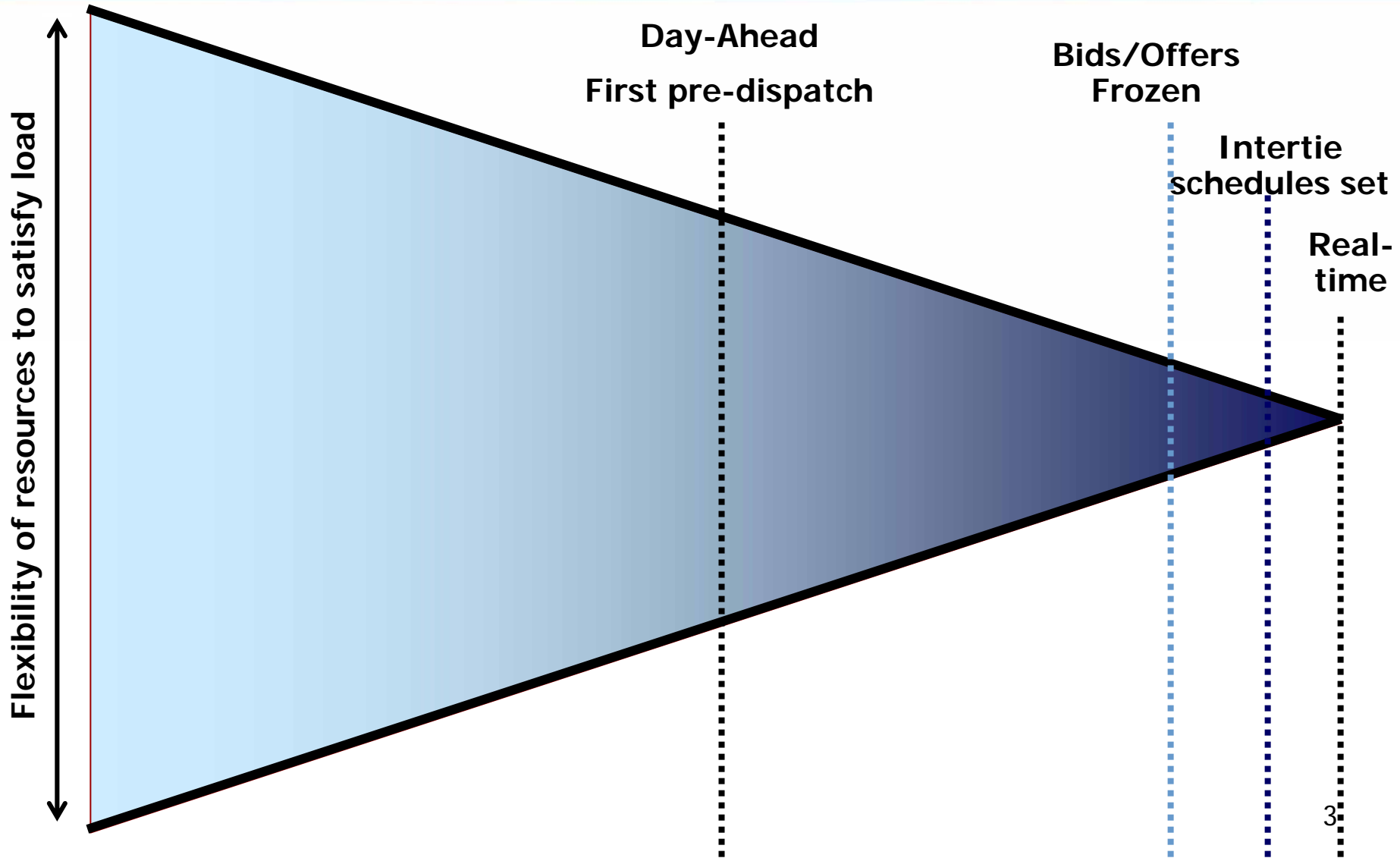


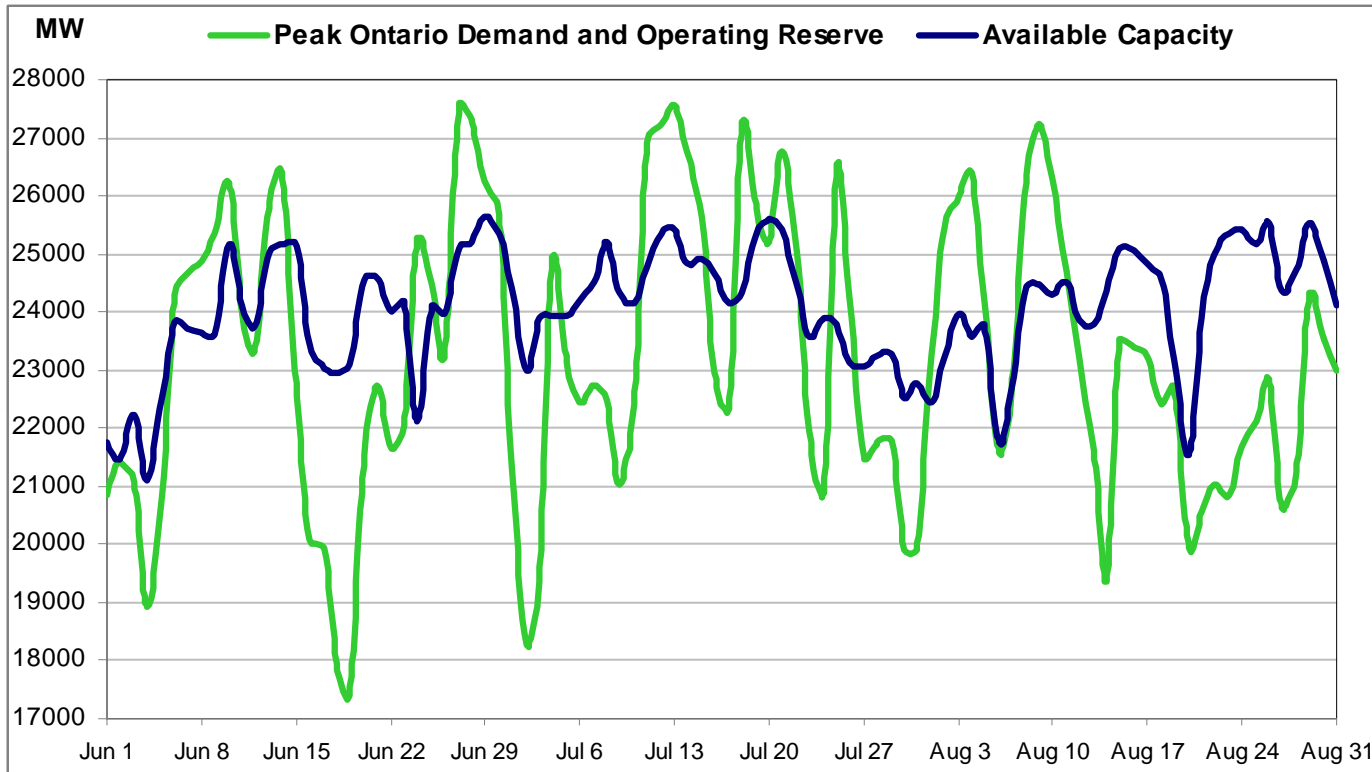
Overview of Reliability Measures for 2006

Stakeholder Advisory Committee meeting: November 28, 2005
Paul Murphy, Vice President – Market and System Operations



- The Ontario power system cannot consistently be in an emergency operating state as it was in summer 2005
- There are a number of initiatives we intend to put in place by next summer to improve reliability and mitigate risk

