



Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00381		
Subject:	Renewable Integration Initiative		
Title:	Publication Requirements: 5-Minute Forecast for Variable Generation		
Nature of Proposal:	<input type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input checked="" type="checkbox"/> Addition
Chapter:	4	Appendix:	
Sections:	7.3.6 (new)		
Sub-sections proposed for amending:			

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel review	August 14, 2012
2.0	Publish for Stakeholder Review and Comment	August 23, 2012
3.0	Submitted for Technical Panel Vote	September 21, 2012
4.0	Recommended by Technical Panel; Submitted for IESO Board Approval	October 16, 2012
5.0	Approved by IESO Board	November 29, 2012
Approved Amendment Publication Date:	January 3, 2013	
Approved Amendment Effective Date:	The effective date is anticipated to be in the third/fourth quarter of 2013, and shall be specified by the Chief Executive Officer of the IESO in a notice to all market participants.	

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, 5-minute forecast for all intervals of the previous dispatch hour to each registered market participant operating variable generation facilities directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants, following 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

Background

As part of the renewable integration design, the IESO will actively dispatch all variable generation¹ directly connected to the IESO-controlled grid and those embedded variable resources that are registered market participants through the five-minute security constrained economic dispatch.

The IESO's forecasting vendor will provide the IESO with a 5-minute energy forecast for all variable generators that are registered market participants. This forecast will be updated on a 5-minute basis and will contain forecasts for the end of each 5-minute interval. The 5-minute forecast will be used as an input to real-time dispatch, the market schedule and to calculate congestion management settlement credits (CMSC) for variable generators.

The IESO proposes to make the new 5-minute forecast report privately available for all variable generators that are registered market participants.

Each report will:

- Contain the forecast for all 12 intervals of the previous dispatch hour;
- Be published at the end of the hour.

Forecasts will be:

- Confidential to the market participant;

¹ Market Rules, Chapter 11 Definition: *variable generation* means all wind and solar photovoltaic resources with an installed capacity of 5MW or greater, or all wind and solar photovoltaic resources that are directly connected to the *IESO-controlled grid*.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

- Made available with the other private reports;
- Provided for informational purposes only.

Discussion

The IESO proposes to amend Chapter 4, section 7.3.6 (new) to obligate the IESO to provide a confidential, 5-minute forecast to each registered market participant operating variable generation facilities subject to 5-minute dispatch. The forecast relates to the production capability level at the end of the interval to align with our current market scheduling process. The report will be available after the dispatch hour and will contain all 12 intervals of the previous dispatch hour. Details on the report will be outlined in the applicable market manual (Market Manual 4.3: Real-Time Scheduling of the Physical Markets).

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.

NOTE: Proposed section 7.3.5 is part of MR-00381-R01 Centralized Forecasting Publication, and was approved by the IESO Board on September 7, 2012.

7.3.6 The *IESO* shall, as soon as practicable following each *dispatch hour*, provide the confidential forecast produced by the *forecasting entity* for each *dispatch interval* in the preceding *dispatch hour*, to each *registered market participant* for each of their *variable generation facilities* as specified in the applicable *market manual*.

PART 5 – IESO BOARD DECISION RATIONALE

As part of the renewable integration design, this amendment is a component of the IESO's ability to actively dispatch all variable generators that are registered market participants through the five-minute security constrained economic dispatch, which is an essential tool for the IESO to maintain system reliability and market efficiency.