

Memorandum

To: Market Pricing Working Group
From: John MacKenzie
Date: December 3, 2007
Re: Market Pricing Working Group Updated Issues Listing

Attached is an updated listing of the issues and initiatives before the Market Pricing Working Group. The issue list is organized as follows:

- Issues are grouped by whether they are 'open', 'on hold' or 'closed'
- Within each grouping issues are listed in descending numerical order.

This updated listing is being provided to facilitate discussion of 2008 priorities and performance measures. As this updated listing is the first updating done in some time, MPWG members are asked to also review the listing for errors or omissions.

Below is a listing of 'open' issues by priority.

Open - High Priority Issues

040: Nodal Pricing for Import and Export Transactions
039: Exporting Operating Reserve
037: Operating Reserve Initiatives resulting from NPCC Changes (Regional Reserve Sharing & Dispatchable Loads)
031: Multi-Interval Optimization Pricing Methodology
026: Integration of Competitive and Regulated Wholesale Prices
025: Temporal Optimization in the Real-Time Constrained Sequence but Not in the Real-Time Unconstrained Sequence
005: Simultaneous use of Ramping Generation Units for Energy and operating Reserve
004: Use of 12-times Ramp rate in the Dispatch Unconstrained Algorithm

Open - Medium Priority Issues

038: Treatment of Shared Activation of Reserve
032: Role of Import Offer Guarantee
016: Historical Analysis of Nodal Prices
009: Use of Peak Demand Forecast in Pre-Dispatch
001: Pre-Dispatch Price Uncertainty

Open – Low Priority Issues

034: Rules Concerning the Breaker Status of “Quick Start Facilities”

027: Timing and Input Differences Between Unconstrained And Constrained Real-Time Sequences

023: Uncertainty with respect to Constraint Payments

022: Pricing Physical Constraints

020: Treatment of Intertie Transactions in a Congestion Pricing Regime

019: Penalty Factors (formerly referred to as Line Loss Factors)

018: Pricing and Allocating Line Losses

Over the next few MPWG meetings, the IESO requests that the MPWG review the ‘open’ issues, as the IESO believes that some ‘open’ issues could be ‘closed’ or placed ‘on hold’. For example, it may be appropriate to close the following issues:

1. Issue 037: Operating Reserve Initiatives resulting from NPCC Changes (Regional Reserve Sharing & Dispatchable Loads):
 - all changes from this issue have been approved and implemented or have implementation dates established.
2. Issue 019: Penalty Factors (formerly referred to as Line Loss Factors):
 - all activities related to this issue being managed under a separate stakeholder engagement activity - SE-40.

It may also be appropriate to place issues related to real-time pricing methodology ‘on hold’ pending the results of the analysis of the impact of the change to the 3x ramp rate. These pricing methodology issues would include:

- Issue 031: Multi-Interval Optimization Pricing Methodology
- Issue 025: Temporal Optimization in the Real-Time Constrained Sequence but Not in the Real-Time Unconstrained Sequence

The priority of the remaining ‘open’ issues should also be reviewed to ensure the assigned priorities are appropriate.

This review would clean-up the MPWG issues listing and facilitate MPWG focusing on the remaining issues.

Yours truly,

John MacKenzie

Attach.

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

OPEN ISSUES

Issue ID	ISSUE NAME	DATE RAISED & DESCRIPTION	STATUS (Open, On Hold, Closed; Current Activities)	NEXT STEPS	PRIORITY	RELATED ISSUES/ INITIATIVES	REFERENCE MATERIAL
040	Nodal Pricing for Import and Export Transactions	<p>Schedule and settle import and export transactions on the basis of the locational prices at the respective intertie nodes. There would no change to the method/criteria for scheduling and settling of domestic supply and demand.</p> <p>Issue raised in fall of 2007 by stakeholder groups as a possible means of improving the efficiency of import and export transaction scheduling and hence overall market efficiencies.</p> <p>Addressing this issue proposed as one of the 2008 IESO MPWG performance measures.</p>	<p>Open</p> <ol style="list-style-type: none"> 1. IESO staff drafting issue description paper and stakeholder engagement plan. 	<p>Draft issue description paper and stakeholder engagement plan submitted for MPWG review and feedback at February 7th, 2008 meeting.</p>	High		<p>Issue Description Paper [insert hyperlink - pending]</p> <p>Stakeholder Engagement Plan - pending</p>
039	Exporting Operating Reserve	<p>Allow the commercial trading of operating reserve to and from Ontario. Current market design and rules only permit importing of operating reserve to Ontario.</p> <p>Prior to market opening the IESO Board committed to investigate the possibility of exporting operating reserve.</p> <p>Subsequently raised at the March 1, 2007 MPWG and the February 26, 2007 Technical Panel.</p> <p>Addressing this issue proposed as one of the 2008 IESO MPWG performance measures.</p>	<p>Open</p> <ol style="list-style-type: none"> 1. IESO staff drafting issue description paper and stakeholder engagement plan. 2. IESO engaging external consultant to assess and make recommendations as to if and how commercial trading of operating reserve into and out of Ontario should be accommodated. 	<p>IESO to issue Request for Proposals in Dec 2007 and to engage consultant in early 2008.</p> <p>Draft issue description paper and stakeholder engagement plan submitted for MPWG review and feedback at February 7th, 2008 meeting.</p>	High		<p>Issue Description Paper - pending</p> <p>Stakeholder Engagement Plan - pending</p> <p>Request for Proposals - pending</p>

