Philippine Electricity Market Corporation

WHOLESALE ELECTRICITY SPOT MARKET
RULES CHANGE COMMITTEE

RESOLUTION NO. 2014-16

Proposed General Amendments to the
WESM Manual on Constraint Violation Coefficients

WHEREAS, on 27 February 2014, the PEM Board approved the Proposal for Urgent Amendments to the WESM Manual on Constraint Violation Coefficients;

WHEREAS, said Proposal was published on 28 February 2014 and made effective on 26 March 2014;

WHEREAS, the Manual of Procedures for Changes to the WESM Rules (Rules Change Manual) defines the effectivity of urgent amendments, as follows: *Section 7.4 (b) "The amendment shall be effective for a period of not more than six (6) months from publication...or until such time that a general amendment on the same matter has been approved and become effective, whichever comes first.";*

WHEREAS, in view of the foregoing, the Philippine Electricity Market Corporation (PEMC), as the Proponent, re-submitted the same Proposal but as general amendments, following the procedures for *Rules* changes, and with some revisions in the value of CVCs, as previously discussed by the RCC based on the simulation results presented by PEMC;

WHEREAS, the Proposal for General Amendments to the WESM Manual on Constraint Violation Coefficients (Annex A) was received by the Rules Change Committee on 4 August 2014;

WHEREAS, the Proposal for General Amendments to the WESM Manual on Constraint Violation Coefficients intends to reflect the operational priorities in the grid in order to provide proper schedules for energy and reserve that are operationally feasible for implementation of the System Operator during cases of supply deficits for energy and regulation reserve;

WHEREAS, during the 90th RCC meeting held on 6 August 2014 the PEMC presented before the RCC its Proposed General Amendments to the WESM Manual on Constraint Violation Coefficients, with a request for approval of the same;

WHEREAS, during the same meeting, the RCC reviewed the Proposal and finding the said Proposal compliant with the criteria for rules change pursuant to Section 4 of the Rules Change Manual, approved the publication of the Proposal in the WESM Website;

WHEREAS, the Proposal was published in the WESM website on 7 August 2014 to solicit comments from Participants, with notice sent the following day;

WHEREAS, no further comments were received relative to the Proposal;

WHEREAS, on 10 September 2014, where quorum was established, the RCC convened for its 92nd Meeting to deliberate on the Proposal;

WHEREAS, during the same meeting, the RCC further reviewed and deliberated on the Proposal and, thereafter, finding merit on the same, approved the said Proposal for General Amendments to the WESM Manual on Constraint Violation Coefficients and agreed to endorse the same to the PEM Board, for its approval;

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

RESOLVED, that the Proposal for General Amendments to the WESM Manual on Constraint Violation Coefficients (Annex A) is hereby adopted and approved by the RCC, as submitted;

RESOLVED FURTHER, that the attached Proposal for General Amendments to the WESM Manual on Constraint Violation Coefficients (CVC) is hereby endorsed to the PEM Board, for its approval.

Done this 10 September 2014, Pasig City.

Approved by: RULES CHANGE COMMITTEE [redacted] **Rowena Cristina L. Guevara** Chairperson University of the Philippines (UP)	
Members:	
Concepcion I. Tanglao Independent	**Francisco L.R. Castro, Jr.** Acting Chairperson Independent Tensaiken Consulting
[redacted] **Maila Lourdes G. de Castro** Independent	[redacted] **Jose Ferlino P. Raymundo** Generation Sector SMC Global
[redacted] **Theo Cruz Sunico** Generation Sector 1590 Energy Corporation (1590 EC)	[redacted] **Joselyn D. Carabuena** Generation Sector Power Sector Assets and Liabilities Management Corporation (PSALM)
Gilbert A. Pagobo Distribution Sector (PDU) Mactan Electric Company (MECO)	[redacted] **Ciprinilo C. Meneses** Distribution Sector (PDU) Manila Electric Company (MERALCO)
[redacted] **Jose P. Santos** Distribution Sector (EC) Ilocos Norte Electric Cooperative, Inc. (INEC)	**Sulpicio C. Lagarde Jr.** Distribution Sector (EC) Central Negros Electric Cooperative, Inc. (CENECO)
Lorreto H. Rivera Supply Sector TeaM (Philippines) Energy Corporation (TPEC)	[redacted] **Isidro E. Cacho Jr.** Market Operator Philippine Electricity Market Corporation (PEMC).
[redacted] **Ambrocio R. Rosales** Transmission Sector/System Operator National Grid Corporation of the Philippines (NGCP)	
	Certified True and Correct: [redacted] **Elaine D. Gonzales** RCC Secretary PEMC

