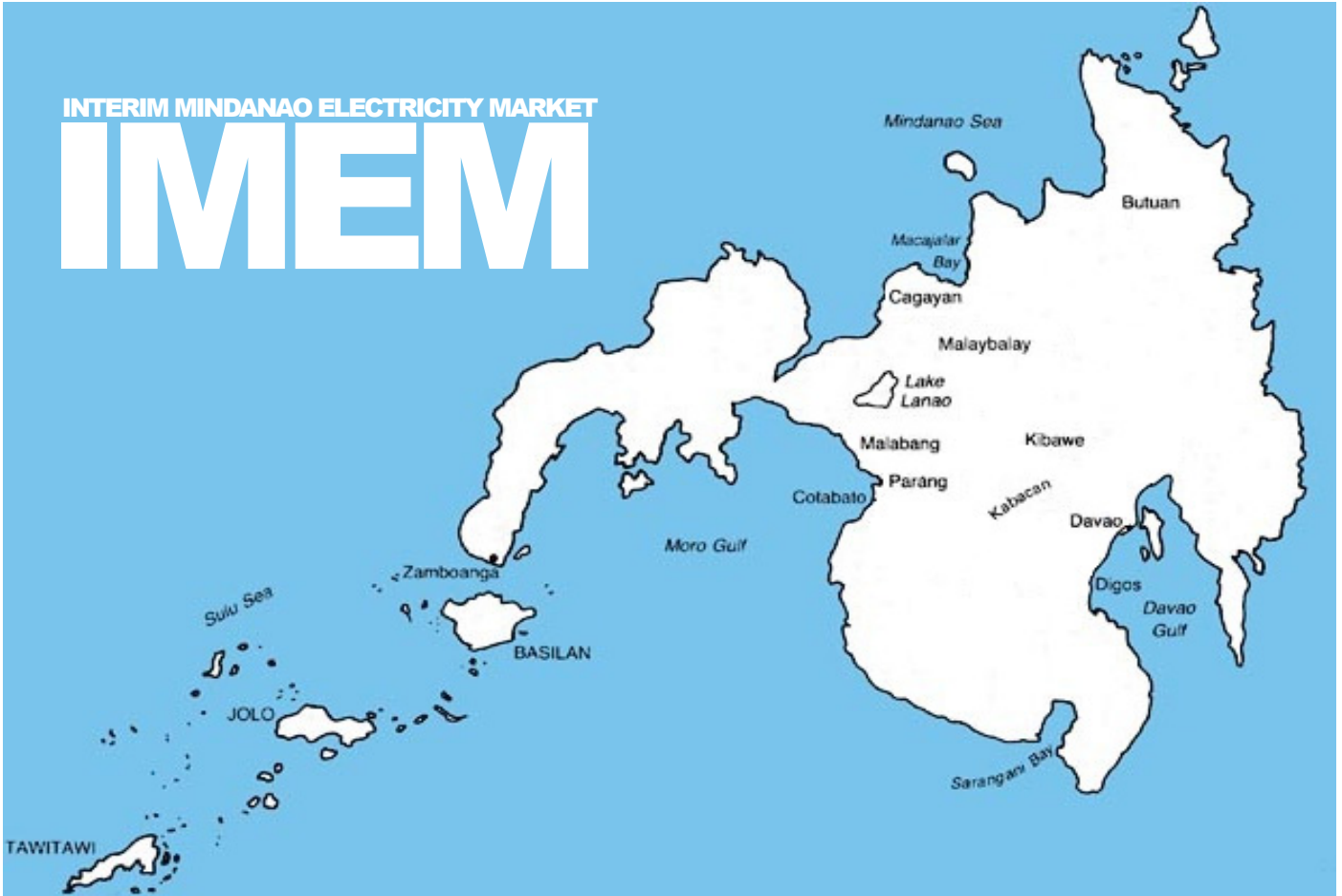


INTERIM MINDANAO ELECTRICITY MARKET

IMEM



THE INTERIM MINDANAO ELECTRICITY MARKET (IMEM) PRIMER

About this primer

This primer explains the establishment of IMEM as an interim measure of the Department of Energy to address the power supply situation in Mindanao. It also covers the salient features and market design of IMEM and the impact of IMEM operations to electricity prices in Mindanao.

