

# Outage Management Redesign Consultation Process (SE-109)

September 4, 2013



- Stakeholder Feedback & IESO Response
  - Final Process Redesign Proposal
  - Suggestion for Software Capabilities
  - Interim Process Redesign Proposal
  - Criteria for Pre-Approvals
- Changes to the Interim Process Redesign Proposal
- Table-Top Session on Interim Process Redesign
- Discuss Interim Process Implementation Plan
- Next Steps

- Proposed compensation mechanism for revocation of mid-term approvals approved by stakeholders
- At Risk declarations in the mid-term process may be confused with those used in the 18 Month Outlook process.
  - 18 Month Outlook only provides At Risk declarations for outages starting within 9 months.
  - The mid-term process will provide At Risk declarations for outage starting within 7 months.
  - IESO will propose using either two distinct declarations or remove the declaration from the 18 Month Outlook process

- Broad range of recommendations received with major themes being:
  - Greater transparency of outage information
  - Automated communications & notifications
  - Configuration capabilities (flexibility in creating, viewing and modifying outage requests)
- IESO will consider recommendations that contribute to the objectives of this process redesign initiative:
  - Minimizing reliability risks to the power system
  - Improving process efficiencies between the IESO and market participants.

# Feedback & Response: Interim Process Redesign

- Manual tracking of final approvals may create confusion
  - Similar risks exist for IESO assessments in real-time
  - Existing software doesn't provide reliable means of tracking
  - Efficiency gains of an implied final approval may be offset by the additional effort required to track eligible outages
- Deadline for approving pre-approved outages is impractical
  - Alternatively, an end of business day deadline provides opportunity for mitigation in the event of a rejection
- Proposed submission & approval deadlines may not be suitable for commissioning activities
  - Scheduling flexibility for lower impact commissioning activities will be provided under the pre-approval criteria

- Broad range of suggestions received
  - Approval by validation-only approach would significantly reduce eligible outages:
    - Significant restrictions to participant scheduling flexibility
  - Inclusion of an IESO reliability assessment expands pre-approval eligibility
- Proposed criteria assumes criteria validation + reliability assessment being used (including the removal of implied final approval)
  - Achieves greater scheduling flexibility while satisfying the principles of low system impact and minimal assessment effort



- **Transmission & Distribution**
  - Outages, restrictions, de-ratings or changes in configuration of transmission facilities operated below 50 kV that:
    - unload step-down transformers or individual windings of step-down transformers;
    - require paralleling or separation of low voltage buses via operation of the low voltage bus tie breaker;
    - result in a load transfer of 20 MW or more from one step-down transformer station to another.
  - Not included are those outages, restrictions, de-ratings or changes in configuration of transmission facilities operated below 50 kV that may adversely affect the operation of another market participant.
    - tracking of these facilities requires further discussion

- **Transmission & Distribution (con't)**
  - Power system auxiliaries that impose a loss of redundancy and have a recall  $\leq 15$  minutes;  $> 15$  minutes if the loss of the redundant in-service auxiliary places no additional risk to the IESO controlled grid.
- **Dispatchable Loads**
  - In addition to the criteria under transmission & distribution, those outages, restrictions, de-ratings or changes in system configuration that result in an atypical change of more than 20 MW.



- **Generators**

- Outages, restrictions, de-ratings or changes in the operation of a generator with a recall  $\leq 15$  minutes
- De-ratings to a level greater than a facilities' forecasted energy production provided that:
  - The facility cannot shift energy from one hour to another (wind, solar, run of the river hydro)
  - The de-rating is limited in duration (to be determined)
- Segregated Mode of Operation (SMO)
- Power system auxiliaries that impose a loss of redundancy and have a recall  $\leq 15$  minutes;  $> 15$  minute recall if the loss of the redundant in-service auxiliary places no additional risk to the IESO controlled grid.
- All generating facility plant auxiliaries with a recall of  $\leq 15$  minutes that affect more than a single generator or aggregate of generators where the loss of an additional element results in multiple unit/aggregate shutdowns.

