

IESO Response to Stakeholder Feedback

Adjustments to Intertie Flow Limits - November 22, 2021

Following the November 22, 2021 engagement session on [Adjustments to Intertie Flow Limits](#) stakeholder engagement webinar, the IESO invited stakeholders to provide comments and feedback on the materials presented by December 10, 2021.

The IESO received written feedback submissions from the following stakeholders which have each been posted in their entirety on the engagement webpage:

- 1. Capital Power**
- 2. Ontario Power Generation**
- 3. Evolgen (by Brookfield Renewable)**

Also, the presentation materials and recorded session have been posted on the IESO stakeholder [engagement webpage](#) for this engagement. If interested, please visit the webpage to reference the feedback submissions directly as the below uses excerpts and/or a summary of the stakeholder feedback for the purposes of providing an IESO response.

Please contact IESO Engagement at engagement@ieso.ca if you have any questions.

Capital Power

Feedback:

In order to better understand the implications of the actions taken and confirm that the proposed drafting changes clarify the meaning of the Market Rule and do not change its effect:

i. Were the IESO's actions on August 23rd consistent with historical practices under similar operating conditions, and have similar actions been taken on other Ontario interties before or after August 2021? If the actions were inconsistent with historical practices under similar conditions, could the IESO provide more information regarding factors considered in its decision to reduce intertie flow limits in August 2021?

Response:

Internal transmission constraints have not usually been considered by the IESO as the main factor when determining the intertie scheduling limits. However, similar operating conditions have not occurred for the prolonged and sustained periods seen in 2021. In previous years, similar system conditions generally did not persist for more than a few hours at any given time, creating limited situations where Ontario was unable to supply exports in the Northwest using domestic resources. The frequency of these conditions occurring increased considerably in 2021, which the IESO monitored over the summer.

Anticipated transmission outages necessary to complete the upgrades to the East-West Transmission Line, plus ongoing supply limitations from hydroelectric resources due to drought, created operating conditions that were expected to persist for several months through the fall and winter. The predictable nature of these operating conditions uniquely experienced in the Northwest due to system configuration necessitated different actions than are typically utilized.

Feedback:

ii. As it is understood from the IESO that the mathematical calculations included in this formula are the basis for the proposed amendment to clarify the meaning of the Market Rules, can the IESO provide a detailed breakdown of the formula in Appendix 7.5.1 section 6.4.4?

Response:

In these equations, imports are labelled as generation and exports as purchases. Scheduled imports are considered as positive values and exports as negative values. Hence the

maximum export limit is described mathematically as a minimum flow limit. Surplus and deficit intertie block are terms that are necessary to solve the inequality.

Mathematically, the formula can be read as;

The sum of scheduled offers from imports; minus
the sum of scheduled bids from exports; plus
the sum of scheduled offers of operating reserve; must be less than or equal to
the maximum allowable flow of imports into Ontario at the relevant intertie.

The sum of scheduled offers from imports; minus
the sum of scheduled bids from exports; must be less than or equal to
the maximum allowable flow of exports out of Ontario at the relevant intertie.

Feedback:

iii. Are there scenarios where, supported by the Market Rules, the IESO would lower export limits on all interties where the IAM needs energy/capacity and price is insufficient to incentivize needed imports?

Response:

The IESO would not lower export scheduling limits under the conditions described.

Feedback:

Capital Power also submits that future communications to stakeholders regarding actions taken by the IESO in the market that could affect supply, demand, or price, be (i) communicated to all market participants, (ii) identify the actions being taken by the IESO, and (iii) identify the Market Rules relied upon to support the IESO's actions.

Response:

The IESO agrees with providing such communications to all market participants in the future and not just to the traders active at the time on the given interties. Also, the public Transmission Facility Outage Limits report is available to all participants via the IESO webpage, which identifies when intertie flow limits are adjusted.

Ontario Power Generation

Feedback:

- 1) Slide 6 states “imports were often constrained-on solely to offset export transactions”, which generated additional CMSCs. What features identify that an import was constrained on solely to offset export transactions?