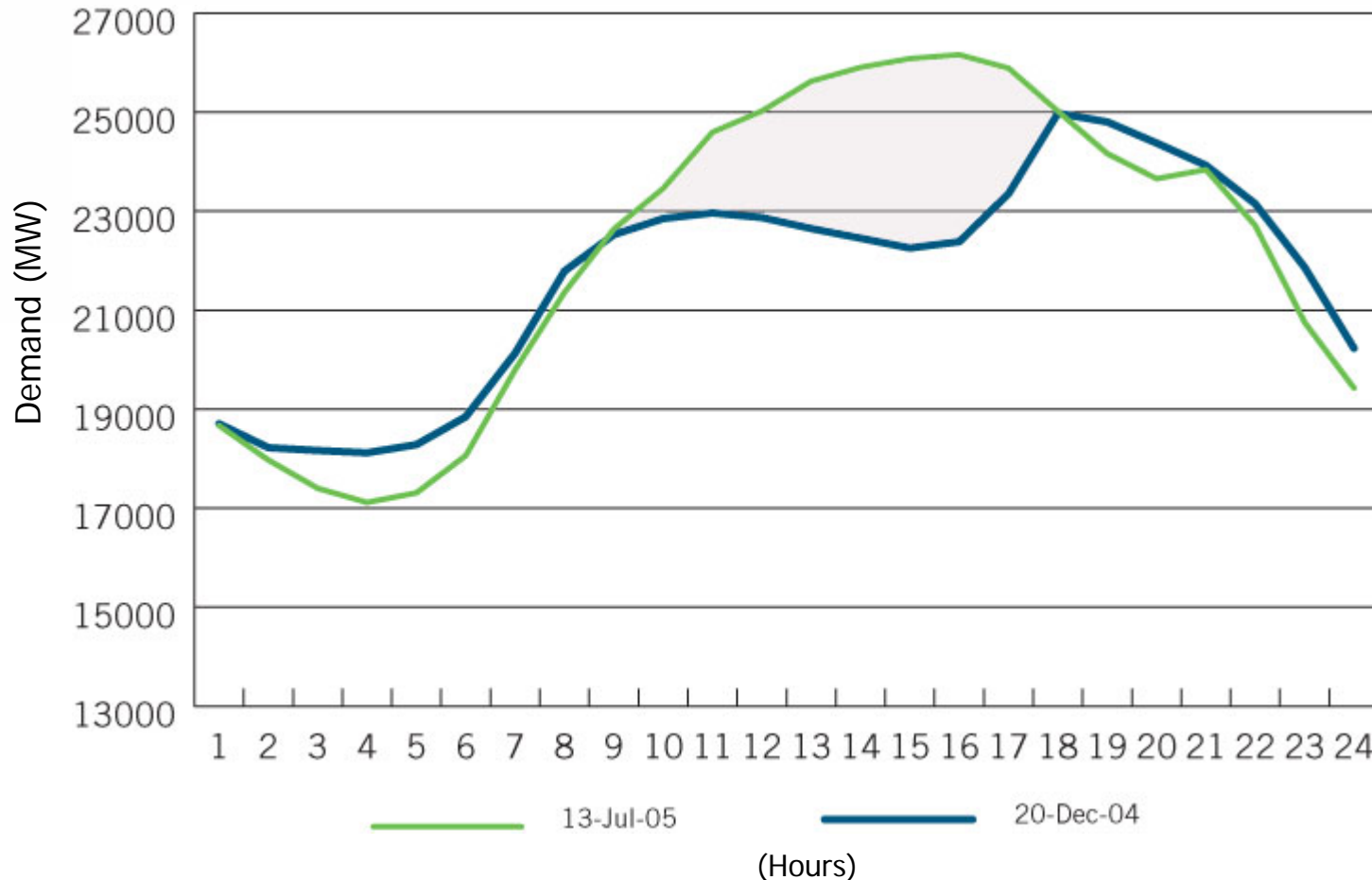




- Record setting demand days
- Summer demand growth greater than winter demand growth

