



# Market Pricing Working Group

Market Evolution Program

Meeting #5  
July 9, 2004  
Toronto Congress Centre

# Agenda

- ➔ • **Review of Action Items from June 25 Meeting**
- **Non-Disclosure Agreement Update**
- **Questions/Comments on Previously Discussed Pricing Issues**
- **Pricing Issues for Discussion**
  - Impact of Out of Market Operating Reserve Resources (13)
  - Pricing and Allocating Line Losses (18)
  - Line Loss Factors (19)
  - Over-Forecasting (10)
  - Use of Peak Demand Load Forecast in Pre-Dispatch (09)
- **Pricing Issues for Next Meeting - Friday, August 6**

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# Issue 13: Out-of-Market Reserve Impacts

- Out-of-market sources of reserve
  - 3% and 5% voltage reductions
  - temporary disregard 30 minute reserve
  - recall exports
- Market Rules and Manuals permit the IMO to meet its NPCC and NERC requirements using out-of-market sources
  - IMO strives to meet requirements with market sources
  - IMO incorporates out-of-market sources only if there is a shortage of market sources of reserve in RT constrained sequence
  - implements these sources through a manual process;
    - reduces requirement in both constrained and unconstrained sequence by expected shortfall
    - difference between scheduled quantities and NPCC requirement met with out-of-market sources

# Issue 13: Out-of-Market Reserve Impacts - 2

- Pricing impact:
  - contribute to difference between pre-dispatch and real-time prices (transparency)
  - may cause the real-time prices to fall at times when shortage conditions are worsening (transparency and efficiency)
  - undermine signals for efficient dispatch
- Pricing Team Offered two potential solutions:
  - allowing the DSO to automatically utilize the out-of-market resources
  - applying a price to each of the ‘out of market’ resources and directly inserting these resources into the market as Operating Reserve offers
- Summer/Fall of 2003 Introduction of 400MW of of out-of-market sources into market (CAOR)
  - Is the price of CAOR too low or too high?

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# Issue 18: Pricing and Allocating Line Losses

- Unconstrained sequences use uniform prices - losses are paid as uplift
- Constrained sequences calculate dispatches and prices that account for the impact of incremental losses.
- Differing treatment of losses was identified as one of the reasons why nodal prices are different from uniform price
- Pricing issue related to efficiency (sending the right signals) and fairness (transfer of wealth between stakeholders)

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# Issue 19: Node Loss Factors

- Loss factors are used to calculate penalty factors
- Penalty factors are used to adjust bid/offer prices used in the constrained sequences to account for losses
- In the original design of DSO, loss factors were dynamic
- Loss factors were fixed before market launch due to erratic dispatches and MP desire to have predictable dispatches
- Price issue because of efficiency (high CMSC) and transparency (manually set)

