adjourned at around 3:00 PM.

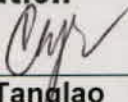
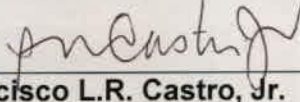

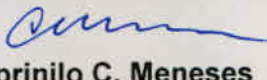
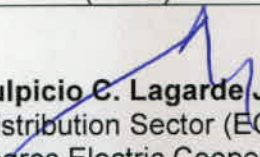
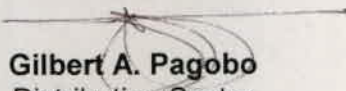

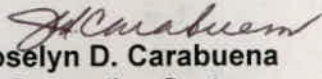
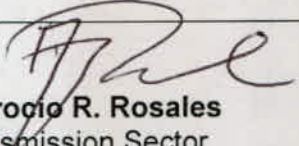
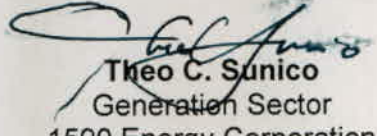
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