



Market Pricing Working Group

Market Evolution Program

Meeting #7
August 20, 2004
8:30 - 3:00

Issue 5: Simultaneous Use of Ramping Generation Units for Energy and Operating Reserve

- Units increasing output in response to energy dispatch will not have their full ramping capability available for activated reserve
- Pre-dispatch DSO limits the sum of scheduled energy and operating reserve in each hour by what is achievable if the unit ramps from initial output using its energy ramp rate.
- Real-time DSO subtracts the energy increase in the dispatch interval from available reserve ramp capabilities
- Other control areas use the full ramp capabilities of the units for reserve without regard to energy schedule change (and visa versa)
- The issue is system reliability vs. amount of available reserve, higher prices and possible reserve shortages.

Issue 11: Comparing Treatment of Self-Scheduling Resources in Pre-dispatch and Real-time

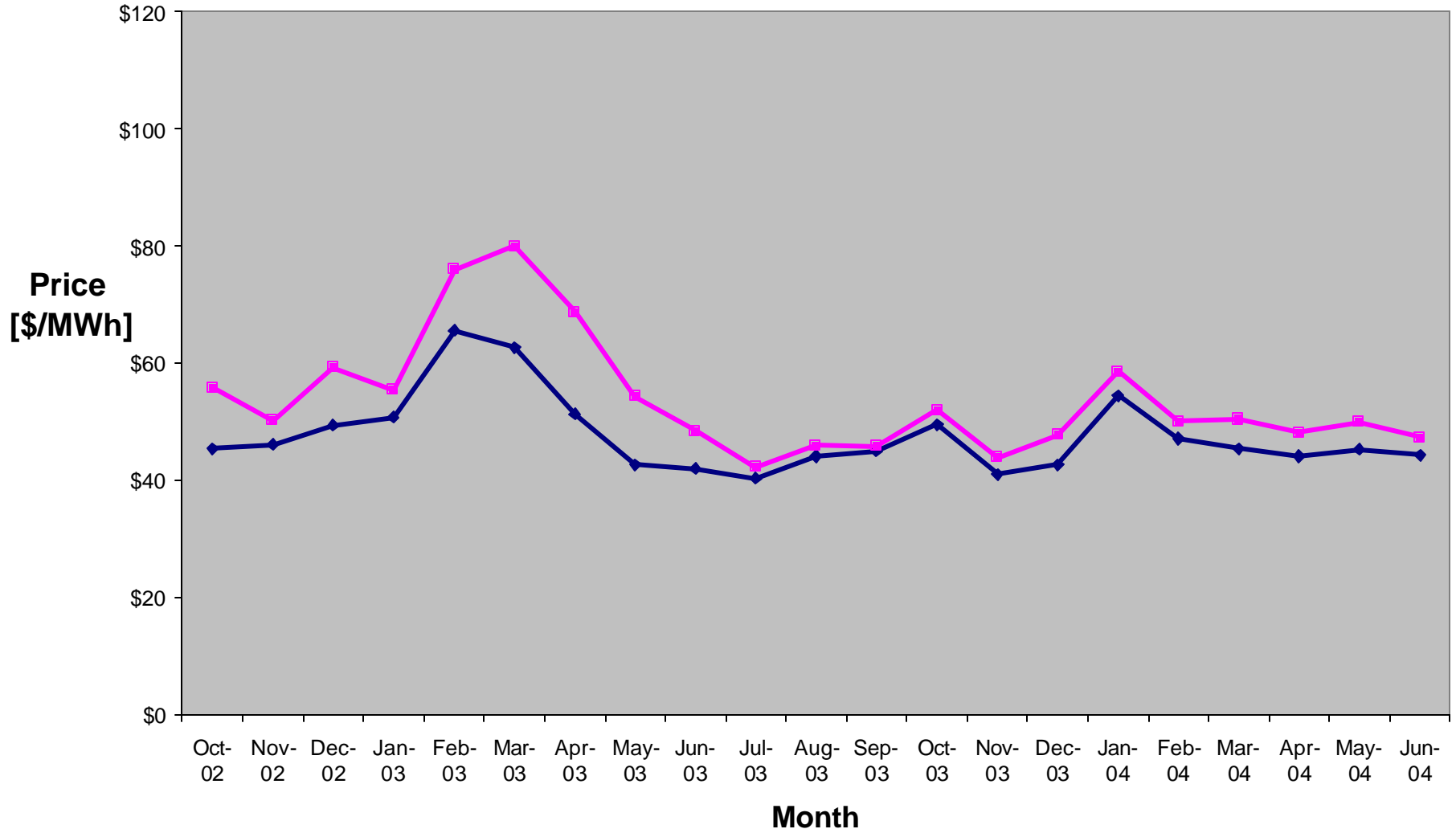
- SSGs submit schedules and price below which they will not generate. The information is used in pre-dispatch
- Market Rules assumed SSGs to be small - Minimal impact on system reliability or price for deviation from schedules - did not turn out this way.
- Deviation from schedules is a concern especially in transmission limited areas.
- Real-time changed to use actual output (forecast in the case of constrained)
- Assumptions made affect the scheduled generation from other units (system reliability, fairness) and prices.