Difference between Summer and Winter Peaks

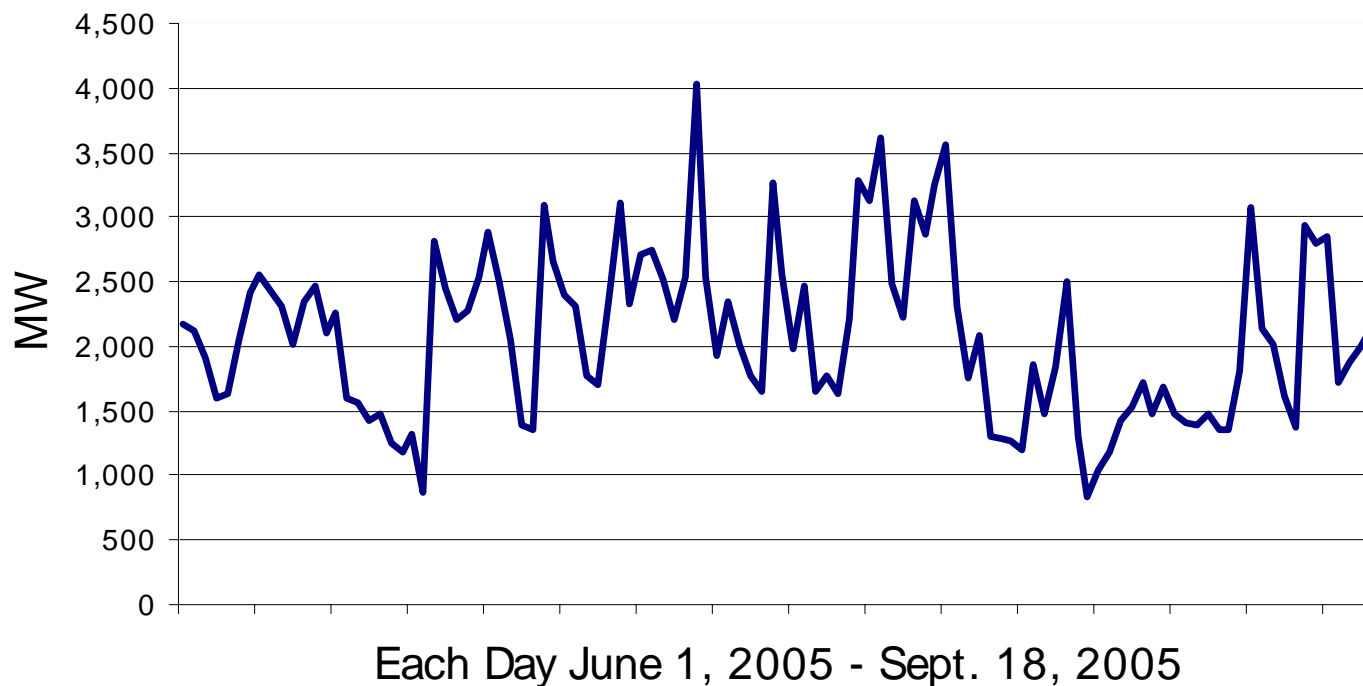
Summer and Winter Peak Days



Requires greater focus on energy sustainability

- Relied extensively on external supply

Maximum Hourly Imports



Summer highlighted major reliability concerns:

- Extensive use of Emergency Control Actions to avoid load shedding

Emergency Control Actions

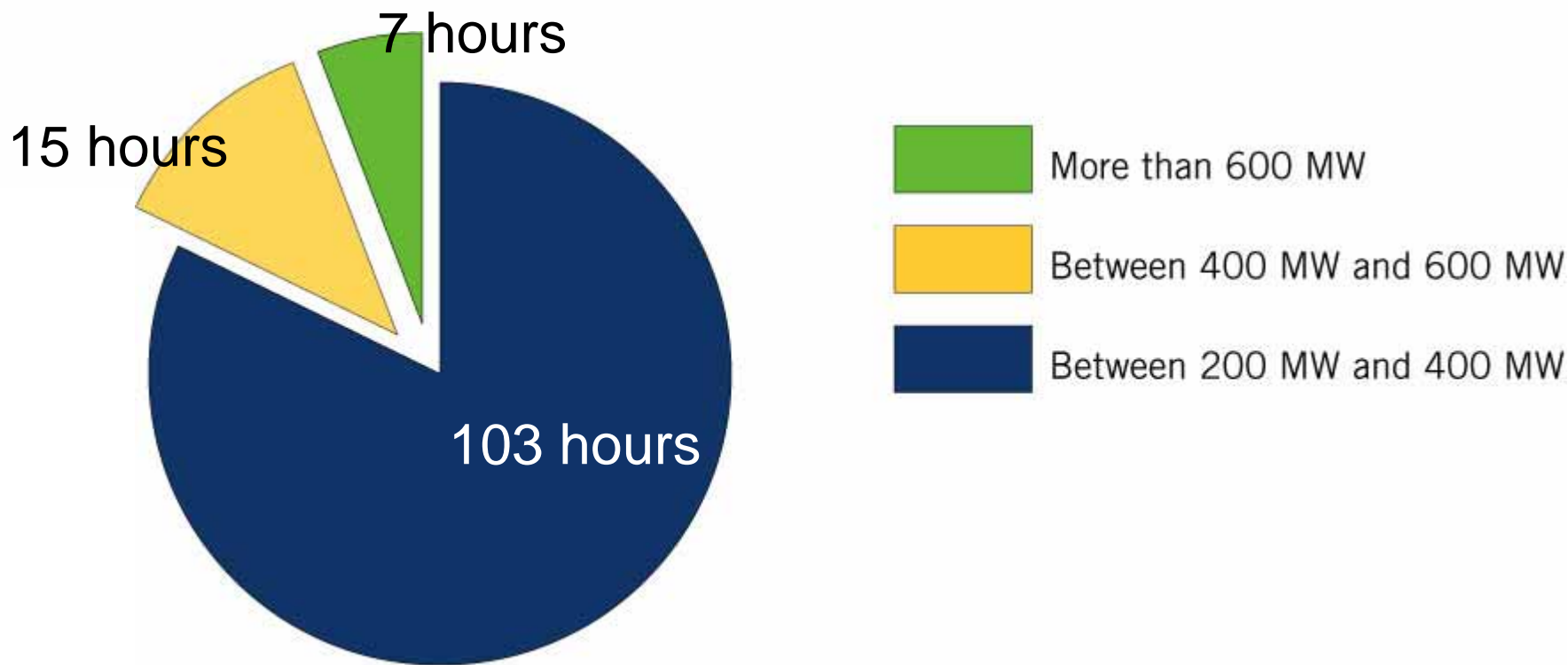
- Public Appeals
- Purchase emergency power
- Voltage reductions
- Environmental variances
- Operate transmission to emergency condition limits
- Activate Emergency Demand Response Program
- Load shedding

