



Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

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| Identification No.: | MR-00420-R00 | | |
| Subject: | Capacity Exports in the IESO-Administered Markets | | |
| Title: | Capacity Exports | | |
| Nature of Proposal: | <input checked="" type="checkbox"/> Alteration | <input type="checkbox"/> Deletion | <input checked="" type="checkbox"/> Addition |
| Chapter: | Various | Appendix: | N/A |
| Sections: | Various | | |
| Sub-sections proposed for amending: | Various | | |

PART 2 – PROPOSAL HISTORY

| Version | Reason for Issuing | Version Date |
|--------------------------------------|----------------------------------|--------------|
| 1.0 | Draft for Technical Panel Review | May 17, 2018 |
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| 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

The IESO proposes to amend the market rules to codify a framework for Ontario-based resources to export capacity, as approved by the IESO.

The IESO will continue to assess and determine the need for changes to the capacity exports framework in the future as a result of requirements arising from the Market Renewal Program (MRP) or from the IESO having entered into capacity export agreements with additional jurisdictions, if applicable.

Specifically, the R00 amendment will:

- Introduce a new section on capacity exports in the market rules for eligible Ontario-based generation facilities that wish to export their installed capacity to external control areas; and
- Specify market participant and IESO rights and obligations for capacity export requests, IESO review of capacity export requests and capacity call processes.

Further information can be found on the [Capacity Exports](#) stakeholder engagement webpage.

Background

It is anticipated that Ontario resources will satisfy or exceed expected domestic Ontario capacity requirements until the early or mid-2020s. Additionally, most neighbouring or nearby jurisdictions have auctions and/or contracting mechanisms to secure capacity which could include importing capacity from Ontario. These conditions offer an opportunity for market participants to export capacity determined by the IESO to be surplus to Ontario's needs for specified periods.

More specifically, capacity exports:

- Provide Ontario-based resources an opportunity to monetize capacity not required for Ontario planned adequacy needs during certain periods;
- Offer an alternative to facilities that may otherwise choose to idle or shut down due to Ontario market conditions; and
- Improve the efficient utilization of assets regionally.

Capacity export pilots, as part of the Enabling Capacity Exports initiative, enabled generators on a trial

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basis to export limited amounts of capacity over limited periods to neighbouring jurisdictions for external reliability purposes. The Capacity Exports initiative will build upon the learnings from the pilots to implement enduring and enhanced design features and will broaden the scope of the initiative. Importantly, the initiative will also continue to ensure that the benefits of enabling Ontario-based resources to export their capacity are appropriately balanced against the overarching need to meet planned Ontario reliability needs and to limit congestion related costs.

Discussion

Capacity Exports in the IESO-Administered Market

The IESO proposes to include a new section 20 in Chapter 7 to outline the process for enabling Ontario-based resources to export capacity to external control areas. The proposed new section 20 will specify certain rights and obligations of the IESO and of market participants seeking to export their capacity to external control areas.

New Section 20.1 – Capacity Export Request and IESO Review

- Insert section 20.1.1 to specify that a market participant that wishes to export capacity to an external control area will be required to submit a capacity export request to the IESO. The request will have to be submitted via Online IESO no earlier than 6 months prior to the first day of the proposed commitment period in the external control area and shall be for a commitment period no longer than 1 year. A market participant may withdraw a capacity export request any time prior to the submission of finalized commitment information. Eligibility requirements, timelines and specific capacity export request information requirements will be detailed in the applicable market manual. The list of information that will be required as part of a capacity export request and specified in the applicable market manual will include the:
 - Type of commitment being pursued (e.g., auction, contract);
 - Capacity resource and quantity of capacity that is being offered to the external jurisdiction;
 - External control area to which the capacity will be committed and the corresponding counterparty to which the capacity will be committed;
 - Start and end dates of the commitment period;
 - Willingness of the market participant to accept a partial approval (i.e. approval for a portion of the requested MW quantity, commitment period, or both);
 - Closing date of the external capacity transaction (if applicable); and
 - Name of the entity that will serve as the exporter for any associated intertie transactions.
- Insert section 20.1.2 to specify that the IESO will review and approve (which may include partially approving) or deny each submitted capacity export request. The IESO intends to

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inform market participants of its determination no later than 2 weeks prior to the closing date of the external capacity transaction. The IESO will undertake, as applicable, a series of reviews to assess capacity export requests, as further described in the applicable market manual. Generally, capacity export requests that pass each IESO review step will proceed to the next review step:

- Congestion screen, which will determine if the proposed capacity resource is in a historically constrained area of the grid;
 - Planned outage and local transmission outage reviews, which will determine if the resource is unavailable to support capacity calls for a material period of time during the proposed commitment period;
 - Intertie review, which will determine if the sum of all potential capacity exports over the applicable period can be delivered if called at the same time;
 - Contract review, which will confirm that any contract-related issues have been addressed by the generator to the satisfaction of the IESO;
 - Resource adequacy assessment, which will determine if planned Ontario resource adequacy can be expected to be maintained during the proposed commitment period if the proposed capacity is removed from Ontario resource adequacy assessments; and
 - Congestion study, which will look closely at the potential for congestion on the path from the resource to the proposed external jurisdiction.
- Insert section 20.1.3 to authorize the IESO to revoke a capacity export request approval up until the day before the closing date of the external capacity transaction. The IESO will have the authority to revoke approval for reasons related to the IESO's paramount responsibility of maintaining the reliability of the IESO-controlled grid. The IESO will also have the authority to revoke an approval if the IESO becomes aware of any event or change in circumstances that may have altered the IESO's initial approval of a capacity export request.

New Section 20.2 – Capacity Export Commitment Process

- Insert section 20.2.1 to specify that, following an approval, a market participant that chooses to participate in an external capacity export opportunity must adhere to the terms of the approval granted by the IESO.
- Insert section 20.2.2 to obligate a market participant who commits capacity to an external control area to notify the IESO of the terms of the finalized commitment. This will include the market to which the capacity is committed, the counterparty to which the commitment is made, the resource committed, the commitment period, the MW of capacity committed, confirmation of the exporter, and supporting documentation such as a system screen shot or confirmatory letter. The market participant is required to notify the IESO of any subsequent changes to this finalized commitment information.

PART 3 – EXPLANATION FOR PROPOSED AMENDMENTNew Section 20.3 – Called Capacity Exports

- Insert section 20.3.1 to specify that the IESO will only allow a capacity export to be called and scheduled in the IESO-administered market when the external control area is anticipating or experiencing an adequacy shortfall, as may be specified in the relevant capacity export agreement.
- Insert section 20.3.2 to obligate a market participant who has received a call for capacity to notify the IESO, in the manner and within the time prescribed by the applicable market manual. The applicable market manual will require notification within a specified time prior to the mandatory window and will require identification of the capacity export transaction (e-Tag ID), boundary entity resource, capacity resource name and the expected duration of the capacity call. A market participant must also notify the IESO of any subsequent change to the details of the capacity call.

New Section 20.4 – Called Capacity Export Scheduling and Dispatch

- Insert section 20.4.1 to specify that in order to enable the IESO to schedule and dispatch a called capacity export in accordance with the relevant capacity export agreements, a market participant must submit an export bid in accordance with the provisions outlined in the applicable market manual. A called capacity export, like other energy exports, will be scheduled through the market. The bid specifications and associated timelines for called capacity exports will be detailed in the applicable market manual in order to appropriately identify, schedule and dispatch the capacity export in accordance with the market rules and relevant capacity export agreements.
- Insert section 20.4.2 to provide the IESO with authority, notwithstanding any provision of Chapters 5 or 7 of the market rules, to schedule and dispatch a called capacity export to an external control area that is anticipating or experiencing an adequacy shortfall, as may be specified in the relevant capacity export agreement. Called capacity exports will be managed by the IESO pursuant to the relevant capacity export agreements, the material details of which will be specified in the applicable market manual. These details will include:
 - If Ontario experiences, or anticipates experiencing, an energy or operating reserve shortfall, the IESO will match the schedule of a called capacity export to the schedule or output of the associated backing generation unit. Therefore, if the backing generator is fully scheduled to the amount of the called capacity export, the called capacity export will not be cut for Ontario adequacy reasons.
 - The IESO may curtail called capacity exports for specified reasons included in the relevant agreements. These curtailment provisions currently include:
 - Preventing the violation of a voltage, stability or thermal transmission limits;
 - To prevent endangering, the safety of any person, equipment damage, or violation of any applicable law;
 - As a result of a suspension of market operations in accordance with section 13

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or a market tool failure that results in being unable to facilitate scheduling;

- If the capacity resource is contracted with the IESO to provide black start capability for Ontario and is required by the IESO for grid restoration; and
- If there is congestion on the interface caused by economic scheduling.

Chapter 11 - Capacity Export Definition

The IESO proposes to include a definition for “called capacity export”, “capacity export agreement,” and “capacity export request” within chapter 11 of the market rules as follows:

- *Called capacity export* means an energy export from the IESO control area that is supported by the capacity of a generation unit within the IESO control area that has committed its capacity, or a portion thereof, to an external control area and that capacity has been called by the external control area operator;
- *Capacity export agreement* means an agreement between the IESO and a control area operator regarding the management of called capacity exports, and which may include but is not limited to interconnection agreements;
- *Capacity export request* means a request submitted to the IESO by a market participant for approval to commit Ontario-based capacity of a generation unit to an external control area in accordance with section 20.1 of Chapter 7 and the applicable market manuals.