- **Tests**
  - All system tests as described in Market Manual 7.3, Section 1.3.11 provided they have a recall of  $\leq 15$  minutes and are not considered Power System Tests as per Market Rules Chapter 5, Section 6.6.
  - Testing of generation units with a recall of  $\leq 15$  minutes, including:
    - in-service or commissioning tests
    - testing of de-rated units at levels above the de-rated levels;
    - testing of units currently on outage; and
    - tests of facilities providing ancillary services

- Re-instate the requirement to request final approval and provide actual start and end times for pre-approved outages
- Change the submission deadline time for all submissions from 23:59 EST to 16:00 EST



- Process is mandatory for all planned outages
  - Submissions due at **16:00 EST**, T-5 Business Days, Approvals due at **16:00 EST**, T-3 Business Days
- 14 Day Advance Approval process remains unchanged from today
  - Submissions due at **16:00 EST**, T-21 Calendar Days, Approvals due on the last business day at **16:00 EST**, that is at least T-14 Calendar Days in advance
- Pre-approved outages can be requested up to **16:00 EST**, T-2 business days
  - Manual confirmation (like 14 day process) required (auto-processing unavailable)
  - Must meet pre-approved criteria (to be developed within SE-109)
  - Still subject to IESO advance approval / rejection by **16:00 EST**, T-1 business days (**validation of criteria and a reliability**; auto-validation unavailable)
  - **~~Advance approval implies final approval and no need to report actual start or end times (as long as scope remains unchanged)~~**
- Forced outages are incorporated up to real-time (T=0)
- Timestamp retention rules for rejection/revocation/recall
  - Must be rescheduled within 5 business days
  - Retention available only once for rejections

SEPTEMBER 2013						
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	Outage Start Date
	Assessment Period for 3-day Advance Approvals
	Assessment Period for Pre-Approvals
	Submission Deadline for 3-day Advance Approvals
	Submission Deadline for Pre-Approvals

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- Any planned outage submitted prior to the submission deadline for 3 day advance approval (16:00 EST on Sept 4) will be assessed by the end of the 3 day advance approval assessment period (16:00 EST on Sept 6)
  - This includes any outage eligible for pre-approval
- Outages eligible for pre-approval can be requested for pre-approval up to 2 business days in advance of the date the outage is scheduled to start (16:00 EST on Sept 9) and will be assessed by the end of 1 business day in advance (16:00 EST on Sept 10)
- For pre-approvals, IESO will first validate whether the outage meets the submission criteria; then perform a reliability assessment.



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- Generator 'A' protection outage scheduled to start Sept 11 and submitted to the IESO on Sept 6 (after the deadline for requesting 3-day advance approval)
- MP does not confirm to the IESO that the outage is submitted for pre-approval by 16:00 EST on Sept 9
- Without a confirmation, IESO rejects the outage as the MP failed to meet the submission requirements.

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- Transmission Line 'A' protection outage with a recall of 60 minutes scheduled to start Sept 11 and submitted to the IESO on Sept 6 (after the deadline for requesting 3-day advance approval)
- MP confirms with the IESO that the outage is submitted for pre-approval by 16:00 EST on Sept 9
- IESO validates that the outage meets the pre-approval criteria and proceeds with a reliability assessment
  - The outage passed validation because it was a loss of redundancy and a recall of > 15 minutes is acceptable since the loss of the B protection would not pose an additional risk to the IESO controlled grid.

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- Load transformer ABC (yellow) outage scheduled to start Sept 11 and submitted to the IESO on Sept 6 (after the deadline for requesting 3-day advance approval)
- MP confirms with the IESO that the outage is submitted for pre-approval by 16:00 EST on Sept 9
- Outage passes IESO validation but still requires a reliability assessment
- Since transformer ABC outage requires load to be transferred to an alternate supply, the IESO determines the load transfer creates a thermal violation due to another transmission outage (blue) already in-progress and rejects the transformer ABC outage for security reasons.

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- Implementation proposed for Feb 2014
  - Ahead of spring maintenance season
  - Allows for sufficient feedback on documentation & software changes
- Documentation
  - Market Rules, Market Manuals
  - Online Outage Form Guideline
- Software Changes
  - IESO Software
  - Online Outage Form
  - Application Programming Interface
- Training
  - Format & Materials

- **Sept 5** – 3 week comment period on Interim Process rule changes closes
- **Sept 13** – Stakeholder feedback on Pre-Approval criteria and proposed Interim Process changes due
- **Sept 17** – Next Technical Panel Meeting
  - Opportunity for Interim Process rule changes to be voted on for IESO Board approval
- **Sept 27** – IESO response to stakeholder feedback due
- **Early Oct** – Next Stakeholder Meeting (Pre-Approval Criteria & Market Manual Changes)



Questions/Comments?