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038	Treatment of Shared Activation of Reserve	<p>Recommendation from the Market Surveillance Panel (MSP) report published on December 22, 2006.</p> <p>Shared Activation of Reserve (SAR) should be treated in the same fashion as emergency energy purchases i.e. add demand in the amount of SAR back to the market schedule; so that SAR does not result in counter-intuitive price drops during time of system stress.</p> <p>Raised at the March 1, 2007 MPWG and the February 26, 2007 Technical Panel.</p>	<p>Open</p> <ol style="list-style-type: none"> 1. IESO conducting analysis of the market efficiency and other impacts of changing treatment of SAR as recommended by the MSP. 2. IESO investigating whether market rule amendments required to change treatment of SAR as recommended by the MSP. 	<p>IESO to present analysis results and recommendation at February 7th, 2008 MPWG meeting.</p>	Medium		<p>Market Surveillance Panel report: http://www.oeb.gov.on.ca/documents/msp/msp_report_final_20061222.pdf</p> <p>Stakeholder Engagement Plan SE-37: http://www.ieso.ca/imo/web/consult/consult_se37.asp</p>
037	Operating Reserve Initiatives resulting from NPCC Changes (Regional Reserve Sharing & Dispatchable Loads)	<p>NPCC related changes:</p> <ul style="list-style-type: none"> • Reduce 10 minute non-synchronized operating reserve requirement by 100 MW of regional reserve sharing (RRS) • Reduce 10 minute operating reserve requirement, including synchronized reserve, by 100 MW of regional reserve sharing (RRS) • Dispatchable loads able to provide 10 minute synchronized operating reserve <p>Raised at the March 1, 2007 MPWG and the February 26, 2007 Technical Panel.</p>	<p>Open</p> <ol style="list-style-type: none"> 1. Reduce 10 minute non-synchronized operating reserve requirement by 100 MW of regional reserve sharing (RRS) – implemented spring 2007 2. Reduce 10 minute operating reserve requirement, including synchronized reserve, by 100 MW of regional reserve sharing (RRS) – rule amendment MR-00332 approved by IESO 7 Sep 07; in effect 12 Dec 07 3. Dispatchable loads able to provide 10 minute synchronized operating reserve - rule amendment MR-00333 approved by IESO Board 15 Nov 07, in effect 5 Mar 08 	<p>Nothing planned.</p> <p>Candidate for closing?</p>	High		<p>Stakeholder Engagement Plan SE-37: http://www.ieso.ca/imo/web/consult/consult_se37.asp</p>

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034	Rules Concerning the Breaker Status of "Quick Start Facilities"	<p>Noted in Market Surveillance Panel Report, June 14, 2004.</p> <p>Quick-start facilities can be started, synchronized and ramping within 5-minutes of receipt of an IESO dispatch instruction. Quick-start facilities are also eligible to provide non-synchronized and 30-minute OR in real-time. This treatment relative to non-quick-start facilities may not be appropriate under all conditions. System reliability and unfair compensation may then result.</p> <p>Issue description paper developed and reviewed by MPWG in August 2004.</p>	<p>Open</p> <p>1. No current activities.</p>	Nothing planned.	Low		<p>Issue Description Paper http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue34.pdf</p> <p>Market Surveillance Panel Report: http://www.oeb.gov.on.ca/documents/msp/panel_mspreport_imoadministered_140604.pdf</p> <p>Stakeholder Engagement Plan - pending</p>
032	Role of Import Offer Guarantee	<p>Noted in Market Surveillance Panel Report, June 14, 2004.</p> <p>Issue relates to the question of whether the Import Offer Guarantee is appropriate in certain hours such as 23:00 and 24:00. Namely, whether the premiums paid in such hours are worth the reliability benefits intended.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group in August, 2004.</p>	<p>Open</p> <p>1. No current activities.</p>	Nothing planned.	Medium		<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS32_IORole.pdf</p> <p>Market Surveillance Panel Report: http://www.oeb.gov.on.ca/documents/msp/panel_mspreport_imoadministered_140604.pdf</p> <p>Stakeholder Engagement Plan - pending</p>