[redacted]

"ANNEX A"
RCC Orep-WM-14

[redacted]

Wholesale Electricity Spot Market

WESM-WM-(Manual)-CN - _____

REQUEST FOR AMENDMENTS OR CHANGES TO THE WESM MANUALS

Proposals made only under this prescribed form shall be accepted and considered as submitted:

This request for amendments to the WESM Rules can be submitted to:

PEM Board
Attention: **PEM Committee Secretariat**
Philippine Electricity Market Corporation
18/F Robinsons Equitable Tower
ADB Avenue, Ortigas Center
Pasig City, 1605 Philippines
Email address: rcc@wesm.ph
Fax Number: (+632) 395-2704

I. Proposer's Information

Name	**President Melinda L. Ocampo**
Designation	President
Signature	[redacted]
Company	Philippine Electricity Market Corporation
Company Address	18/F Robinsons Equitable Tower, ADB Avenue, Ortigas Center, Pasig City
Telephone No.	(02) 631-8734
Fax. No.	(02) 636-0802
Email Address	helpdesk@wesm.ph

II. WESM Manual Amendments Information

Title of WESM Manual being commented:

Constraint Violation Coefficient

Nature of Request (please indicate with x)
☐ Addition ☒ Alteration ☐ Deletion ☐ Clarification ☐ Clerical Correction

[redacted]

III. **Proposed Amendment**

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	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 be least prioritized than deficient regulation, contingency and dispatchable reserves.	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 be least prioritized than deficient regulation, contingency and dispatchable reserves.**~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	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. ~~However, as dispatchable reserves are more flexible than interruptible load reserve, deficit dispatchable reserve should be prioritized over deficit interruptible load reserve.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	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.**~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	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. ~~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.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	4.0 (e)	Contingency Constraint - This signals the risk resulting from transmission line overflow during single outage conditions. Similar to Base 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.	Contingency Constraint - This signals the risk resulting from transmission line overflow during single outage conditions. Similar to Base 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.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.
Constraint Violation Coefficient	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. ~~In this case, it is prioritized over deficit reserves and contingency constraint.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	4.0 (h)	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 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.	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 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.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
Constraint Violation Coefficient	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. ~~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.~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.

Title	Section	Provision	Proposed Amendment	Rationale
	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. ~~**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.**~~	Simplify description of CVCs. Priority Order scheme should not be part of the definition.
Constraint Violation Coefficient Development	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 Nodal VoLL 6.1.2 TCG Constraint 6.1.3 Base Constraint 6.1.4 Under Generation 6.1.5 Contingency Constraint 6.1.6 Deficit Contingency Reserve 6.1.7 Deficit Regulating Reserve 6.1.8 Over Generation 6.1.9 Deficit Dispatchable Reserve 6.1.10 Deficit Interruptible Load	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 **Base Case Constraint** ~~**Nodal VoLL**~~ 6.1.2 TCG Constraint 6.1.3 **Deficit Regulating Reserve** ~~**Base Constraint**~~ 6.1.4 Under Generation / **Over Generation** 6.1.5 **Nodal VoLL** ~~**Contingency Constraint**~~ ~~**6.1.5**~~**6.1.6** Contingency Constraint ~~**6.1.6**~~**6.1.7** Deficit Contingency Reserve	Proposed Operational Priorities in view of integration of Reserves in the WESM

Title	Section	Provision	Proposed Amendment	Rationale
			~~6.1.7 Deficit Regulating Reserve~~ ~~6.1.8 Over Generation~~ ~~6.1.9~~6.1.8 Deficit Dispatchable Reserve ~~6.1.10~~6.1.9 Deficit Interruptible Load	
Constraint Violation Coefficient Development	6.2	**Penalty Price Level** 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 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.	**~~Penalty Price Level~~ Gradation Levels between CVCs** The initial **~~economic estimate used in the determination of VoLL for the WESM pegged the value of lost load~~ value of the Deficit Interruptible Load, which is of the lowest priority, was set at CVC of** ~~P~~100,000**~~/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. 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. ~~However, considering the priority order on the application of CVC and to~~**	

Title	Section	Provision	Proposed Amendment	Rationale
			~~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.~~Section 8 details the priority order of the CVC and their corresponding ~~penalty price.~~ **CVC values.**	
Constraint Violation Coefficients Table	8.0	*See Table 1*		

