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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381		
Subject:	Renewable Integration Initiative		
Title:	Centralized Forecasting Publication		
Nature of Proposal:	<input type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Addition
Chapter:	4	Appendix:	
Sections:	7.3.5 (new)		
Sub-sections proposed for amending:			

### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	June 7, 2012
2.0	Publish for Stakeholder Review and Comment	June 14, 2012
3.0	Submitted for Technical Panel Vote	July 10, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	July 17, 2012
Approved Amendment Publication Date:		
Approved Amendment Effective Date:		

### PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

#### Summary

This amendment submission proposes to obligate the IESO to provide a confidential, centralized forecast to each registered market participant operating variable generation facilities prior to each dispatch hour.

This proposal is based on stakeholder consultation as part of SE-91 Renewable Integration which includes the Dispatch Technical Working Group (DTWG) and the Floor Price Focus Group (FPFG).

Further information on SE-91 can be found on the IESO's website at:

[http://www.ieso.ca/imoweb/consult/consult\\_se91.asp](http://www.ieso.ca/imoweb/consult/consult_se91.asp)

#### Background

The IESO Board approved [MR-00362-R00: Centralized Forecasting - Cost Recovery](#) and [MR-00362-R01: Data Obligations](#) on June 16, 2011 to implement a centralized forecasting service for variable generation in Ontario. The next phase of market rule amendments will specify the publication requirements for centralized forecasting.

The IESO's forecasting vendor will provide the IESO with a 48-hour energy forecast for all individual grid-connected variable generators and embedded variable generators  $\geq 5$  MW. In addition, a ramp forecast identifying large changes in variable generation output will initially be used as an operational tool by the IESO's control room.

The IESO will publish the following centralized forecasting information. However, only the confidential individual forecast reports will require market rule changes:

#### Market rule changes required:

- i. Individual forecasts
  - A rolling 48-hour confidential, market participant specific report updated every hour for each of their variable generation facilities available to each registered market participant prior to each dispatch hour

#### No market rule changes required – Information only:

- i. Individual forecasts
  - As soon as practicable following each dispatch hour, actual generation capability (i.e. the centralized forecast) (MW) and energy production (MWh) for each generation facility with a maximum output capability of 20MW or greater will be made publicly available via the [Hourly Generator Output &](#)

## PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

### Capability Report

- **Note:** No changes are required to the existing market rule provisions in Chapter 4, section 7.3.4.
- ii. Aggregate forecast report
- A 48-hour energy forecast for all variable generation (i.e. all grid-connected variable resources and embedded variable generation facilities  $\geq 5$  MW) – this report will be updated hourly and published prior to each dispatch hour.
  - **Note:** This report is in the process of being developed and may be produced as part of an existing report. No market rule changes are anticipated to be required at this time.
- iii. System Status Reports (SSRs)
- Where intermittent generation forecasts are used today, centralized forecasting data for variable generation will be added and will provide a more accurate forecast of future system conditions
  - Messages regarding ramp forecasts will be made available via the SSRs
  - **Note:** No changes are required to the existing market rule provisions on SSRs in Chapter 7, section 12.

### **Discussion**

Variable generators who are registered market participants will have access to their centralized forecast information for each of their wind and solar generation facilities prior to the start of the first hour in the 48-hour forecast horizon. The forecast will contain hourly average forecast values for the next 48-hours and will be confidential to the market participant.

The IESO proposes to amend Chapter 4, section 7.3.5 (new) to obligate the IESO to provide a confidential, centralized forecast to each registered market participant operating variable generation facilities. The report will be available before the start of the first hour in each 48-hour forecast horizon, except on occasions when it is not possible to publish the report prior to each dispatch hour (e.g. should the forecast arrive late from the forecasting entity, or if IESO reports fail, etc). Details on the report will be outlined in the applicable market manual. The IESO will determine and publish the date when the confidential forecasts will first become available, which may occur shortly after the implementation date for centralized forecasting.

## PART 4 – PROPOSED AMENDMENT

### Chapter 4

#### **7.3 Monitoring Information Provided by Generators to the IESO**

- 7.3.1 Subject to section 7.3.2, in order to permit the *IESO* to direct the operations of the *IESO-controlled grid*, each:

- 7.3.1.1 *generator* (i) whose *generation facility* is *connected* to the *IESO-controlled grid*, or (ii) that is participating in the *IESO-administered markets*; and
- 7.3.1.2 *embedded generator* (i) that is not a *market participant* or whose *embedded generation facility* is not a *registered facility*; (ii) whose *embedded generation facility* includes a *generation unit* rated at greater than 20 MVA or that comprises *generation units* the ratings of which in the aggregate exceeds 20 MVA; and (iii) that is designated by the *IESO* for the purposes of this section 7.3.1 as being required to provide such data in order to enable the *IESO* to maintain the *reliability* of the *IESO-controlled grid*,
- shall provide the *IESO* with the data listed in Appendix 4.15 on a continual basis. Such data shall not be modified by the *generator* and shall be provided:
- 7.3.1.3 with equipment that meets the requirements set forth in Appendix 2.2 of Chapter 2; and
- 7.3.1.4 subject to section 7.6A, in accordance with the performance standards set forth in Appendix 4.19.
- 7.3.2 Section 7.3.1 does not apply to:
- 7.3.2.1 a *small generation facility*;
- 7.3.2.2 a *self-scheduling generation facility* that has a name-plate rating of less than 10 MW; or
- 7.3.2.3 an *intermittent generator* or a *transitional scheduling generator* that is comprised solely of a *generation unit* rated at less than 20 MW or of *generation units* the ratings of which in the aggregate is less than 20 MW unless designated by the *IESO* at the time of registration as affecting the *reliability* of the *IESO-controlled grid*.
- 7.3.2A Each *variable generator* not otherwise subject to any communication requirements specified in this chapter shall at a minimum, meet the medium performance standards set forth in Appendix 4.19 for the purposes of providing data in accordance with section 7.1.6.
- 7.3.3 [Intentionally left blank – section deleted]
- 7.3.4 The *IESO* shall *publish*, as soon as practicable following each *dispatch hour*, the actual *generation capacity* (in MW) and hourly *energy production* (in MWh) for each *generation unit* based on information provided to it by *market participants*. *Generation capacity* and *energy production* for *generation units* with rating less than 20 MVA can be aggregated by station.

7.3.5 The IESO shall, as soon as practicable prior to each dispatch hour, endeavour to provide a confidential forecast produced by the forecasting entity to each registered market participant for each of their variable generation facilities as specified in the applicable market manual. The IESO shall determine and publish the date when the confidential forecasts will first become available.

**PART 5 – IESO BOARD DECISION RATIONALE**

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