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031	Multi-Interval Optimization Pricing Methodology	<p>Noted in January 2003 IESO MEP discussion paper.</p> <p>When adopting a MIO approach in the unconstrained sequence there are a number of methodologies for determining price: e.g. offer price of dispatched resource with the highest offer price, offer price of incremental resource. Each methodology may result in different prices under similar scenarios.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group July, 2004.</p>	<p>Open</p> <ol style="list-style-type: none"> Multi-Interval Optimization (MIO) was deployed in the constrained sequence on June 23, 2004. It was decided during the 12X RR discussions that the opportunity cost of designing and implementing an unconstrained MIO would be too high and that there are other more substantive market evolution initiatives to pursue. Simulations did not demonstrate significant changes in price patterns relative to status quo; hence, there was unlikely to be substantial increased efficiency from moving to an unconstrained MIO pricing methodology. Change to 3x ramp rate in the RT market schedule was implemented on September 11, 2007. 	<p>Nothing planned.</p> <p>Candidate for being placed on hold pending results of 3x ram rate impact analysis.</p>	High	003; 004; 005; 009; 012; 025; 027;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS31-MIO-PricMthdgy.pdf</p>
027	Timing and Input Differences Between Unconstrained And Constrained Real-Time Sequences	<p>Real-time constrained sequence uses forecast values of demand, reserve requirements and unit availability. Real-time unconstrained sequence uses actual values. Differences between the forecast and actual values can contribute to the differences between uniform MCP and nodal prices.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group in June 2004.</p>	<p>Open</p> <ol style="list-style-type: none"> No current activities. 	<p>Nothing planned.</p> <p>As suggested at the June 2004 Market Pricing Working Group meeting, further analysis could entail analyzing, among other things, the magnitude, frequency, timing, and distribution of over- and under-forecasts of demand.</p>	Low	002; 004; 010; 012; 013; 016; 018; 020; 022;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jun25_RTU-RTC-InpDiff.pdf</p> <p>Stakeholder Engagement Plan - pending</p>

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026	Integration of Competitive and Regulated Wholesale Prices	<p>Potential issues resulting from legislated and regulated changes to the Ontario electricity sector. Potential issues include:</p> <p>a. Offering behaviour of “Heritage Pool” generators –particularly where such generators would be self-scheduling - and associated impacts (whether complementing or distorting) market efficiency and reliability</p> <p>b. Ensuring meaningful linkages between wholesale and retail prices, broadly in view of promoting effective consumer participation in electricity and contract markets and facilitating demand response.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group in August 2004.</p>	Open	Nothing planned.	High		<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS26_RelWhslPrice.pdf</p> <p>Stakeholder Engagement Plan - pending</p>
025	Temporal Optimization in the Real-Time Constrained Sequence but Not in the Real-Time Unconstrained Sequence	<p>Temporal optimization was introduced in real-time constrained (RTC) sequence in June 2004. The real-time unconstrained (RTU) sequence continues to not consider future expectations of supply or demand. This difference in optimization could result in greater differences between the RTC and RTU results, increasing CMSC payments and reducing market efficiency and transparency.</p> <p>Issue description paper developed and reviewed by market Pricing Working Group in July 2004.</p>	Open	Nothing planned.	High	003; 004; 005; 009; 012; 027; 31;	<p>Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS25-TmprlOptRTU-RTC.pdf</p>

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023	Uncertainty with Respect to Constraint Payments	<p>Prompted by Market Surveillance Panel review of CMSC in October 2002.</p> <p>General concerns expressed by market participants over the future prospect and impact of changes to Ontario's constraint payment regime.</p> <p>Issue description paper developed and reviewed by market Pricing Working Group in August 2004.</p>	<p>Open</p> <p>1. No current activities.</p>	Nothing planned.	Low	004; 014; 016; 022;	<p>Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue23.pdf</p> <p>Market Surveillance Panel Consultation on CMSC: http://www.oeb.gov.on.ca/html/en/industryrelations/msp_cmhc.htm</p> <p>Stakeholder Engagement Plan – pending</p>

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022	Pricing Physical Constraints	<p>Prices are currently computed in an unconstrained market sequence, whereas dispatch instructions are issued according to a security constrained sequence. Additional costs are incurred in Ontario's "uniform pricing" system when the actual security constrained dispatch of resources required to satisfy load at a given interval differs from the purely economic solution produced by the unconstrained algorithm. These additional side-payments (CMSC) reduce price transparency and efficient market signalling.</p> <p>Issue description paper developed and reviewed by market Pricing Working Group in July, 2004.</p>	<p style="text-align: center;">Open</p> <p>1. No current activities.</p>	Nothing planned.	Low	002; 004; 016; 018; 023; 027;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS2-2-PricPhysConstr.pdf</p> <p>Stakeholder Engagement Plan – pending</p>