Issue 16: Historical Analysis of Nodal Prices

- A presentation on Historical Nodal Pricing Analysis was given by the DAM working group at the MOSC meeting in January 2004. The goal was to help stakeholders understand and assess the potential impacts of nodal pricing on the market, and how these prices have varied over time.
- The analysis is comprised of two components:
 - **Total Pricing Comparison** – to consistently compare the uniform and nodal (generator-weighted average) prices of energy and show how these prices have varied over time.
 - **Spatial Analysis** – to track how the nodal prices have varied across the 10 Ontario zones.

Issue 16: Example of Total Pricing Comparison Graph

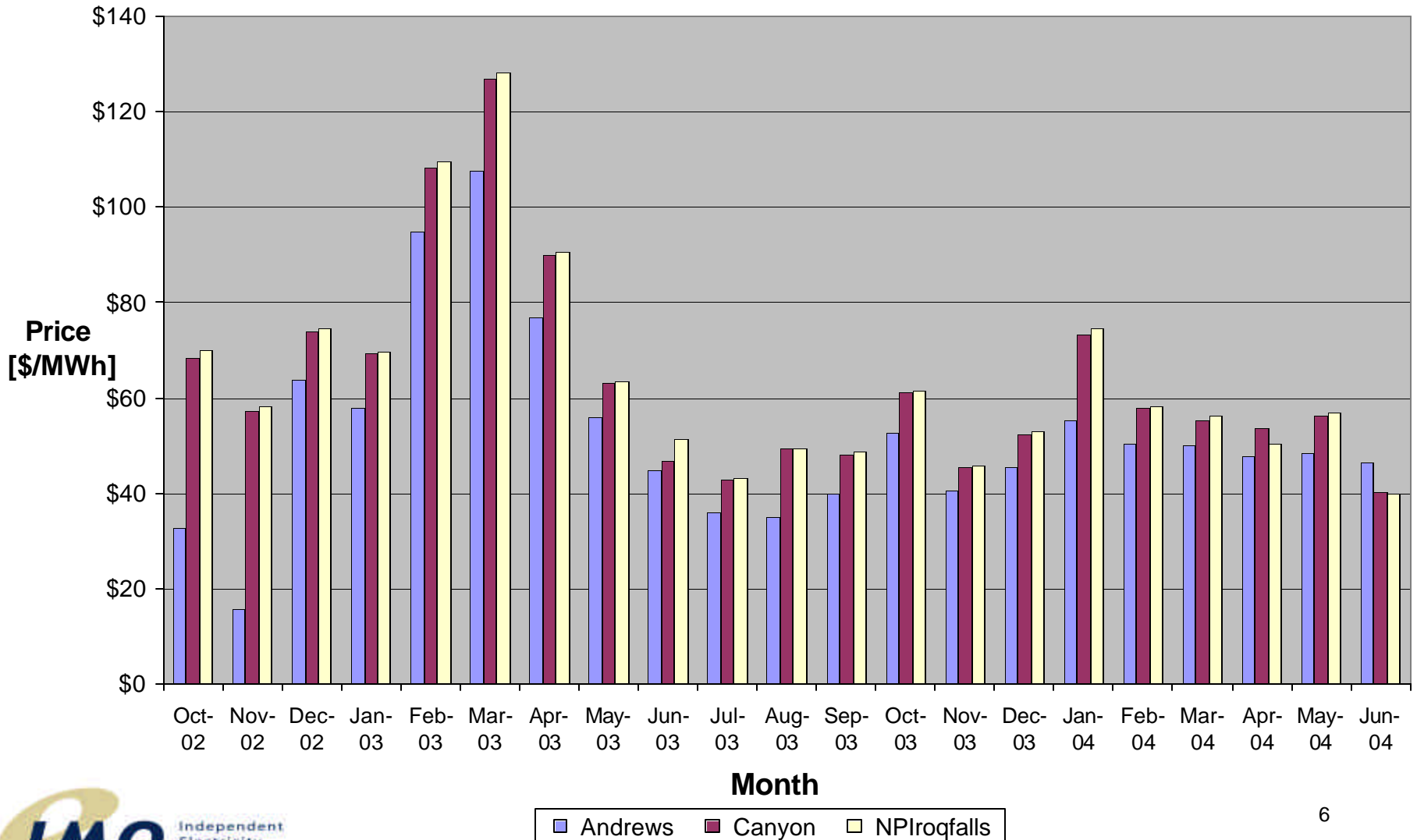
Total Price Comparison With Existing Rebates Applied



◆ Uniform (HOEP+Uplifts-IOG-Rebate) ■ Nodal (Gen-Wtd Avg)

Issue 16: Example of Spatial Analysis Graph

North East Average Nodal Price Paid to Generators



Issue 24: Reducing Frequency of Failed Intertie Transactions

- Intertie transactions are scheduled by the IMO's final (hour-ahead) pre-dispatch.
- If the transaction has not been scheduled by the other Control Area, then the transaction fails.
- Market Impacts of these failures:
 - Can cause a reliability issue that may lead to the use of out-of-market control actions.
 - Adds to the difference between pre-dispatch and real-time prices.
 - Operational impacts on internal dispatchable facilities.
 - May increase IOG payments.