

AESO Stakeholder Workshop

To identify potential solutions to minimize impacts to import capability as a result of insufficient contingency reserves

November 10, 2015



Agenda

Agenda Item	Time
Welcome	5 minutes
Objective, scope and background	25 minutes
Workshop: Brainstorm/discuss short-term solutions	50 minutes
Break	15 minutes
Workshop: Brainstorm/discuss long-term solutions	50 minutes
Next Steps	5 minutes

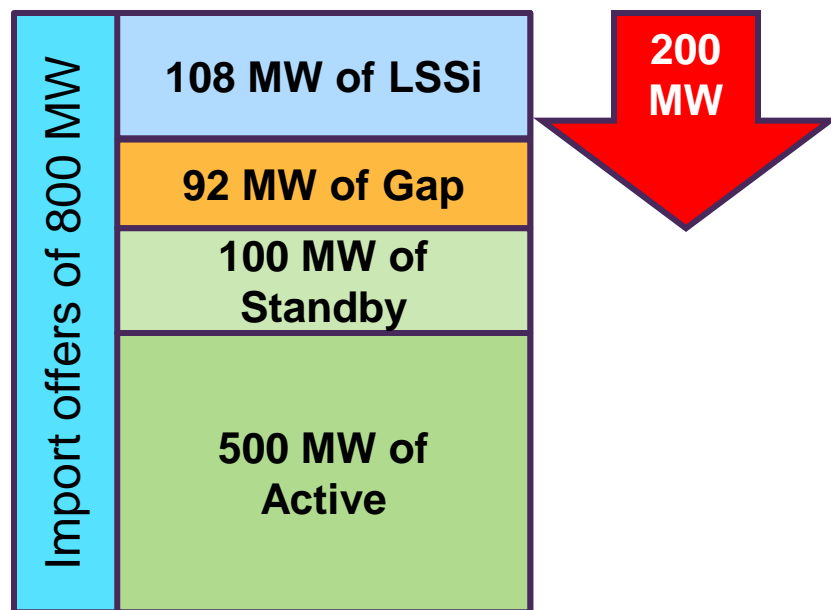
- Objective
 - To identify potential solutions to ensure sufficient contingency reserves for desired import volumes in a manner which is as cost effective and promoting of market efficiency as possible
- In Scope
 - Discussing and understanding the issue
 - Brainstorming and gathering potential solutions to be evaluated by the AESO to minimize reductions to import capability as a result of insufficient contingency reserves, and to do so in a cost-effective way
- Out of Scope
 - Calculation of ATC and related ISO Rules

- In 2014, an LSSi study was completed to review the LSSi volumes required to mitigate intertie trips
- The study determined the amount of LSSi that is required to be armed for scheduled import conditions on the BC and MATL interties at various Alberta load levels (AIL)
- LSSi requirements are determined in order to meet system performance criteria such that the tripping of the LSSi load will prevent operation of the under-frequency load shed (UFLS) program blocks upon a trip of the interties
- Study results were implemented in updates to the LSSi table in ID #2011-001R effective December 11, 2014
- The LSSi requirements in general are lowered
 - For example, at combined BC and MATL import level of 676 MW and AIL of 10,000 MW, LSSi requirement is 0 MW as compared to 299 MW before

- When the AESO forecasts the intertie to be the MSSC (on a day-ahead basis), active reserves are procured to meet the requirements (Active reserves are procured on a block basis)
- Active reserve volumes may be supplemented with increased (day-ahead) purchases of standby reserves based on AESO analyst assessment that the algorithmic forecast may be underestimating the potential next-day import volume
- In real time, if required and if available, system controllers will activate standby contingency reserves to support the high imports if active reserves are not sufficient to cover the MSSC
- If there are not enough reserves (active and standby) to accommodate the higher imports prior to arming LSSi, imports are curtailed to match the available reserve volumes to reliably operate the system

Current Process

- Example:
 - Combined BC and MATL import offers of 800 MW and an AIL between 10,000 and 10,499 MW
 - Based on table 10 of ID # 2011-001R the amount of LSSi to be armed is 108 MW
 - CR required to facilitate the import schedule is 692 MW
 - Assume that the AESO only procured 500MW of active and 100 MW of standby CR on a day-ahead basis
 - The shortfall of CR would be 92 MW (692 MW-600 MW)
 - **The 92 MW in this example is the “Gap”**
 - **The imports on the BC and MATL interties will need to be reduced by 200 MW to 600 MW**



Are there any questions on objective, scope and background?



- Ground Rules
 - Share all relevant information
 - Everyone has a chance to speak without interruption
 - No idea is a bad idea, and all ideas and opinions will be respected
 - All ideas and opinions will be encouraged to survive the “Relevant Test”
 - You’ve stated the reasoning behind the idea/opinion
 - You’ve given a specific example
 - You’ve shared the intention or benefit to you
 - All participants are invited to ask questions throughout the discussion
 - Ideas will be captured and documented

- Short-term:
 - What short-term options can you think of to cost effectively “fill the gap”?
 - What are the “pros” and “cons”?

- Long-term:
 - What long-term options can you think of to cost effectively “fill the gap”?
 - What are the “pros” and “cons”?

- Seek clarification/correction on what has been captured
- Circulate discussion points in summary form
- Provide update on potential next steps
 - For further information, please contact Dilhan Rodrigo at dilhan.rodrigo@aeso.ca

Thank you