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020	Treatment of Intertie Transactions in a Congestion Pricing Regime	<p>Fixing of intertie transactions for the dispatch hour does not allow the real-time nodal prices within Ontario to reflect import offers and export bids. While Ontario retains uniform pricing regime, this is not a serious problem. If Ontario moves to locational pricing within Ontario, the impact of import offers and export bids on real-time locational prices would need to be evaluated.</p> <p>Issue description paper developed and reviewed by market Pricing Working Group in September, 2004.</p> <p>IESO proposal to close this issue at MPWG meeting August 2007. MPWG members feedback at that time:</p> <ul style="list-style-type: none"> If there is no active review of locational marginal pricing (LMP) then placing this issue on hold would be more appropriate. Request that the IESO provide the working group with the scope of the LMP study being conducted under stakeholder engagement plan SE-25. <p>MPWG members requested to provide additional feedback in writing. No comments received.</p>	<p>Open</p> <ol style="list-style-type: none"> Issue 40 opened: Nodal pricing for Imports and Exports. In light of stakeholder concerns, IESO proposing to place this issue on hold pending results of Issue 40 and LMP study under SE-25. 	IESO proposal to place issue on hold to be discussed at MPWG meeting December 2007.	Low	002; 007; 016; 017; 022; 027; 040	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Sep03_ISS20_Imp_LMP.pdf</p>

Market Pricing Working Group

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019	Penalty Factors (Formerly referred to in this document as Line Loss Factors. The name has been changed to agree with the rules and the stakeholder engagement plan)	Noted during historical analysis of nodal prices. Relates to whether static rather than dynamic penalty factors are used. Issue description paper developed and reviewed by Market Pricing Working Group July, 2004. IESO undertook stakeholder consultation under Stakeholder Engagement Plan (SE-40) on possible changes to loss factors for Ontario resources.	Open 1. Change to dynamic factors made on October 10, 2007.	Refer to activities under SE-40.	Low	018; 022;	Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS19-NodeLossFact.pdf Stakeholder Engagement Plan: SE-40: http://www.ieso.ca/imo/web/consult/consult_se40.asp
018	Pricing and Allocating Line Losses	Under the current uniform pricing system, average losses are allocated on an Ontario-wide average basis and are recovered from consumers as an uplift charge. Under a nodal system, incremental line loss costs are allocated to each node in a manner that recognizes each node's individual contribution to/impact on those costs. Incremental losses typically higher than average losses, which could result in over-collection. Issue description paper developed and reviewed by Market Pricing Working Group July, 2004.	Open 1. No current activities.	Nothing planned.	Low	002; 016; 019; 022; 027;	Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS18-PricAllocLineLoss.pdf

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016	Historical Analysis of Nodal Prices	<p>Market participants requested that the IESO provide on-going analysis of historical nodal prices, as a continuation to the analysis presented by the Day-Ahead Market Working Group (DAMWG) at the Market Operations Standing Committee meeting on January 14, 2004.</p> <p>Study to entail: (a) total pricing comparison - to consistently compare uniform and nodal prices and show how these prices have varied over time; (b) Spatial analysis - to show how nodal prices have varied across Ontario.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group August 2004.</p> <p>IESO subsequently initiated review of nodal pricing in August 2006 under Stakeholder Engagement Plan SE-40. In June 2007, IESO decision to continue to learn more about LMP, but at a measure pace.</p>	<p>Open</p> <p>1. No current activities.</p>	Nothing planned.	Medium	002; 004; 010; 017; 018; 019; 020; 022; 023; 027;	<p>Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS16_AnalNodalPrices.pdf</p> <p>Stakeholder Engagement Plan SE-40: http://www.ieso.ca/imo/web/consult/consult_se25.asp</p> <p>Announcement on Status of LMP Review under SE-40: http://www.ieso.ca/imo/web/pubs/consult/se25/se25_LMP-Analysis.pdf</p>

