



# **Proposed Amendments to the WESM Manual on Load Forecasting Methodology for the Inclusion of the Procedures for Preparation and Updating of Nodal Load Distribution Factors**

**Independent Electricity Market Operator of the  
Philippines**

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## I. SUMMARY OF THE PROPOSED RULES CHANGE

The amendments to the WESM Manual on Load Forecasting Methodology are proposed to include the procedures for the preparation and updating of load distribution factors.

## II. BACKGROUND

Load forecasts are important inputs in the determination of prices and schedules in the Wholesale Electricity Spot Market (WESM). Load is forecasted for all market runs (i.e., week-ahead projection, day-ahead projection, hour-ahead projection, real-time dispatch).

WESM Rules Clause 3.5.4 provides that load forecasts shall be performed at each customer scheduling point. Under Clause 3.5.4.1, a customer has the option to provide its forecast for each of its scheduling points in the market network model. If the customer does not submit load forecasts, the forecasts by the Market Operator for its scheduling points will be used for the pricing and scheduling process.

Using the forecasts from the customers and its own forecasts, the Market Operator, in accordance with WESM Rules Clauses 3.5.4.2 and 3.5.4.3, prepares an unconstrained net load forecast that represents the total demand without any load shedding. Section 6.2.1 of the Load Forecasting Manual states that the unrestrained net load forecast for each customer scheduling point will be prepared by the Market Operator by allocating the total regional demand forecast, net of an initial loss percentage, based on Load Distribution Factors (LDF) set for each customer market trading node, as illustrated in Figure 1. The LDF is the factor used in allocating the total projected load to individual loads in the market network model.

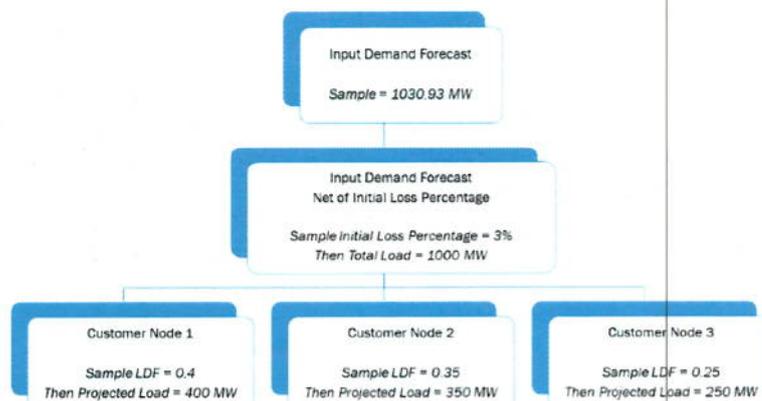


Figure 1. Determination of Unrestrained Net Load Forecasts for each Customer Scheduling Point

Section 6.2.3 of the Load Forecasting Methodology Manual requires that the Market Operator develop the relevant procedures for the preparation of the LDFs.

Moreover, Section 2 of the Department of Energy (DOE) Department Circular No. DC2018-04-0008 on the amendments to the WESM Market Manual on Load Forecasting Methodology for the implementation of enhanced WESM design and operations includes a provision as follows:

“The Market Operator shall expedite the development of the procedures in connection with the preparation of load distribution factor as required under Section 6.2.3 of the Load Forecasting Methodology Manual. Such procedures shall form part of the said Market Manual for consistency and transparency.”

### **III. THE PROPOSED RULES CHANGE**

In view of the requirements of the DOE circular and the Load Forecasting Methodology Manual, the Independent Electricity Market Operator of the Philippines (IEMOP), as the Market Operator, proposes to amend the WESM Load Forecasting Methodology to include the procedures for the preparation and updating of nodal Load Distribution Factors (LDFs). Highlights of the proposed changes to the WESM Load Forecasting Manual are as follows:

- update of reference to the procedures for determining the load distribution factors (i.e., annex of the manual instead of a separate procedure), and
- addition of Annex F detailing the procedures for preparing and updating LDFs.

In general, the procedure uses historical loading of each customer scheduling point to prepare and update its LDF. The LDFs will be updated every five (5) minutes based on most recent actual loadings.

The LDF methodology is already incorporated in the market systems that will be used for the implementation of the enhanced WESM design and operations. The load forecasting component of the new Market Management System (NMMS), which includes the use of the LDF, has undergone certification audit by a third party auditor in compliance with the requirements of the WESM Rules and the PEM Audit Manual. The certification for the said component was issued last November 2019.

### **IV. BACKGROUND AND DESCRIPTION OF THE PROPONENT**

The proponent is the Independent Electricity Market Operator of the Philippines, Inc. IEMOP acts as the market operator of the WESM.

Top Officers:

Richard J. Nethercott – President and CEO

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### **V. CONCLUSIONS AND RECOMMENDATIONS**

The amendments to the WESM Manual on Load Forecasting Methodology are proposed to include the procedures for the preparation and updating of load distribution factors. This is in compliance with DOE DC 2018-04-0008, and the requirement under the current Load Forecasting Methodology Manual.

## **VI. REFERENCES**

1. Department of Energy Department Circular 2018-04-0008
2. WESM Manual on Load Forecasting Methodology Issue 3.0