Introduction

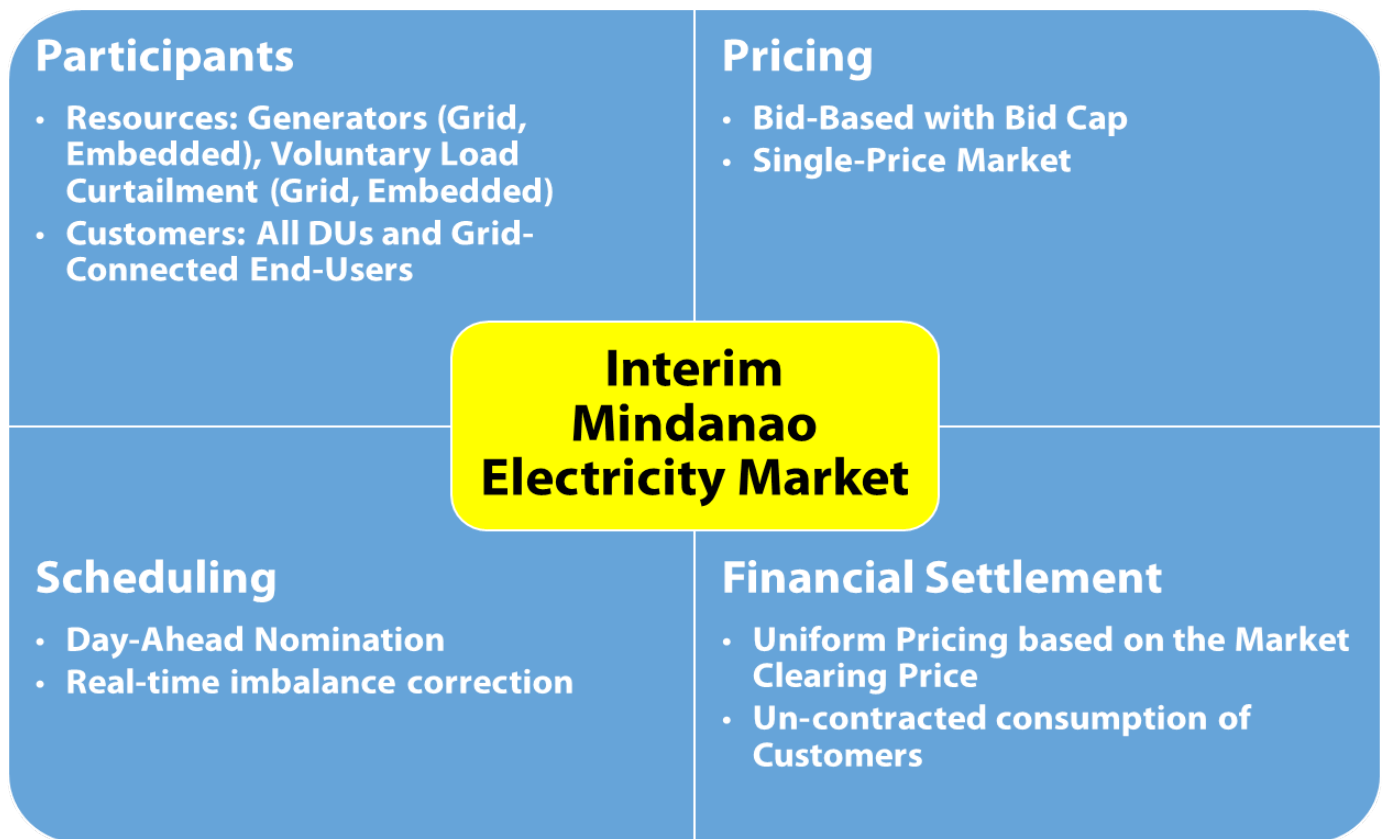
Recognizing the urgent need to address the current supply shortage in Mindanao, the DOE directed the Philippine Electricity Market Corporation (PEMC) to develop and implement an interim electricity market design specific to Mindanao. The IMEM is a medium term and interim solution developed by the DOE meant to address the deficiency of the supply in Mindanao.