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009	Use of Peak Demand Load Forecast in Pre-Dispatch	<p>IESO uses hourly peak demand forecast in pre-dispatch to ensure sufficient resources (imports and domestic supply) available to meet peak demand in real-time. Result is "over-commitment" of resources for the part of the real-time hour where actual demand is less than peak forecast. This over-commitment has effect of depressing real-time prices.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group July 2004.</p> <p>IESO presented and MPWG endorsed efficiency analysis proposal at MPWG meeting July 2007.</p> <p>Addressing this issue proposed as one of the 2008 IESO MPWG performance measures.</p>	Open	<p>1. IESO conducting efficiency and reliability impact analysis.</p>	Medium	001; 010; 013; 014; 015;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS09-UseOfPkDmd.pdf</p> <p>Draft Stakeholder Engagement Plan SE-54: - pending</p> <p>Efficiency Analysis Proposal: http://www.ieso.ca/imo/web/pubs/consult/mep2/MP_WG-20070719-item3.pdf</p>

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005	Simultaneous Use of Ramping Generation Units for Energy and Operating Reserve	<p>Generating units' can increase (or decrease their output at no more than their physical ramping capability. Consequently, if a unit is increasing its output in response to an energy dispatch, the amount of additional energy that it could provide, if it was activated as operating reserve is limited by the unit's total ramping capability.</p> <p>The simultaneous use of ramping generation units for energy and operating reserve impacts both the market and the reliability of the power system.</p> <p>Issue description document developed and reviewed by Market Pricing Working Group August, 2004.</p> <p>IESO identified that modifications were made to two constraints in the market schedule that have the effect of simultaneous use of ramping for energy and operating reserve. These modifications were made at market launch when 12x ramp rate introduced. Modifications were intended to prevent the constraints defeating the purpose of the 12x ramp rate.</p> <p>IESO presented numerical examples of the impact of the modifications made to market schedule constraints at October 2007 meeting. MPWG members requested further clarification.</p>	Open	<ol style="list-style-type: none"> IESO developing further clarification of effect of the modifications made to market schedule constraints. 	High	003; 004; 013; 022; 025;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS05_SimUseRamping.pdf</p>

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004	Use of 12-times Ramp Rate in the Dispatch Unconstrained Algorithm	<p>12-times ramp rate introduced in April 2002 to address periods of large demand change.</p> <p>When determining the real-time uniform market clearing price, it is assumed that dispatchable facilities have an energy ramping capability that is 12 times higher than their actual ramping capability (i.e. 60 minutes of ramping capability in a 5-minute period).</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group June 2004.</p> <p>In consultation with stakeholders through the 2006 calendar year the IESO has put forward a proposal to modify the existing 12X RR assumption used in the market schedule to a 3X RR assumption. With this change, if approved by the OEB, the prices of the unconstrained pricing methodology would be closer to the results of constrained dispatch. (Stakeholder Engagement Plan SE-17)</p> <p>This change implemented through rule amendment MR-00331-R00 on September 12, 2007.</p> <p>IESO committed to conduct impact analysis of change to 3x ramp rate over the next 12-18 months. Analysis to include price simulations and econometric analysis.</p>	<p>Open</p> <p>1. IESO conducting analysis.</p>	IESO to conduct analysis and present results for stakeholder review and discussion.	High	002; 004; 005; 012; 016; 022; 025; 027; 031	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jun25_12xRR.pdf</p> <p>Stakeholder Engagement Plan SE-17: http://www.ieso.ca/imo/web/consult/consult_se17.asp</p> <p>MR-00331-R00: http://www.theimo.com/imoweb/pubs/mr2007/MR-00331-R00-BA.pdf</p>

Market Pricing Working Group

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001	Pre-Dispatch Price Uncertainty	<p>For many market participants, accurately predicting pre-dispatch prices is a key component in both making business decisions and managing their participation in the market. In particular, importers and exporters who offer or bid into the Ontario market are scheduled in real-time according to the hour-ahead pre-dispatch price. As well, participants in HADL and TDRP monitor the 3-hour ahead pre-dispatch prices to help determine their price-responsive actions and settlements in the market. Such participants would benefit from an understanding of how sensitive the published pre-dispatch prices are to potential changes in demand. An indicator or measure of pre-dispatch price sensitivity may serve as a valuable tool.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group August, 2004.</p> <p>IESO proposal to close presented at MPWG meeting August 2007. MPWG members feedback at that time:</p> <ul style="list-style-type: none"> Stressed need for convergence of pre-dispatch prices to real-time prices. Such convergence would promote appropriate market responses to real-time conditions. The development of a day-ahead market or HOEP forecast may diminish the importance of pre-dispatch price to real-time price convergence, but convergence of day-ahead prices and/or pre-dispatch prices to real-time prices is necessary. 	<p>Open</p> <ol style="list-style-type: none"> In light of stakeholder concerns raised, IESO proposing to place this issue on hold pending outcome of day-ahead forecast of RT HOEP initiative. This forecast may be better trigger for operational decisions than the pre-dispatch prices. 	Discussion of IESO proposal to place on hold at MPWG meeting 6 Dec 07.	Medium	009; 012; 013; 014; 015	Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS01_PreDispPrice.pdf