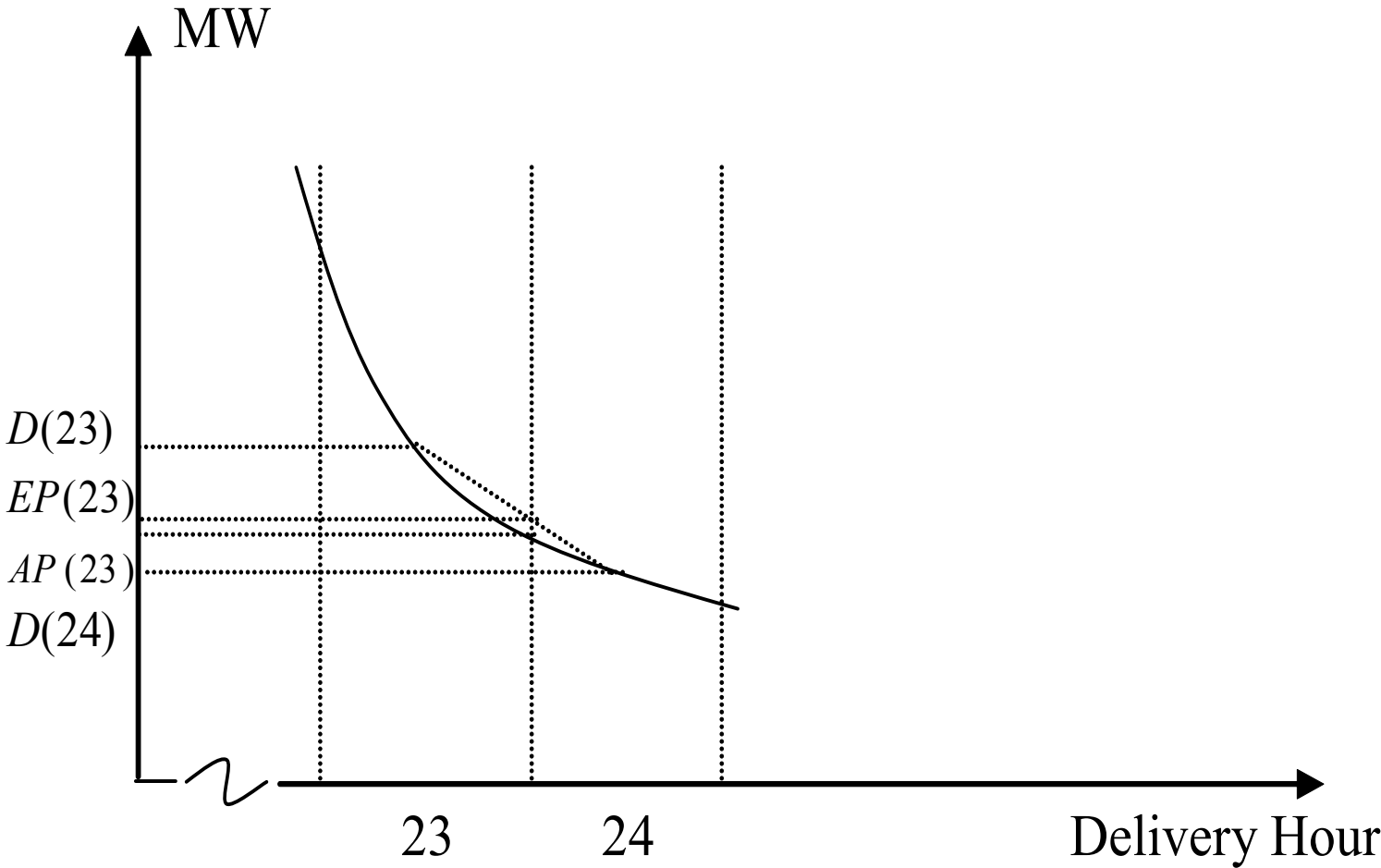
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# Issue 10: Over-Forecasting of Demand in hrs 23, 24

- The estimate of peak demand is in general the average of the forecasts of two consecutive hours
- The algorithm could lead to systematic bias in forecast of peak demand.
- MSP found significant accumulation of IOG payments in hours 23 and 24, when reliability issues are unlikely.
  - Impact primarily attributable to persistent over-forecast of demand caused by bias in algorithm for selecting hourly peak demand
- MSP has concerns with the impact of the algorithm on:
  - Efficiency: imports/exports, pre-scheduling
  - Transparency: inaccurate signals
  - Fairness: wealth transfer from rate-payer to trader

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## Issue 9: Peak Demand Forecast in Pre-Dispatch

- Pre-dispatch sequence uses estimate of peak demand for schedules instead of forecast of average demand
- IMO uses peak demand to ensure sufficient resources available to meet peak demand within the hour (reliability)
- Use of peak demand contributes positive difference between pre-dispatch price and HOEP
- MSP concerned with the impact of the price difference on:
  - Efficiency: imports/exports, pre-scheduling
  - Transparency: inaccurate signals

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