What is the IMEM?

The IMEM is a venue for the transparent and efficient utilization of all available capacities in the Mindanao grid to meet the supply deficiency. Unlike the Wholesale Electricity Spot Market (WESM) operating in Luzon and Visayas, the IMEM will be a day-ahead market and will address ONLY the supply deficiency in the grid. It intends to draw out all generation capacities including embedded generators in the grid to contribute to the supply in Mindanao. Further, it also intends to draw out voluntary load customers who are willing to curtail their load to lower the demand in the system. By reasonably compensating embedded generators and voluntary load customers through a price determination methodology and cost recovery methodology approved by the ERC, it is envisioned that the supply and demand situation in Mindanao will improve until the entry of new capacities in Mindanao in 2015. By then, the Mindanao grid will be ready for the operation of the WESM. Thus, the IMEM also serves as a transition to the operation of the WESM in Mindanao.

What is the legal basis for the establishment of IMEM?

The IMEM is mandated by DOE Department Circular No. DC2013-01-0001 dated 09 January 2013 pursuant to DOE's mandate in ensuring reliability, quality and supply of electric power under Republic Act No. 9136 also known as the Electric Power Industry Reform Act of 2001 or EPIRA.



Overview of the Interim Mindanao Electricity Market (IMEM).

What is the objective of the IMEM?

The objective of the IMEM is to augment the power supply in Mindanao through:

- a transparent and efficient utilization of all available capacities and encouragement of voluntary load curtailment in Mindanao;
- a reasonable and transparent pricing mechanism that will encourage participation of existing generating capacities and demand side management in Mindanao; and
- free and fair competition and public accountability.

What are the IMEM Rules?

The IMEM Rules establish the basic rules, requirements, and procedures that govern the operation of the IMEM. It sets the responsibilities of the IMEM Operator, Mindanao System Operator, IMEM Members, and the IMEM Governing Committee. The Rules are meant to implement the provisions of DOE DC No. 2013-01-0001 on the general principles of IMEM.

What are the key features of IMEM?

The key features of IMEM are as follows:

- A day-ahead market wherein market participants submit their nominations a day before the actual delivery or curtailment of energy;
- All generation capacities, directly-connected customers and distribution customers shall be part of a mandatory program that aims to address only the deficiency of supply in the grid;
- Provides for energy efficiency incentives meant to contribute to the supply in the grid;
- Provides real time imbalance correction through the use of merit order table provided by the IMEM Operator;
- Provides a Merit Order Table having the same principles of the merit order table used in the Luzon and Visayas grids;
- A settlement based on a uniform pricing framework settled at the market clearing price with which the total cost shall be allocated among the IMEM participants; and
- Provides for a governance framework to ensure free and fair competition and public accountability.

The IMEM is a medium term and interim solution developed by the DOE meant to address the deficiency of the supply in Mindanao.

Who can participate in the IMEM?

Participation in the IMEM shall be mandatory for all generation capacities connected to the Mindanao Power System, all Distribution Utilities in the Mindanao Power System, and end-users that are connected to the Mindanao Transmission System. It is voluntary for end-users that are connected to a Mindanao Distribution System and have the capability for either voluntary load curtailment or synchronised self-generation. Participation in the IMEM, including trading and provision of services, is restricted to entities that are registered as IMEM Members.

What are the membership requirements to participate in the IMEM?