Response:

The IESO performed market simulation analysis using submitted market bids and offers and adjusting the intertie flow limit while holding other inputs constant. While an import transaction is not specifically identified as being intended to offset an export transaction, the net result can be deduced if there are no other changes to resource schedules.

Feedback:

- 2) How often were imports constrained-on solely to offset export transactions prior to August 23rd?

Response:

These outcomes occurred on a daily basis in 2021.

Feedback:

- 3) Please identify the dollar value of the additional CMSCs that “did not benefit the ratepayer.” OPG feels this information is important to understanding the rationale for the proposed amendments, especially since the IESO expects the issue to be partially resolved in Q1, 2022, and fully resolved under Market Renewal

Response:

In the months leading up to September, associated Congestion Management Settlement Credits (CMSC) payments were on average \$5M per month.

Feedback:

- 4) Has the IESO seen a material change in the volume of CMSCs in the Northwest (credited to either imports or generators) since it applied the new intertie limit methodology in August?

Response:

CMSC has decreased significantly, to less than \$1M per month. This remaining CMSC is appropriately paid to imports that have been constrained-on to reliably supply electricity demand in the Northwest.

Feedback:

5) The slide describes the rule change as a clarification of the following statements:

- Internal transmission constraints are considered when setting intertie flow limits.
- Those limits are applied in the unconstrained and constrained schedule.
- Those limits apply “to or from” intertie zones, consistent with the mathematical constraints in the DSO.

Please explain where in the Market Rules and Manuals the IESO believes these statements are implied and why they warrant clarification.

Response:

Section 4.4.4.2 of Chapter 7 of the Market Rules authorizes the IESO to limit intertie flows based on the IESO’s best estimate of the maximum flow on transmission lines to intertie zones, given the status of the neighbouring transmission systems and expected or actual unscheduled flows.

To provide greater transparency and certainty around the IESO’s considerations when forming its best estimate of the maximum flow, the proposed amendment to section 4.4.4.2 of Chapter 7 clarifies that the IESO may consider the integrated power system’s limited capability to supply and export energy to an intertie zone and applicable neighbouring transmission system without scheduling imported energy to supply the exported energy.

The proposed amendments to section 4.5.1.1 of Chapter 7 and section 7.5.1 of Appendix 7.5 support the clarification amendment in section 4.4.4.2 of Chapter 7 by recognizing that intertie flow limits are applied in the unconstrained and the constrained schedules and to or from intertie zones.

Feedback:

6) Please identify any additional flexibility, security, or efficiencies the proposed amendments will grant the IESO and the electricity market. If the amendment allows the IESO any additional authorities beyond clarification, OPG proposes that:

- a sundown clause is added (e.g., Q2 2022), and
- the amendment is limited to the affected interties in the Northwest.

Response:

The IESO does not believe that it is granting itself any additional authorities beyond clarification. Additionally, please refer to the following [communication](#).

Feedback:

- 7) Was the IESO aware, prior to August 23rd, that the Market Rules allowed them to consider internal transmission constraints when setting intertie flow limits for the unconstrained schedule? If so, what was the reason the IESO declined to exercise this authority prior to August 23rd?

Response:

The IESO believed it had the ability to consider internal transmission constraints when setting intertie flow limits for the unconstrained schedule prior to August 23rd. In previous years, similar system conditions generally did not persist for more than a few hours at any given time, creating limited situations where Ontario was unable to supply NW exports using domestic resources. The frequency of these conditions occurring increased considerably in 2021, which the IESO monitored over the summer.

Anticipated transmission outages necessary to complete the upgrades to the East-West Transmission Line, plus ongoing supply limitations from hydroelectric resources due to drought, created operating conditions that were expected to persist for several months through the fall and winter. The predictable nature of these operating conditions uniquely experienced by the Northwest due to system configuration necessitated different action than typically utilized.