Table 1. Original CVC Table

Priority	Constraint Violation Coefficient Name	Price (P/MW)	Definition	SO Action
10	Deficit Interruptible Load Reserve	100,000	Insufficient Interruptible demand to meet Reserve Requirement	This is not a problem if Dispatchable reserve is met. Otherwise resort to mandatory load dropping.
9	Deficit Dispatchable Reserve	200,000	Insufficient capacity to meet Reserve Requirements (n-2)	This is not a problem if Interruptible reserve is met. Otherwise resort to mandatory load dropping.
8	Over Generation	(800,000)	the total minimum generation in the system exceeds the total demand	Identify "Must-Run Units" and shut down other units to eliminate excess capacity.
7	Deficit Regulating Reserve	400,000	Insufficient capacity to meet Reserve Requirements	Larger frequency excursions are expected without regulating reserve. Lower quality of service.
6	Deficit Contingency Reserve	500,000	Insufficient capacity to meet Reserve Requirements (n-1)	Automatic load dropping will cover for loss of generation if contingency reserve is insufficient.
5	Contingency	600,000	Violation in pre-defined contingency limits during single-outage conditions (n-1)	If risk involves system collapse or islanding, implement necessary re-dispatch and load dropping.

Priority	Constraint Violation Coefficient Name	Price (P/MW)	Definition	SO Action
4	Under Generation	800,000	The demand exceeds the total maximum generation in the system	Immediately implement mandatory load dropping as necessary
3	Base Case Constraint	900,000	Thermal loading limit violations of lines or transformers	Marginal overloads (i.e., <10% for 1 hour) should be allowed. Re-dispatch generation and drop load.
2	TCG Constraint	1,000,000	Import/Export constraints between areas.	Immediately implement re-dispatch and/or load dropping as necessary.
1	Nodal Value of Lost Load	1,100,000	Localized deficiency in supply due to line or transformer loading limitations	Marginal overloads (i.e., <10% for 1 hour) should be allowed. Otherwise drop local loads.

Table 2. Proposed Revisions to the CVC Table

Priority	Constraint Violation Coefficient Name	~~Price ($/MW)~~ CVC	Definition	~~SO~~ Action to be Undertaken
~~109~~	Deficit Interruptible Load Reserve	100,000	Insufficient ~~interruptible demand~~ capacity to meet the Interruptible ~~demand to meet~~ Reserve Requirement	~~This is not a problem if Dispatchable reserve is met. Otherwise resort to mandatory load dropping.~~ Same function as Dispatchable reserve
~~98~~	Deficit Dispatchable Reserve	200,000	Insufficient capacity to meet Dispatchable Reserve Requirements ~~(n-2)~~	~~This is not a problem if Interruptible reserve is met. Otherwise resort to mandatory load dropping.~~ The contingency reserve when depleted cannot be replenished by Dispatchable Reserve if not sufficient
~~8~~	~~Over Generation~~	~~(800,000)~~	~~the total minimum generation in the system exceeds the total demand~~	~~Identify "Must-Run Units" and shut down other units to eliminate excess capacity.~~
~~7~~	~~Deficit Regulating Reserve~~	~~400,000~~	~~Insufficient capacity to meet Reserve Requirements~~	~~Larger frequency excursions are expected without regulating reserve. Lower quality of service.~~

Priority	Constraint Violation Coefficient Name	~~Price (P/MW)~~ CVC	Definition	**SO** Action **to be Undertaken**
~~67~~	Deficit Contingency Reserve	~~500,000~~ 300,000	Insufficient capacity to meet **Contingency** Reserve Requirements ~~(n-1)~~	**Delayed restoration of affected automatic load dropping (ALD) feeders due to loss of generation if contingency reserve is insufficient.** ~~Automatic load dropping will cover for loss of generation if contingency reserve is insufficient.~~
~~56~~	Contingency	~~600,000~~ 400,000	Violation in pre-defined contingency limits during single-outage conditions (N-1)	~~If risk involves system collapse or islanding,~~ Implement necessary re-dispatch **and possible manual** load dropping **to prevent overloading on the remaining lines or transformers**
5	Nodal Value of Lost Load	~~1,100,000~~ 800,000	~~Localized~~ Deficiency in supply due to **localized violations on** line or transformer loading limitations	Marginal overloads (i.e., <1**1**0% for 1 hour) should be **addressed to eliminate possible overloading on the remaining lines or transformers during contingency occurrence.** ~~allowed~~ Otherwise, drop local loads.

