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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

Identification No.:	<b>MR-00321-R00</b>		
Subject:	<b>Connection Assessment</b>		
Title:	<b>Change Connection Assessment Requirements for Embedded Generation Facilities</b>		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
Chapter:		Appendix:	
Sections:	11		
Sub-sections proposed for amending:			

### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Submit for Technical Panel Review	June 7, 2006
2.0	Incorporate Technical Panel Comments and Submit for Technical Panel Review	June 16, 2006
3.0	Publish for Stakeholder Review and Comment	June 21, 2006
4.0	Submit for Technical Panel Review and Vote	July 13, 2006
5.0	Recommended by Technical Panel: Submitted for IESO Board Approval	July 18, 2006
6.0	Approved by IESO Board	July 27, 2006
Approved Amendment Publication Date:	July 28, 2006	
Approved Amendment Effective Date:	September 13, 2006	

### 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 proposal would relax the connection assessment requirements for embedded generation facilities. This modification changes the threshold for a connection assessment for an embedded generation facility from 10 MVA to greater than 10 MW.

This change would encourage generation projects that choose the Standard Offer Program offered by the Ontario Power Authority to build 10 MW generation facilities that use renewable resources to connect to a distribution system. Proponents of such facilities would not be required to undergo the IESO's connection assessment process. Such projects would still need to meet the connection requirements of the distributor.

An embedded 10 MW facility will have no more adverse impact than a 10 MVA facility on the reliable operation of the IESO-controlled grid. This proposal would assist by reducing identified development barriers to the establishment of these facilities in Ontario.

#### Background

The OPA and the Ontario Energy Board (OEB) have developed the Standard Offer Program for small generators that use renewable resources. This program was created in response to an August 18, 2005 directive from the Minister of Energy for the OPA and OEB to work together to address development barriers that many proponents of smaller generation projects were unable to overcome. Under the Standard Offer Program these generators of up to 10 MW in size would connect to electricity distribution systems i.e. would be embedded within the local distribution company's system. For further information on the Standard Offer Program please refer to:

<http://www.powerauthority.on.ca/Page.asp?PageID=1224&SiteNodeID=161>

The OPA, and prospective developers have identified an issue with respect to the embedded generation connection assessment requirements specified in the market rules. The issue raised is whether it is appropriate that a 10 MW embedded facility be required to undergo the IESO Connection Assessment & Approval process.

Currently, the market rules specify that the IESO conduct a connection assessment for new and modified connections:

1. for all facilities that are directly connected to the IESO controlled grid; and
2. for generators embedded within a distribution system only when the proposed facility is rated at 10 MVA or higher.

These connection assessments are undertaken by the IESO to determine the impact of the new or modified connection upon the reliability of the IESO-controlled grid. Where adverse reliability impacts are identified, the IESO proposes mitigating measures to eliminate the identified reliability

## PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

impact.

### Discussion

#### Current Connection Assessment and Approval Process

Currently the definition of connection applicant in chapter 11 of the market rules includes a distributor within whose distribution system a market participant or person seeks to establish an embedded generation facility rated at 10 MVA or higher. Since 10 MVA is equivalent to 9 MW for a generation facility that meets the power factor requirements of the Market Rules, the existing market rules obligate distributors to apply for a connection assessment for proposed embedded generation facilities above 9 MW.

The connection assessment process may be a significant barrier to the development of these small embedded facilities which the Standard Offer Program is promoting. The host distribution system is required to apply to the IESO for a connection assessment on behalf of the facility proponent. This will increase development costs for these facilities and will also increase the length of time necessary to put them in-service.

#### Revised CAA Process

It is proposed to revise the definition of connection applicant. This change will mean that projects between 9 and 10 MW, that under the current rules would be required to undergo a connection assessment, would not need to have such an assessment. This change only represents a modification to the threshold for the Connection Assessment and Approval process. It does not alter other market rule requirements and obligations. This change was stakeholdered at the OPA/OEB with IESO, LDC and Hydro One representation.

Assuming that all applicable generation facility performance standards are met, 10 MW is an acceptable threshold because an embedded facility of this size will have no more adverse impact on the reliable operation of the IESO-controlled grid than a 10 MVA embedded facility.

The market rules would still require a connection assessment for all generating facilities directly connected to the IESO-controlled grid. This is because certain portions of the IESO-controlled grid may be adversely impacted by the direct connection of any generation facility.

#### Operating Performance Standards

Nothing in this proposed change eliminates the need for Standard Offer Program participants to satisfy any applicable Distribution System Codes or IESO market rule technical requirements. Operating performance standards and technical requirements for embedded facilities, which are specified in Chapter 4 section 3 of the market rules, will apply to Standard Offer Program participants.

For example, section 3.1.3 of Chapter 4 of the market rules states: “Each *embedded generator* whose *embedded generation facility* includes a *generation unit* rated at 10 MVA or higher or whose *embedded generation facility* is comprised of *generation units* whose net output is greater than 50 MVA shall ensure that its equipment meets all applicable performance standards in Appendix 4.2.” This rule obligates an embedded generation facility rated at 10 MVA or higher to satisfy the facility technical performance standards set out in Appendix 4.2, which includes reactive power capabilities. In other words, an embedded generation facility rated at 10 MVA would not require a connection assessment under this proposed rule amendment, but would be subject to IESO facility technical performance standards.

**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

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**PART 4 – PROPOSED AMENDMENT**

*connection applicant* means any of:

(i) a *market participant* or person that applies to the ~~IMO~~IESO for approval of a new *connection* to the ~~IMO~~IESO-controlled grid or for approval of the modification of an existing *connection* to the ~~IMO~~IESO-controlled grid, or

(ii) a *distributor* in whose *distribution system* a *market participant* or person is or intends to be connected as an *embedded generator* whose *generation facility* is or will be rated ~~at greater than 10 MW~~at greater than 10 MVA ~~or higher~~, that seeks to establish a new or modify an existing connection pursuant to section 6.1.6 of Chapter 4;

**PART 5 – IESO BOARD DECISION RATIONALE**

This amendment proposal relaxes the connection assessment requirements for embedded generation facilities. This modification changes the threshold for a connection assessment for an embedded generation facility from 10 MVA to greater than 10 MW. This change will facilitate development of renewable generation projects under the Standard Offer Program offered by the Ontario Power Authority. Proponents of such projects would not be required to undergo the IESO's connection assessment process, however, these projects would still need to meet the connection requirements of the distributor.