Chapter 7 - Ability to Deviate from Pre-Dispatch

Section 7.2.5 of Chapter 7 specifies those instances when the IESO may depart from the pre-dispatch schedule of a boundary entity. The IESO proposes to amend section 7.2.5 to address those instances when the IESO will be required to deviate from a called capacity export’s pre-dispatch schedule. As noted above, there will be instances that the IESO may constrain a called capacity export up or down to match the output of the associated (or backing) generation unit.

- Insert new section 7.2.5.5 to clarify that the IESO may depart from the pre-dispatch schedule of a boundary entity if an external control area operator calls upon a capacity export in accordance with proposed new section 20.
 - New section 20.4.2 specifies that the treatment of capacity exports will be administered by the IESO pursuant to the provisions in the relevant agreements and as further specified in the applicable market manuals.

PART 4 – PROPOSED AMENDMENT**Chapter 7**

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20. Capacity Exports in the IESO-Administered Market

20.1 Capacity Export Request and IESO Review

- 20.1.1 A market participant that wishes to export eligible capacity shall submit a capacity export request to the IESO, in the form, within the timelines and as further prescribed in the applicable market manual.
- 20.1.2 The IESO shall approve or deny capacity export requests based on the IESO's review, as prescribed in the applicable market manual.
- 20.1.3 The IESO may, after approving or partially approving a capacity export request and prior to the market participant committing capacity to an external control area, revoke an approval of a capacity export request in order to maintain the reliability of the IESO-controlled grid, or if the IESO becomes aware of any event or change in circumstances that may alter the IESO's approval of a capacity export request.

20.2 Capacity Export Commitment Process

- 20.2.1 A market participant may only commit capacity to an external control area in accordance with the time periods, quantities and other terms and conditions of the IESO's approval of the capacity export request.
- 20.2.2 A market participant that commits its capacity to an external control area shall notify the IESO of the commitment and any subsequent changes to the commitment in the time and manner prescribed in the applicable market manual.

20.3 Called Capacity Exports

- 20.3.1 The IESO shall only accept and schedule a called capacity export in accordance with section 20.4 when advised by the external control area operator that the applicable external control area is anticipating or experiencing an adequacy shortfall, as may be specified in the applicable capacity export agreement.
- 20.3.2 A market participant shall notify the IESO concerning the details of a called capacity export in the time and manner prescribed in the applicable market manual.

20.4 Called Capacity Export Scheduling and Dispatch

20.4.1 All export bids for called capacity exports shall be submitted in the form and within the timelines prescribed in the applicable market manual.

20.4.2 Notwithstanding any provision of Chapters 5 or 7 of the market rules, the IESO may schedule and dispatch called capacity exports in accordance with applicable capacity export agreements (the relevant details of which are specified in the applicable market manual).

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Chapter 11

called capacity export means an energy export from the IESO control area that is supported by the capacity of a generation unit within the IESO control area that has committed its capacity, or a portion thereof, to an external control area and that capacity has been called by the external control area operator in accordance with section 20.3 of Chapter 7;

capacity export agreement means an agreement between the IESO and a control area operator regarding the management of called capacity exports, and which may include but is not limited to interconnection agreements;

capacity export request means a request submitted to the IESO by a market participant for approval to commit Ontario-based capacity of a generation unit to an external control area in accordance with section 20.1 of Chapter 7;

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Chapter 7

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7.2 Information Used to Determine Dispatch Instructions

- 7.2.5 The *IESO* shall use its best endeavours to ensure that the *dispatch instructions* issued with respect to each *registered facility*, that is a *boundary entity*, for each *dispatch hour* reflect the *pre-dispatch schedule* for that *dispatch hour* as determined in accordance with section 6.1.3 of Chapter 7. The *IESO* may, however, issue *dispatch instructions* that depart from the *pre-dispatch schedule* if:
- 7.2.5.1 the *security* and *adequacy* of the system would be endangered by implementing the *pre-dispatch schedule*;
 - 7.2.5.2 the *dispatch algorithm* has failed, or has produced a *pre-dispatch schedule* that is clearly and materially in error;
 - 7.2.5.3 material changes subsequent to determination of the *pre-dispatch schedule*, such as failure of an element of a *transmission system* or failure of a *registered facility* to follow *dispatch instructions*, have occurred;
 - 7.2.5.4 the operation of all or part of the *IESO-administered markets* has been suspended pursuant to section 13; or
 - 7.2.5.5 an external control area operator calls a called capacity export in accordance with section 20.

PART 5 – IESO BOARD DECISION RATIONALE

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