Priority	Constraint Violation Coefficient Name	~~Price (P/MW)~~ CVC	Definition	~~SO~~ Action to be Undertaken
4	Over Generation	~~(800,000)~~ (1,000,000)	The total minimum generation in the system exceeds the total demand	Identify ~~"Must-Run Units" and~~ generating units to be shutdown ~~shut down other units~~ to eliminate excess capacity.
	Under Generation	~~800,000~~ 1,000,000	The demand exceeds the total maximum generation in the system	~~Immediately~~ implement ~~mandatory~~ Manual load dropping ~~as necessary~~ to ensure balance of supply and demand.
3	Deficit Regulating Reserve	~~400,000~~ 1,300,000	Insufficient capacity to meet Regulating Reserve Requirements	Larger frequency excursions are expected without regulating reserve. Lower power quality of service.
2	TCG Constraint	~~1,000,000~~ 1,400,000	Import/Export constraints between areas.	~~Immediately implement re-dispatch and/or load dropping as necessary. Possible overloading should be allowed~~ addressed by Re-dispatch generation and drop load if necessary.

Priority	Constraint Violation Coefficient Name	~~Price (P/MW)~~ CVC	Definition	~~SO~~ Action **to be Undertaken**
1	Base Case Constraint	~~900,000~~ **1,500,000**	Thermal loading limit violations of lines or transformers	~~Marginal overloads (i.e., <110% for 1 hour)~~ **Possible overloading** should be ~~allowed~~ **addressed by** Re-dispatch generation and drop load **if necessary.**

Wholesale Electricity Spot Market

PROPOSED REVISIONS TO THE CONSTRAINT VIOLATION COEFFICIENT MANUAL

Philippine Electricity Market Corporation

06 August 2014

Version No. 1 – 06 August 2014 Public

I. SUMMARY OF THE PROPOSED RULES CHANGE

PEMC proposes revisions to the WESM Manual on the Constraint Violation Coefficient in view of the operational priorities once the reserve market is integrated into the commercial operations of the WESM.

II. BACKGROUND

The Market Operator shall develop and publish constraint violation coefficients or procedures for calculating constraint violation coefficients for each constraint detailed in WESM Rules clause 3.6.1.4, to be used in the market dispatch optimization model prior to the commercial operations of the spot market pursuant to the WESM Rules Clause 10.4.11.

Initially, the Constraint Violation Coefficients were formulated prioritizing the constraints related to energy, whereas the constraints relating to deficits in reserve were of least priority.

However during the discussions between the System Operator and the Market Operator for the preparation of the integration of the Reserve Market into the commercial operations of the WESM, the System Operator noted that the Deficit Regulation Requirement should be of higher priority than the energy requirement. This means that the regulation requirement should be fulfilled first by the regulation reserve providers before completing the generation schedules to meet the energy requirement. In line with this, there should always be enough regulation reserve capacities even if there is insufficient supply to meet the energy requirement.

Such a new priority is considered so that the schedules produced by the Market Dispatch Optimization Model (MDOM) shall be operationally feasible for implementation of the System Operator.

III. THE PROPOSED RULES CHANGE

The proposed changes on the Constraint Violation Coefficient Market Manual intend to reflect the operational priorities in the grid so that it could properly reflect energy and reserve schedules that are operationally feasible for implementation of the System Operator during cases of supply deficits for energy and regulation reserve.

The proposed changes mainly involve the re-ordering of priorities where the Deficit Regulation Reserve should be of higher priority in comparison with the Deficit in Energy Requirement (Under Generation). Given such a proposal, the MDOM shall satisfy the regulation reserve requirement prior to satisfying the energy requirement.

The proposed CVC values also considered sufficient distinctions among them so that the pre-defined order of violation priority is maintained, and to resolve possible dispatch conflicts between the different constraint types.

IV. BACKGROUND AND DESCRIPTION OF THE PROPONENT

The proponent is the Philippine Electricity Market Corporation. PEMC acts as both the market operator and governance arm of the WESM.

Top Officers:
M. L. Ocampo – President
C. C. Claudio – VP, Trading Operations
C. S. Heruela – VP, Market Assessment
R. P. Descanzo – VP, Corporate Planning & Communications
C. S. Martin-Funelas – VP, Legal

V. CONCLUSIONS AND RECOMMENDATIONS

The proposed revisions on the Constraint Violation Coefficient Market Manual amply consider the operational feasibility of producing energy and reserve schedules once the Reserve Market is integrated into the commercial operations of the WESM. Hence, it is recommended that the proposed revised Market Manual be adopted.

VI. REFERENCES

1. WESM Rules