

# Webinar – Curtailing Wheel-through Transactions to Prevent a Nuclear Shutdown

## Q&A Document

The IESO conducted a stakeholder webinar on April 28th to review and discuss proposed changes to Market Manual 7.2: Near-Term Assessments and Reports. The proposed change would add a condition in section 1.3.4: IESO Control Actions (Nuclear Manoeuvres Forecasted or Occurring) regarding the curtailment of wheel-through transactions if a nuclear shutdown is scheduled in future hours concurrent with wheel-through transactions. The IESO posted an Interim Market Document Change (IMDC-31) and received feedback from several stakeholders with concerns and questions about the proposed change.

As a result of the feedback received during the webinar as well as through the stakeholder comment process for the IMDC, the IESO has developed this Q&A document to provide further context. For clarity, we have grouped our responses/further information by theme.

The IESO has revised the IMDC and will post it for another five-day comment period. The revision will clarify and emphasize the rationale that the IESO will curtail linked wheel-through transactions for reliability.

### Analysis

The reason we will curtail linked wheel-through transactions will be solely to maintain reliability.

The primary reliability concerns, related to shutting down nuclear units, are:

1. *Disruption and added complexity to real-time operations due to short notice shutdown -* Shutting down a nuclear unit on short notice requires the switching of equipment under high voltage conditions which increases the risk of insulation failure and breakdown. It can also require the removal of high voltage transmission elements from service, to manage voltages under light load conditions when high voltage equipment is already out of service, as well as the re-dispatching of generation to rebalance the system. When these actions are taken in real-time, there is an added risk to reliability due to the potential for equipment failure, and the increased focus on the actions associated with the shutdown.
2. *Removal of large assets from service without proper operational assessments -* The removal from service of such large assets as nuclear units introduces the need to perform operational assessments as mandated by reliability standards, in order to avoid placing the power system in an unknown operating state. Those assessments are

complex and time consuming. Executing them on short notice introduces further risk of error, and increases the likelihood of unknown/unstudied operating scenarios unfolding in real-time.

3. *Potential for delays in the return to service of nuclear units once shutdown -*

Once shut down, a nuclear generator will be out of service for approximately 72 hours. There is potential that equipment failures may result in a prolonged return to service. While our existing supply mix is adequate, operational experience demonstrates that conditions can quickly change (variability of demand and supply from variable generation, transmission and generation equipment forced outages, etc.). This leads to an increased risk of violating reliability standards and criteria related to supply adequacy during the period when the nuclear unit is out of service.

### Stakeholdering

We have taken the feedback received into consideration and, as a result, have revised the wording in the IMDC.

The IESO currently has the authority to intervene in the market as necessary to maintain reliability (Chapter 5, section 1.2.1 of the Market Rules) and the proposed market manual revision is consistent with and does not change that authority. The proposed market manual revision provides transparency regarding the circumstances under which we may exercise this authority.

The five-day comment period for commenting on the IMDC is consistent with the IESO change management process requirement.

### Transaction Coding and Compensation

Transaction failures for adequacy (surplus or deficiency) do not receive compensation (as per Market Manual 4.3). The proposed use of the TLRe transaction coding for the curtailment of linked wheel-through transactions for reliability purposes is consistent with existing principles and the appropriate settlement outcome.

### Communication

Consistent with current practice, the IESO does not issue a System Status Report (SSR) for transaction failures. In order to ensure the market has the right signals, we publish an SBG report which provides a forecast of potential nuclear shutdowns. Using this report, a market participant should have sufficient notice when their transaction may be exposed to a curtailment to prevent a nuclear shutdown.

You may access the latest SBG report through this link:

[http://www.ieso.ca/weather/mkt4/sbg/PUB\\_SurplusBaseloadGen\\_20160511\\_v1.xml](http://www.ieso.ca/weather/mkt4/sbg/PUB_SurplusBaseloadGen_20160511_v1.xml)

Managing Transmission without Discrimination

We are not impinging on open access to transmission in Ontario because curtailment of linked wheel-through transactions will be done solely for reliability reasons.