

Comments on the **Price Determination Methodology (PDM) for the Philippine Wholesale Electricity Spot Market (WESM)**, Released November 12, 2003

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1.	WESM Characteristics	2.1	1	With electricity markets in various jurisdictions adopting different market structures, we recommend that as a form of introduction, the initial portion of the PDM should be dedicated to the explanation as to why the Philippine WESM has chosen to adopt a mandatory, gross-pool market structure. This will serve to orient the reader as well as provide the rationale for such a choice of market structure.
2.	WESM Characteristics	2.1	1	The section discusses the nature and benefits of the use of nodal, location-specific pricing for generation. We recommend that the PDM also discuss the various disadvantages that could arise from such a market structure. These may include discussions on the increased potential for large price differences across the nodes due to the very nature and inherent characteristics of the system. Also for inclusion are the measures and instruments that have been or will be put in place in order to account for the identified shortcomings of a nodal pricing scheme.
3.	WESM Characteristics	2.1	1	The discussion on the use of ex-ante and ex-post pricing would be further understandable with an inclusion of the argument that this specific choice was made due expected variances between bid quantities/prices and the eventual outcome. This condition arises from the choice of a relatively long trading interval (i.e. one-hour) for the WESM. May we also recommend that the Department of Energy (DoE) mention that it is intended that shorter trading intervals be eventually adopted by the WESM, which may lead to a revisiting of the ex-ante/ex-post pricing scheme.
4.	Market Network Model	2.2.1	2	It is clear that there is a need for an accurate and true representation of the Philippine electric system through the Market Network Model. However there is no mention in the PDM as to why the System Operator (SO) should settle for the use of the reduced Market

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5. Market Network Model	2.2.1	2	<p>Network Model (MNM) instead of a full network model (FNM).</p> <p>Although general guidelines have been set out for the desired MNM, no mention is made of the principles that will be observed during the construction of the appropriate reduced version of the electricity network. This is necessary to ensure that the final MNM is a fair representation of the actual system and that it will be consistent and reliable when used. Also, no criteria have been set against which the final MNM will be evaluated to qualify it for implementation. This may include the desired level of accuracy, essential components, and acceptable omissions.</p> <p>In this light, may we also make the following recommendations:</p> <ol style="list-style-type: none"> 1. A process should be established to specifically define the components that must be included in the MNM, especially components of the system that have material impact on dispatch and pricing. 2. An explanation on the rationale why a particular component is included or not included should be documented. 3. The methodology for the derivation of the values of all parameters should be included. A detailed computation of the values should be properly documented for auditing purposes. 4. Sufficient documentation should be provided for the simplifications, approximations, equivalencies or adaptations that were adopted in the process of developing the MNM. This should include the rationale as well as all arguments leading to such decisions. 5. A process must be established to sufficiently test the determined MNM. <p>We believe that the rules that will govern the development of the MNM, as well as any</p>

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			future revisions that shall be made to it, should be contained in the PDM. Hence, at any point during the MNM's development or modification, reference can easily be made to these rules. As modifications to the MNM become necessary due to changes in the electricity infrastructure (e.g. additional generating capacity, new transmission line, etc.), these rules will continue to guide the MO's actions in the management of the MNM. Also, any other market participant can review and validate the MO's actions against these ERC approved rules.
6. Market Trading Nodes	2.2.1.1	2	<p>Since the concept is rather new, it would be beneficial if the PDM expounded on the definition of a Market Trading Node. The definition and assignment of nodes to market participants has significant impact on the structure and behavior of the market, and will definitely affect prices.</p> <p>We recommend that the PDM provide detailed policies and procedures for the identification of nodes.</p>
7. Customer Pricing Zones	2.2.1.2	3	<p>Although the PDM briefly discusses the concept of the Customer Pricing Zone, there is insufficient detail concerning the criteria for its determination.</p> <p>We recommend that the PDM provide detailed policies and procedures for the composition of customer pricing zones.</p>
8. Reserve Pricing Zones	2.2.1.3	3	<p>Mention is made of the initial determination of three Reserve Pricing Zones, namely Luzon, Visayas, and Mindanao. There is no further discussion concerning the determination of future zones through the decomposition and/or aggregation of the initially determined zones.</p> <p>We recommend that the PDM establish the parameters and process for the determination and/or modification of Reserve Pricing Zones.</p>

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9.	Price Adjustment to Reflect Transmission Losses	2.2.2.7	8	<p>Mention is made of the relevance of the choice of a “reference bus” for the determination of the actual energy loss due to the flow of energy. We would like to request for clarification on the rationale for this, considering the potential for large price fluctuations among the various choices for the reference bus.</p> <p>We recommend that the parameters be set for the choice of the appropriate reference bus. We suggest that these measures be specified in the PDM.</p>
10.	The Price Adjustment to Reflect Transmission Losses	2.2.2.7	8	<p>Mention is made of the use of loss adjustment factors to reflect the particular conditions at the chosen reference bus. There is insufficient detail on the nature of these loss factors. It is unclear whether these loss factors will be computed for each trading interval or pre-calculated and simply applied when necessary. In either case it is unclear as to how these parameters will be determined, validated, and set.</p> <p>We recommend that the PDM establish the guidelines and process for the calculation of Transmission Loss Factors.</p>
11.	The Price Adjustment to Reflect Transmission Losses	2.2.2.7	8	<p>We would like to request for clarification on how the reference node is selected in computing for the loss factors and the reason why the absolute value of the nodal prices will change from that of the marginal plant depending on which reference is selected. It is unclear how would this affect the nodal prices and the customer zonal prices.</p> <p>We recommend that the PDM should establish the process for selecting the reference plant.</p>
12.	Administered Price Cap	2.2.3.4	10	<p>Mention is made of the authority of the MO to impose a price cap on the market during market suspension and intervention. There is insufficient detail concerning the manner by which this cap will be determined and implemented.</p>

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			We recommend that the PDM establish the parameters and process for the determination and administration of the price cap.
13. Treatment of Must-Run Generation	2.2.3.5	10	<p>Clearly there is a need for must-run generation to meet system stability and security requirements. As a responsibility of the SO, we recommend that the SO determine the process of classifying generators as must-run plants, and the generators classified as such must be submitted to ERC for approval. It may be necessary to amend the WESM rules to properly define must-run plants.</p> <p>In line with this, the SO should also determine and publish the specific system stability and security requirements that it hopes to satisfy with the operation of the must-run plants.</p> <p>Also, since must-run generators are price-takers, we would like to request for clarification on the manner by which must-run generators will be compensated should the marginal price fall below their cost of operation.</p>
14. Ancillary Services Traded in the Market	2.2.3.8	11	We would like to request for clarification on why the PDM only identifies two types of reserve categories, regulating and contingency, as opposed to the five ancillary services already listed in the WESM Rules. Also, since according to the WESM Rules (Section 3.3.4.2) the MO may propose other reserve categories, we recommend that the parameters be set for the MO to exercise this authority.