Feedback:

Slide 10

- 8) The slide references the equation in Appendix 7.5 s.6.4.4 as evidence that the unconstrained schedule already imposes limits on energy scheduled "to or from" intertie zones. Please explain how the equation proves this.

Response:

In these equations, imports are labelled as generation and exports as purchases. Scheduled imports are considered as positive values and exports as negative values. Hence the maximum export limit is described mathematically as a minimum flow limit. Surplus and deficit intertie block are terms that are necessary to solve the inequality.

Mathematically, the formula can be read as;

The sum of scheduled offers from imports; minus
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the maximum allowable flow of exports out of Ontario at the relevant intertie.

Evolugen by Brookfield Renewable**Feedback:**

To improve transparency, we recommend that the IESO improve their communication protocol so that future intertie events such as a reduction in transmission limits automatically trigger notices to all registered marketers, and not just "active marketers."

Marketers do not limit their activities to specific interties: they dynamically change trading behaviour depending on market conditions. In other words, registered marketers are all actively monitoring all interties for opportunities, and can become "active" any time economic conditions align. In addition, unusual IESO maneuvers on particular interties can create unforeseen effects on other interties and other market products (e.g. Transmission rights, Capacity obligation delivery), including subsequent market rule amendments. Marketers should be informed as early as possible to meaningfully participate and engage with the IESO.

Response:

The IESO agrees with providing such communications to all market participants in the future and not just to the traders active at the time on the given interties. Also, the public Transmission Facility Outage Limits report is available to all participants via the IESO webpage, which identifies when intertie flow limits are adjusted.

Feedback:

The IESO's November 22, 2021 presentation states that its proposal would have: "Limited impact to the Transmission Rights market, given the low quantities available for auction on these interties." However, while the MB/MN interties' Transmission Rights auctions do have lower volume, the proposed rule change would be applied to other interties with high Transmission Rights volumes.

Should a high-volume Transmission Rights intertie experience similar generation deficits and therefore transmission limit reductions before the implementation of the 2023 energy market, then this proposal would certainly affect high-volume interties with unknown consequences. In sum, the IESO has not evaluated this possibility and its unintended consequences on Transmission Rights auctions in general.

If the IESO intends to resolve the NW intertie issue via market rule changes, then Evolgen recommends the IESO limit such rule changes to the NW interties only.

Response:

The IESO's transmission rights auctions allow Market Participants to compete to purchase transmission rights based on many factors, including the potential impact of planned and unplanned reductions to the amount of exports or imports that can be reliability facilitated at each intertie. Bids into transmission right auctions can be adjusted accordingly, depending on participants' expectations. Based on the unique system conditions being experienced and electrical configuration of the Northwest, the IESO is of the view that similar adjustments to other interties would be highly unlikely. Therefore, market rule changes will be generally applicable and need not be limited to the Northwest.

Feedback:

As Market Renewal now enables capacity exports and imports with neighbour jurisdictions, the reliable use of interties is indispensable for generators to meet the energy delivery associated with their capacity obligation. Please confirm whether the lowering of intertie limits would negatively affect import/export transactions that have already cleared economically.

Please respond in relation to market timing. For example, would the lowering of transmission limits prevent transactions from being scheduled and cleared? Or would a cleared intertie transaction become curtailed due to this proposal?

Response:

Intertie transactions that have already been scheduled ('cleared') in the final run of pre-dispatch and are subsequently curtailed for internal transmission limitations are eligible for a make-whole payment. Where possible, the IESO makes adjustments to intertie scheduling limits several hours in advance of transactions being scheduled.

Feedback:

Please clarify how this proposal would affect wheel-through transactions that have already cleared the market.

Response:

This proposal will not impact how the IESO schedules or curtails wheeling transactions.

The IESO will continue to curtail both legs of a linked wheel transaction in the instance where an individual leg of the transaction was contributing to transmission limit or security concerns.

Feedback:

Please confirm that this proposal would not affect internal generation facilities.

Response:

The dispatch of internal generation facilities will not be affected by this proposal.

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