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

ON HOLD ISSUES

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030	Forecast of Real-Time Price	<p>Noted in Appendix C of the Market Surveillance Panel report for September 2002 – January 2003.</p> <p>This issue relates to providing market participants with price information - in pre-dispatch - that is a more accurate forecast or indication of what the HOEP is likely to be. Such forecasts might assist participants in the price discovery process.</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group in August, 2004.</p> <p>IESO proposed and MPWG agreed to place this issue on hold pending results of RT HOEP forecast work being conducted under Day-Ahead Mechanisms initiative under Stakeholder Engagement Plan SE-21. Stakeholders have identified that a day-ahead forecast of RT HOEP could promote demand response.</p>	Open	<p>1. IESO presented an econometric day-ahead model of real-time HOEP to MPWG meeting October 2007. MPWG members requested the following additional information and analysis:</p> <ol style="list-style-type: none"> a. Identify/quantify key uncertainties b. Comparison of Day-Ahead Model to Three Hour-Ahead Pre-dispatch as Predictor of RT HOEP c. Feasibility of Forecasting RT Richview Price d. Feasibility of Forecasting One-Hour Ahead Pre-Dispatch Price 	Low	001; 006; 009; 010; 012; 013; 014; 015; 024;	<p>Issue Description Paper: http://www.ieso.ca/iesoweb/pubs/consult/mep/MP_WG_2004Aug20_ISS30_RTPriceForecast.pdf</p> <p>Market Surveillance Panel Report: http://www.oeb.gov.on.ca/documents/msp/panel_msreport_imoadministered_240303.pdf</p> <p>DAM Stakeholder Engagement Plan SE-21: http://www.ieso.ca/iesoweb/consult/consult_se21.asp</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

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007	Imports and Exports Setting Price	<p>Noted early in the operation if the IESO-administered markets and raised again by Day-Ahead Market working group in early 2004.</p> <p>Issue relates to the different treatment of import offers and export bids in pre-dispatch as compared to real-time and related implications (i.e. Imports and exports cannot set price in real time).</p> <p>At the August 4th meeting of the MPWG the IESO put forth their opinion that Intertie transactions setting the real time price should not be pursued at this time. The IESO believes that only resources that are dispatchable in real time can set the real time price and that this initiative should be deferred and addressed in the context of a Day Ahead Market design.</p> <p>At the October 6th meeting of the MPWG members agreed to defer work on this initiative until the DAM design work is completed.</p>	On hold	If Ontario does not implement a DAM, the IESO has committed to re-visit this issue.	N/A (was High)	006; 008; 012; 013; 014; 024;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS07_ImpExpSetPrice.pdf</p> <p>Stakeholder Engagement Plan (SE-18): http://www.ieso.ca/imo/web/consult/consult_sel8.asp</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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036	Pricing In-Market Control Action Operating Reserve	<p>Noted at July 09 Market Pricing Working Group session.</p> <p>Issue relates to addressing the rationale, market implications, and overall appropriateness of the current prices for in-market CAOR.</p> <p>Board has approved MR-00235-R05 which allows the inclusion of an additional 400 MW of CAOR into the market at defined prices. See 'Market Data' link in Additional References for the current implementation details of this rule</p> <p>See Issue 013 (out of market operating reserve) for more information on this issue.</p>	Closed	N/A		001; 003; 005; 006; 009; 010; 012; 013; 014; 015; 024; 027; 35	<p>Issue description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue36.pdf</p> <p>MR-00235: http://www.theimo.com/imoweb/pubs/mr/mr00235-R00-R05_BA.pdf</p>
035	Impact of "Other" Out Of Market Control Actions on the Market	<p>Noted in May 2003 Pricing Team Report:.</p> <p>Issue relates to market impacts of control actions other than emergency imports or use of out of market operating reserve.</p> <p>On June 16, 2005 the Board approved MR-00296 which allows the IESO to increase or decrease demand in the market schedule when the IESO undertakes an emergency control action which affects market demand.. This will hopefully negate the occurrence of counter intuitive pricing events when out of market control actions (such as voltage reductions) are utilized.</p>	Closed	N/A		001; 003; 005; 006; 009; 010; 012; 013; 014; 015; 024; 027; 036	<p>Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue35.pdf</p> <p>MR-00296: http://www.theimo.com/imoweb/pubs/mr/MR00296-R00_BA.pdf</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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033	Rules for Determining Prices in Times of Shortage	<p>Noted in Market Surveillance Panel Report, June 14, 2004.</p> <p>Issue relates to the shortage-pricing algorithm provided for in Chapter 7, s. 8.2.2.2. of the IESO Market Rules.</p> <p>IESO proposed and MPWG agreed to close this issue at October 2007 meeting.</p>	Closed	N/A			<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue33.pdf</p>
029			Incorporated into issue #1. September, 2004.				