To become an IMEM Member, an entity must have the proper authorizations under the EPIRA issued by the ERC and other appropriate government agency and must meet the requirements for creditworthiness called "prudential requirements". It must have a communication facility (e.g. fax, telephone or internet connection) to facilitate the exchange of information among the IMEM Operator, Mindanao System Operator and IMEM Member.

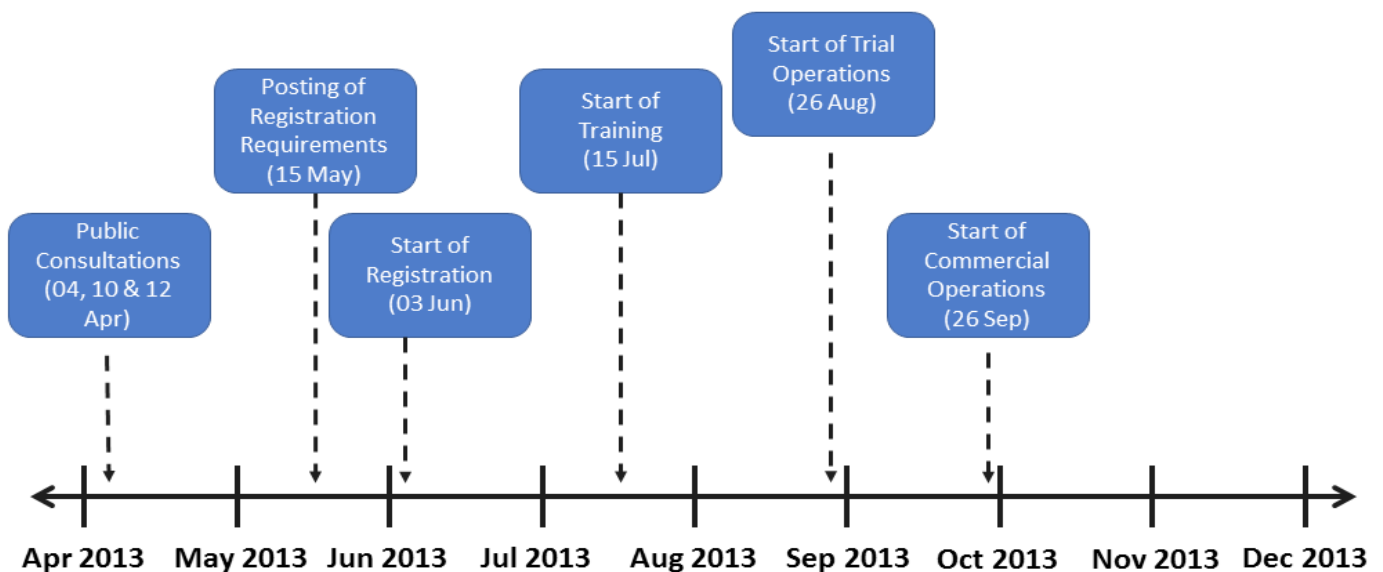
How are dispatch schedules and prices determined in the IMEM?

The IMEM will schedule the participating generation facilities through a merit order table from the lowest to the highest offer that will meet the day-ahead forecasted demand of the Mindanao grid net of contract nominations. The day-ahead price will be fixed at the last offer price that will meet the forecasted demand.

What are the responsibilities of the National Grid Corporation of the Philippines (NGCP) as the Mindanao System Operator in the IMEM?

The Mindanao System Operator shall implement the Day-Ahead Schedule produced by the IMEM Operator. In addition, the Mindanao System Operator shall have the following responsibilities:

- a) Be responsible for and operate the Grid in accordance with the IMEM Rules, the Grid Code, and any legal and valid instruction issued by the IMEM Operator, the DOE, or the ERC;
- b) Provide all necessary information that will allow the IMEM Operator to prepare the Day-Ahead Schedule of all IMEM Resources in accordance with the IMEM Rules;
- c) Provide central dispatch to all generation facilities in the Mindanao Power System and shall implement the IMEM Merit Order Table submitted by the IMEM Operator;
- d) Continuously monitor the Mindanao Power System to ensure compliance with Dispatch Instructions by IMEM Generators;
- e) Monitor all generation resources connected to the Mindanao Power System as regards to their Available Capacity and technical ability to comply with Dispatch Instructions;
- f) Assist the IMEM Operator in enabling it to perform its obligations under the IMEM Rules;
- g) Contribute towards the development, improvement and maintenance of procedures, processes or systems, and assist with any aspect of the operation of the IMEM, in coordination with the IMEM Operator; and
- h) Comply with each of the requirements and obligations imposed on it under the IMEM Rules, Grid Code, and other applicable laws or regulations.



The Interim Mindanao Electricity Market (IMEM) timeline.

How will the IMEM affect electricity prices in Mindanao?

IMEM's effect on the electricity prices in Mindanao will depend on two factors: (1) the level of exposure of the consumer to the IMEM and (2) the offer prices of IMEM Resources. If a consumer is not fully contracted and opts to buy the rest of its requirements from the IMEM, then the IMEM will have an impact on its electricity prices. The direction (whether increasing or decreasing) and extent of the impact of the IMEM on the electricity prices of a consumer would depend on the offer prices of IMEM Resources.

What has been done in preparation for the commencement of IMEM operation?

After the issuance of DOE DC No. 2013-01-0001, PEMC applied to the ERC for the use of the 2012 unutilized market fees to support the establishment of the IMEM. On 5 March 2013, PEMC received the Provisional Authority issued by the ERC.

Pursuant to the DOE Department Circular, PEMC submitted last 25 March 2013 to the DOE the draft IMEM Rules. To fully inform the public of the IMEM, three public consultations in Zamboanga, Cagayan de Oro, and Davao are scheduled to be undertaken.

Coordination meetings among the DOE, PEMC and other energy agencies, such as NGCP, NEA, TransCo, NPC, GMC, and some Distribution Utilities, have been conducted to discuss the design and implementation issues of the IMEM.

Who is the IMEM Operator?

The IMEM Operator is the Philippine Electricity Market Corporation (PEMC) pursuant to DOE Department Circular No. DC2013-01-0001 whereby PEMC is directed to develop and implement an interim electricity market design for Mindanao.

What are the responsibilities of the IMEM Operator?

The IMEM Operator shall perform the following:

- a) Administer the operation of the IMEM in accordance with the IMEM Rules;
- b) Allocate resources to enable it to operate and administer the IMEM on a non-profit basis;
- c) Carry out the development, improvement and maintenance of systems, processes and procedures to be used in the operation of the IMEM.
- d) Administer the registration, suspension and de-registration of IMEM Members;
- e) Maintain and publish an up-to-date register of all IMEM Members;
- f) Determine the Day-Ahead Schedule of all IMEM Resources in accordance with the IMEM Rules;
- g) Determine the IMEM Merit Order Table for use by the Mindanao System Operator in correcting real-time imbalances;
- h) Coordinate with the Mindanao System Operator in the implementation of the Day-Ahead Schedule of all IMEM Resources and the IMEM Merit Order Table to help ensure the reliability of the Mindanao Power System if necessary;
- i) Conduct transaction billing and settlement procedures;
- j) Publish and make available to the IMEM Trading Participants relevant information on the Day-Ahead Schedule;
- k) Monitor and report on trading activities in the IMEM; and
- l) Comply with each of the requirements and obligations imposed on it under the IMEM Rules and other applicable laws or regulations.



The Department of Energy is mandated by RA 7638 as amended by RA 9136 to prepare, integrate, coordinate, supervise and control all plans, programs, projects and activities of the Government relative to energy exploration, development, utilization, distribution and conservation.



The Philippine Electricity Market Corporation (PEMC) is a non-stock, non-profit corporation which was incorporated in November 2003 upon the initiative of the Department of Energy (DOE) with representatives from the various sectors of the electric power industry to be the governance arm of the Wholesale Electricity Spot Market (WESM).

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