- Public appeals – 12 days
- Emergency energy – 17 hours
- Environmental variances – 4 days
- Operation to emergency condition limits – 3 days
- Emergency Alerts – 23
- Voltage reduction – 13 hours over two days

- Imports are selected an hour before they are to flow
- Selected imports that are not chosen in an adjacent market do not flow; these are called import failures
- Import failures:
 - are equivalent to suddenly losing a large generator;
 - happen at the last minute;
 - occurred almost every day this summer;
 - aggravated energy shortage; and
 - consistently contributed to the need to enter an emergency operating state
- New York will curtail Ontario's hourly transactions to protect their day ahead transactions

Import Failures are Significant

Magnitude of Import failures*



*The largest single hourly import failure was 1,005 MW (August 3rd, 2005 HE12)

- The level of 2005 unreliability is unacceptable to Ontario and our neighbours
- Substantive relief from Ontario resources is a couple of years away at best and load is growing
- Ontario will continue to be dependent on reliable performance from our existing resources and from imports until then
- We must increase the certainty of operational plans close to real time

What can be done to reduce the risk of unreliability by summer 2006?

- Planned infrastructure projects;
- Improve capability of existing resources; and
- Increase the certainty of market mechanisms

All of this has to be completed in seven months

Actions for 2006:

- Allow imports to be scheduled day ahead like all of the markets surrounding Ontario
- Commit units day ahead like all of the markets surrounding Ontario
- Implement an Emergency Demand Response Program like the markets surrounding Ontario

- Three streams of stakeholder engagement for Fall related to the reliability concerns:
 - Day-ahead commitment processes
 - Emergency demand response
 - Dispatch issues

- Processes considered include:
 - Day-Ahead commitment of internal resources, and
 - Day-Ahead commitment of imports
- Transactional stakeholders are directly impacted by the changes. Other stakeholders likely to be impacted as a result of pricing and uplift.
- Requires an efficient and intensive stakeholder engagement initiative
- Ken Kozlik will expand on this in his presentation

- Stakeholder Plan posted
- Stakeholder working group session held November 8 with 18 representatives from various constituencies.
- Proposed demand response reliability program has been posted for stakeholder review
- Open Stakeholder session on December 8 to solicit further feedback on proposed demand response reliability program
- Posting of final proposed demand response reliability program will be in late December
- Board approval in early December

- Stakeholder Plan posted.
- The first working group sessions was on November 14 with another planned for December 14. A third meeting will follow in early January.
- Working group is represented by 9 stakeholders with a focus on dispatchable generators.
- Purpose is to develop solutions, run related pilot projects for testing and implement
- Market Rule amendment process will begin in late February, 2006.

- You will find updates on the IESO's Website under Stakeholder Engagement – Active Consultations

<http://www.ieso.ca/imoweb/consult/activeComplete.asp>

- Questions/Comments

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