

Improving Accessibility of Operating Reserve (OR) – Proposed Solutions and Evaluation Framework Feedback Form

Presented July 31, 2019

Date Submitted: <i>2019/08/15</i>	Feedback Provided By: Contact Name: _____Mike Zajmalowski_____
	Organization: _____Northland Power Inc. _____

Thank you for attending the Improving Accessibility of OR webinar on July 31, 2019.

The presentation focused on:

- Reviewing stakeholder feedback from the previous webinar
- Presenting and seeking stakeholder feedback on proposed solutions to the issue of inaccessible OR
- Presenting and seeking stakeholder feedback on the proposed framework for evaluating the proposed solutions

Please share your feedback into the form by **Thursday, August 15, 2019** and email as an attachment to engagement@ieso.ca.
Please use the email subject header: *Improving Accessibility of OR Stakeholder Engagement Meeting 2 Feedback*.

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Proposed Solutions

Option 1 – Market Rule amendments

Option 2 – Modify operating reserve activation (ORA) dispatch signal

Option 3 – Enhancing OR scheduling and dispatching

Questions

Feedback

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<p>Are there any other options the IESO should consider? Please provide context along with your comments</p>	<p>NPI provides the following comments to the three options tabled and provides a hybrid solution as option #4.</p> <p>NPI comments on Option #1: a clawback mechanism is understandable, however a penalty factor that dissuades participants from participating in the OR market should be avoided. I can understand the loss of OR payments from the applicable period that was not met, however would limit the claw back to just that period, any more than that may be detrimental to the long term viability of resources offering into the OR market. The clawback mechanism should be based on the difference between what was dispatched and what was provided. For e.g. if a resource was dispatched from 0 to 50 MW, and it provides 49.5 MW that assessment of non-compliance should not be the same as a resource that only provided 5 MW.</p> <p>NPI comments on Option #2: This always seemed like a disconnect that prior to an ORA being activated the IESO allowed compliance deadband for a resource, but as soon as an ORA is issued, it completely removes the deadband all together without recognizing where the resource was generating/consuming at the time the ORA was issued. Option #2 makes a whole lot of sense to NPI. If the IESO were to tighten up the compliance deadband as indicated below, this option could also provide some benefit.</p> <p>NPI comments on Option #3: This seems to be a good solution and takes into account elements of Option #2. Similar to Option #2 we can appreciate that there are some challenges with this one.</p> <p>NPI proposed Option #4:</p> <ul style="list-style-type: none">• Update the compliance deadband. This deadband has not been revised in 10 years. Given the challenges the IESO is facing, the IB is likely creating unintended issues for the IESO. It can benefit from a revision.• Introduce some consideration for where a facility is sitting (i.e. generating or consuming) at the time an ORA is issued. Whether that's respecting that it's below its dispatch target (within its compliance deadband) and only expecting the incremental ORA amount
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	<p>(respecting ramp rates) to be provided, or as Option #3 suggests, assuming that a facility is at the top or bottom end of its deadband and adjusting the expectations from that end.</p> <ul style="list-style-type: none"> • If a clawback mechanism is introduced, minimize the clawback to just the affected hours and cap that clawback at a reasonable period (e.g. 24 hours) so that financial impact is within reason.
<p>Proposed Framework for Evaluating the Proposed Solutions</p>	
<p>Questions</p>	<p>Feedback</p>
<p>Is there any other evaluation criterion that the IESO should consider?</p>	<ul style="list-style-type: none"> • Technology – acknowledging that some technologies react differently to ORA's. • Affect of ambient conditions on thermal facilities – while there's always an effort to ensure market offers reflect the resources true capability, being off by 0.5% during an activation is not the same thing as being off by 50%. • To assess compliance on % of compliance and not just a pass/fail assessment. • If a facility has a mechanical issue (i.e. failed to start, or had to be derated during an activation for mechanical reasons), then be clear how compliance is assessed. It's recognized that facilities are never going to be 100% dependable and that forced outages (and derates) will occur. The financial impact to a facility should be minimized during these events.
<p>Is there any evaluation criterion that is not appropriate to evaluate these solutions?</p>	<ul style="list-style-type: none"> • I would say there's nothing that is not appropriate for consideration, however the devils are in the details, so it'll be important to understand what options the IESO is considering for any financial clawbacks.

General Comments/Feedback:

Northland Power Inc. acknowledges the need for the IESO to revisit the mechanisms it has available to it to ensure market participants comply with the operating reserve requirements, while at the same time ensuring the IESO meets its own compliance requirements with NPCC and other neighbouring. We can also appreciate the desire to reduce the amount of OR that is being over-activated from an efficiency standpoint and to minimize costs.

The challenge with this assessment is separating out those participants that may be mis-applying the intent of the compliance deadband with those that are offering what they believe to be the true capability of their resources at the time to then find out during an ORA that the equipment encountered some issues or the capability was off by a bit.

The IESO references the compliance deadband in it's presentation as a possible bridge to address the issues its experiencing with getting participants to provide the OR that's been activated. There seems to be a disconnect with what the compliance deadband was originally designed for and how participants may be applying it. The dispatch compliance deadband can be improved to still provide participants flexibility while at the same time limiting the amount of OR that the IESO is overactivating.

The IB was introduced at a time when there were coal units operating in the province. All generating resources are different and sending five minute dispatches to different generators will create different challenges for each. For e.g. hydroelectric can respond to a dispatch within seconds and be fully loaded to the required dispatch very quickly, however is impacted by reservoir levels and it's impact on head (translated to efficiency), while a thermal facility can have some challenges depending on many factors like daily changing ambient conditions, equipment limitations, etc. Oscillating a coal unit every five minutes in between ranges where it had to either put in or take out a mill to provide the incremental power created issues for the older coal plants to keep up with their dispatch. For one, it can incur significant O&M wear and tear on the equipment, but also the equipment sometimes just needs more time to achieve those outputs. The IB was partially created to address this issue with coal plants - as long as the resource was making its best effort to be moving towards the dispatch the IESO compliance group would not flag the resource as long as its within the compliance deadband.

The issue with the IB is that it's dated (2009). There are no more coal facilities and would argue that the deadband that the IESO provides for other resources is too generous – in essence the IESO is a bit of an enabler to this issue with an IB that's out of date. The purpose of the deadband isn't for participants to knowingly offer above or below their true capability for other market related reasons. Why does a 30 MW facility need a 15 MW deadband? As opposed to a 750 MW facility, that gets the same deadband. Why does a hydroelectric facility get the same deadband as a nuclear facility? There are different reasons why these facilities would be off their dispatch. If a resource is expected to be off it's dispatch for a prolonged period of time, shouldn't the resource update it's energy offer quantity? Perhaps reiterating some of these requirements in this engagement or in the compliance deadband? I get that there's a balance with this, it creates an administrative burden to be constantly updating energy offers based on hourly changes in temperature or hourly changes in reservoir elevations, so an element of the compliance deadband is needed. And while the deadband was created so that MACD also wouldn't be overloaded with running countless investigations on the deviations from dispatch, tightening up the compliance deadband wouldn't necessarily create that burden now.

Earlier this summer (June 27, 2019), the IESO issued a notice to market participants heading into the summer to "In preparation for the summer peak demand period, the IESO is requesting gas generator operators to submit any de-rates due to ambient temperature variation as soon as practical. Accurate information is required by the IESO to reliably plan and operate the power system. De-rates to generation facilities are material to the IESO's reliability assessments and real time operations." While we understand the need to send this notice out, having facilities that can rely on a compliance deadband to offer materially different than their capability also doesn't send the right messages.

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Thank you for your feedback.