

Exploration of Enhancements to Dispatch Methodology & Processes (SE-61)

Stakeholder Advisory Committee
October 30, 2008



- Background
- IESO-stakeholder one-on-one discussions
- Findings: Stakeholder and IESO Issues
- Next Steps

- Seeking SAC feedback on findings and next steps

- Generators express ongoing concern regarding dispatch volatility
 - Operational and market efficiencies; reliability
 - Some measures taken : multi-interval optimization, compliance aggregation, wider compliance deadbands
- Changing resource mix (IPSP)
 - Embedded generation; demand response; natural gas; renewable supply
 - IESO operability report
- SE-61 initiated end of March 2008

- July through October
- 8 Ontario generators
- Wide range of generation technologies:
 - Nuclear - 2 generators
 - Coal - 1 generator
 - Natural gas (CCGT, single cycle) – 5 generators
 - Hydro-electric – 2 generators
 - Other – 2 generators
- IESO Operations

- Varied opinions as to what are the dispatch issues
- Varied opinions as to what the solutions may be
- Common issues:
 - Erratic dispatch (e.g. up one interval, down the next)
 - Improve how dispatch-scheduling optimizer (DSO) takes into account individual generation facility operating characteristics e.g. CCGT interdependencies; ramping; start-up

- Eligibility to provide operating reserve when not synchronized
- Dispatch errors
- Dispatch advisories not accurate
- Integration of gas-fired peaking generation
- Lack of recovery of start-up costs for quick-start facilities
- Insufficient information regarding network constraints provided to MPs
- Reliance on non-AGC resources to manage frequency

- Forecasting
 - Demand: expected embedded generation, DR
 - Supply: intermittent, self-scheduling
- Ramping capability in future supply fleet
- Top of the hour changes
- Surplus baseload generation

- Any solution must take into account the future supply fleet; no consensus on preferred/desired solution(s)

Possible Solutions Identified by Stakeholders

- DSO improvements
 - Load forecasting smoothing
 - System modelling
 - Transmission limit and/or optimization tolerances
 - CCGT: gas and steam unit interdependencies
- Technology specific dispatch compliance deadbands
- 3-part offers day-ahead and in real-time
- 15-minute dispatch – different options
- Dynamic AGC requirement

- Short-term: ongoing work with participants to address specific issues within existing market framework
- Medium-term:
 - Initiate third-party review of DSO
 - What are causes of 'erratic dispatches'?
 - What are possible solutions?
 - Initiate third-party review of other Markets
 - Do they have similar issues
 - How have they 'solved' the problem
 - Complete spring 2009
- Longer-term: Study market design changes
 - IESO to establish priority of longer-term study by end of 2008
 - IESO to produce report by spring 2009: findings, scope of further study of market design changes, work plan