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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028	Compensation under Administered Pricing when Incorrect Prices have been Posted	<p>Noted in January 2004, Identified as Participant Issue #924.</p> <p>Load customers that respond to high prices that are determined to be incorrect lose significant production and income and become hesitant to respond to price signals. To increase their confidence in the price signals they would like to be compensated for losses in the event that prices are corrected.</p> <p>If a load is dispatched to consumer in real time and the prices are administered after the fact the resulting price may be higher than their bid price. Loads encountering such circumstances will be entitled to claim compensation equal to the difference between their bid price and the administered price. The amendment only applies during administrative pricing events that extend beyond 48 intervals or that result from a suspension of the market. During these times CMSC payments no longer apply. This is the equivalent treatment for generators that encounter similar situations.</p>	Closed	N/A			<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004aug06_Issue28.pdf</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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024	Reducing Frequency of Failed Intertie Transactions	<p>Noted in May 2003 Pricing Team Report.</p> <p>Three avenues to reduce failed intertie transactions:</p> <ol style="list-style-type: none"> 1. continued enforcement of compliance with Market Rules 2. discussing measures to better align inter-jurisdictional trading with neighbouring systems 3. investigating potential improvements to the bidding/offering process for exports and import <p>This issue is being addressed by other forums (Real-Time Intertie Transaction Failures integration with Day-Ahead Commitment Process).</p>	Closed	N/A		001; 006; 012; 013; 014; 015;	Issue Description paper: http://www.ieso.ca/imoweb/pubs/consult/mep/MP_WG_2004Aug20_ISS24_Intertie_Trans.pdf
021			Incorporated into issue #27. September, 2004.				
017	Settlement Adjustment and Allocation	<p>Noted in Market Pricing Working Group Meeting, August 20 2004.</p> <p>The IESO Board has approved MR-00291-R00 which changes the treatment of Settlement adjustments that occur after the final settlement statement has been issued.</p> <ul style="list-style-type: none"> • For adjustments less than \$3.5 Million , the existing process of using current period adjustments will be used for any adjustments • For Adjustments greater than or equal to \$3.5 million An adjustment period allocation will be used attempting to allocate the adjustment to the appropriate market participants during the period which instigated the adjustment. 	Closed	N/A			<p>Issue Description paper: http://www.ieso.ca/imoweb/pubs/consult/mep/MP_WG_2004Sep03_ISS17_StlmtAdj.pdf</p> <p>MR-00291: http://www.theimo.com/imoweb/pubs/mr/MR_00291-R00-R03_BA.pdf</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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015	Restriction on Changes to Dispatch Data between 4 and 2 hours ahead of Dispatch Hour	<p>Noted in May 2003 Pricing Team Report. Relates to increasing the ability of Market Participants to react to market or system changes occurring prior to the dispatch hour.</p> <p>Unrestricted changes to dispatch data up to 2 hours ahead of dispatch hour allowed Introduced on trial basis in 2002, implemented in September 2003.</p>	Closed	N/A		001; 006; 007; 009; 010; 012; 013; 014; 024;	Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_IS_S15_ChangesDisp.pdf
014	Hour(s)-Ahead Price Signal Uncertainty	<p>Noted in May 2003 Pricing Team Report. Hour-Ahead Dispatchable load initiative raised as a way to increase the amount of price-responsive load within the IESO-administered markets, particularly in view of the limited extent to which certain loads are able to respond to five-minute dispatch instructions due to physical limitations.</p> <p>Hour-Ahead Dispatchable Load Offer Guarantee that would compensate load for reducing its consumption on the basis of pre-dispatch when real-time price was such that the load would not have reduced its consumption. Allows to submit offers to reduce consumption and indicate the amount of consumption reduction that would occur at a specific price if dispatched. Implemented in May 2003. Current participation consists of ~235MW.</p>	Closed	N/A		001; 003; 004; 006; 007; 009; 010; 012; 013; 015; 023; 024;	Issue Description paper:

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

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013	Impact of Out of Market Sources of Operating Reserve on the Market	<p>Noted in May 2003 Pricing Team Report.</p> <p>A total of 800 MW of CAOR is currently in the real time market, with only 400 MW being available in pre-dispatch. The 800 MW represents the demand reduction available from 3 and 5 % voltage reductions (400 MW) and disregarding the 30 minute OR requirement.</p> <p>CAOR discussion paper sent to MPWG in January 2006</p>	Closed	N/A		001; 003; 005; 006; 009; 010; 012; 014; 015; 024; 027; 35; 36	Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS13-ImpactOutMktRes.pdf
012	Under-commitment of Available Generation	<p>Noted in May 2003 Pricing Team Report as Spare Generation On-Line. Insufficient amounts of available generation was being committed by participant, to address disturbances or changes in system conditions close to real-time, thereby requiring IESO to rely on out of market resources. Arises from risk of not recovering start-up and min generation costs.</p> <p>Implemented Generation Cost Guarantee provisions in market in August 2003. Arrangement entails guaranteed "start-up", "speed no-load", and "minimum generation" costs to eligible resources.</p>	Closed	N/A		001; 008; 009; 010; 013; 014; 015; 027;	Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Sep03_ISS12_UC_AvailGen.pdf

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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011	Comparing Treatment of Self-Scheduling Resources in Pre-Dispatch and Real-Time	<p>Issue relates to implications of differences in assumptions concerning Self Scheduling Generator (SSG) output due to inconsistencies between the schedules provided by the SSG units (used in pre-dispatch) and the forecasted output (used in the real time constrained sequence).</p> <p>Issue description paper developed and reviewed by Market Pricing Working Group August, 2004.</p> <p>IESO proposed and MPWG agreed to close this issue at October 2007 meeting.</p>	Closed	N/A			Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS11_SSG_Treatment.pdf
010	Over -Forecasting of Demand in Hours 23, 24.	<p>Noted in Market Surveillance Panel report #2</p> <p>IESO adjusted formula that selects the peak demand for these 2 hours.</p> <p>Outstanding issues will be covered under Issue #9.</p>	Closed			001; 009; 013; 014; 015;	Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jul09_ISS10-DmdOverFrcst.pdf
008	Systematic Differences Between Day-Ahead and Real-Time Markets	<p>Noted by Day-Ahead Market working group. Bids and offers in the proposed Day-Ahead Market design could be submitted in multiple parts, consisting of "start-up", minimum generation", & "incremental energy" components. Current real-time market does not provide for such multi-part bids and offers.</p> <p>Some concern regarding the ability of participants to bid freely in either market remains. However this is a broader participation issue that cannot be addressed by the MPWG. Any effect on this issue due to Bill 100 legislation or related regulations will be monitored under issue 26 (Integration of Competitive and Regulated Wholesale Prices).</p>	Closed	"2-Pager" issue document to be updated in view of MPWG discussion of October 20.		007; 005; 012;	Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MG_WG_2004Sep03_ISS08_SystArbitOpp.pdf

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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006	Effects of Emergency Purchases on the Market	<p>Noted in May 2004 at 1st Market Pricing working group meeting.</p> <p>On June 16, 2005 the Board approved MR-00296 allowing the IESO to not reduce the amount of non-dispatchable load when Emergency Energy purchases have been performed. Previously, IESO procedures stated that when emergency energy was purchased the equivalent amount of non-dispatchable load would be removed from the price setting mechanism, thereby causing the price to fall. This led to a counter intuitive pricing signal as emergency energy is typically purchased during periods of tight supply-demand balance when it would be expected that prices rise, not fall. The market rule amendment allows the IESO to modify the procedure to no longer remove the demand from the price setting mechanism and avoiding the potential counter intuitive price signal.</p>	Closed	N/A		001; 003; 005; 007; 009; 013; 014; 015; 024; 027;	<p>Issue Description paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004jun25_EmergCA.pdf</p> <p>MR-00296: http://www.theimo.com/imoweb/pubs/mr/MR00296-R00_BA.pdf</p>
003	Information to Explain Dispatch Optimization Process	<p>Noted in May 2004 at 1st Market Pricing working group stakeholder meeting.</p> <p>IESO has issued a "Quick Take" QT20 – Joint Optimization of Energy and Operating Reserve.</p>	Closed	N/A		004; 005; 013; 017; 024;	<p>Issue Description Paper: Quick take QT20: http://www.ieso.ca/imo/web/pubs/training/QT20_JointOptimization.pdf</p>

Market Pricing Working Group

TRACKING DOCUMENT OF PRICING ISSUES

CLOSED ISSUES

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002	Publishing Nodal Price Data	<p>Noted in December 2003 as part of Day-Ahead Market working group historical nodal pricing analysis.</p> <p>Representative nodal prices for 10 Ontario zones and generator weighted average prices are now available on "Market Summaries" section of IESO Web.</p> <p>The Intertie Traders Sub-Committee has arranged for the publication of pre-dispatch intertie nodal prices.</p>	Closed	N/A		004; 016; 018; 020; 022; 023; 27;	<p>Issue Description Paper: http://www.ieso.ca/imo/web/pubs/consult/mep/MP_WG_2004Aug20_ISS02_NodalPriceData.pdf</p>