



Update on Renewed Market Performance and Common Questions

NOVEMBER 26, 2025

Welcome and Introduction

- Today's session will be recorded and available for viewing online
- The recording and presentation for this engagement can be found on the [Renewed Market Operations page](#)

Participation

- For questions and comments click on the “raise hand” icon (hand symbol) at the top of the application window. This will indicate to the host you would like to speak.
- To unmute audio, click on the microphone icon at the top of the application window.
- Audio should be muted when not asking a question.

Territory Acknowledgement

The IESO acknowledges the land we are delivering today's webinar from is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnawbe, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples. We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit First Nation.

As we have attendees from across Ontario, the IESO would also like to acknowledge all of the traditional territories across the province, which includes those of the Algonquin, Anishnawbe, Cree, Oji-Cree, Huron-Wendat, Haudenosaunee and Métis peoples.

Agenda

Today's engagement will cover the following topics:

- Transitioning to steady state
- Observations on market performance
- Common questions and answers
- Upcoming Engagements



Transition to Steady State for the Renewed Market

Transition to Steady State

- After six months of operating in the renewed market the IESO and participants are becoming comfortable with the new processes and tools while continuing to build an understanding of the new market dynamics that shift as system conditions change with each season
- No new high priority defects have arisen, and good progress is being made on the backlog of defects identified after the launch, all of which have workarounds in place
- The renewed market continues to produce intuitive prices that are reflective of system conditions and generate efficient schedules for reliable operations

Transition - Settlements and Invoicing 1/4

- IESO has made improvements to month-end settlement processing times and is working on further improvements to system performance
- Month-end statements and invoices issued in October and November were delivered ahead of the IESO's goal of posting by 17:00
- A [Settlements Notifications](#) webpage is available on the IESO website to help participants stay informed of key settlement updates (enable RSS Feeds in Microsoft Outlook to directly receive an email when an update is posted)

Transition - Settlements and Invoicing 2/4

- ~30% of resolved disagreements have been related to defects that are now corrected, and IESO has confirmed the calculation was correct for the remaining resolved disagreements
- IESO continues to work through the backlog of disagreements, some related to defect fixes that are pending
- Communications are being sent to advise participants if there will be a delay in correcting settlements while IESO is waiting for a defect to be fixed

Transition - Settlements and Invoicing 3/4

IESO notified participants that resettlement statements posted on November 17 and December 12 may include adjustments to Real Time (RT) Make-Whole Payment (MWP) charge types to address Economic Operating Point (EOP) defects that have been resolved:

1. Lost Cost EOPs for non-quick start resources were not considering the Minimum Loading Point constraint causing RT EOP to be underestimated in certain scenarios, triggering unwarranted RT Lost Cost MWPs. The EOP must be greater than or equal to the MLP if the resource's energy schedule is at or above MLP.
2. Incorrect Operating Reserve EOPs were being calculated for steam turbine resources in a pseudo unit. The RT Lost Opportunity Cost EOPs for steam turbine resources were overestimated for Operating Reserve, triggering unwarranted RT Lost Opportunity Cost MWPs.
3. The RT Lost Cost EOP logic considered a minimum reliability constraint when it should not have, causing RT Lost Cost MWP to be underpaid.

Transition - Settlements and Invoicing 4/4

A defect with Settlement Mitigation for Non-Quick Start (NQS) resources has been identified:

- In some scenarios when an NQS resource is operating in Combined Cycle mode the after-the-fact settlement mitigation is calculated using the Single Cycle mode Reference Level or vice versa
- An interim workaround was implemented as of the November 1 trade date that should address this defect until it can be fixed; participants may see a correction applied on the final settlement statement if the resource was operating in single cycle mode
- The defect is expected to be fixed in Q1 2026 after which settlements will be corrected for instances settlement mitigation was applied using the wrong reference level

Transition – Market Systems 1/2

- The IESO posted provisional [Potential Constrained Areas](#) (PCA) in August based on the historical constraint data from the first three months of operation of the renewed market
- The provisional PCAs are available to provide participants with an early indication of where constrained areas may be located once these are in effect
- Official PCA designations will be published in early December and will be in effect for Dynamic Constrained Area (DCA) designation starting mid-January 2026
- There will be no Narrow Constrained Areas (NCA) in this designation; IESO will reevaluate designations after one year of Renewed Market data is gathered

Transition – Market Systems 2/2

- No new high priority defects have been identified over the last quarter
- The interim Pseudo-Unit resource workarounds, which are explained in a Reference Card available here: [Training Materials](#), are still in effect as the IESO continues to determine a feasible permanent solution
- The defect causing real-time forecast demand fluctuations was fixed as of November 14; an overview of the issue and impacts is provided in the following slides

Defect causing demand fluctuations – Overview

- Participants have noticed 5-minute interval Ontario Demand values published in real-time in the IESO's Realtime Totals Report change by hundreds of megawatts for only a few intervals.
- The Realtime Totals Report provides an approximate calculation of Ontario demand in near real-time using several variables obtained through market dispatches and/or real-time system conditions. Given the unpredictable nature of some of these variables (e.g. disruptions in supply, sudden increased heating/cooling demand, neighboring system conditions, etc.) there are changes in demand from one interval to the next. Swings of several hundred megawatts for only a few intervals have historically been quite rare.

Defect causing demand fluctuations - Overview

- The IESO identified a defect in the Ontario Demand calculation that causes 5-minute interval Ontario Demand values reported in real-time to be overstated when Hourly Demand Response (HDR) resources are on standby.
- An interim, manual workaround was implemented to mitigate this defect until a permanent fix was deployed.
- The workaround was adjusting forecast demand in the impacted intervals but in some cases the adjustment has been early or late being added or removed which can result in an increase or decrease of several hundred megawatts in those few intervals.

Defect causing demand fluctuations - Overview

This defect absent the workaround could have two potential types of impacts:

1. posting the incorrect peak demand hour for the ICI program if occurring on a potential peak day
2. determining incorrect prices for impacted intervals

Defect causing demand fluctuations – Overview

- The IESO reviewed the peak days to identify intervals where the workaround did not mitigate the defect in some intervals and recalculated the hourly peak values (average of the 5-minute demand values) to confirm that the relative order of the posted hourly peak demands was not affected.
- The review confirmed that the top 10 peaks posted on the [Peak Tracker](#) webpage are correct.

Defect causing demand fluctuations - Overview

- The intervals where the workaround did not mitigate the defect are assessed as part of the IESO's normal ex-post review of market results.
- IESO identified 38 intervals where the incorrect input had an impact, requiring prices to be administered. This is done within four business days of the trade date as per the market rules for administrative pricing.
- Participants are advised when administered prices are published through an RSS feed available on the IESO's website: [Administrative Pricing Notifications](#).

Defect causing demand fluctuations – Overview

Prices were administered due to this defect in these intervals

month	day	hour	intervals corrected	# of intervals
July	7	13	3,4,5	3
		14	2	1
	9	13	1,2,4,5,6	5
		14	2	1
		21	12	1
	10	22	1,2	2
		21	11,12	2
September	15	13	1,2,3	3
	30	13	1,2,3,4,5	5
	1	13	1,2,3,4	4
October	9	13	3,4,5,6,7,8,9,10,11,12	10
		14	1	1



Observations on Market Performance

Market Performance

The renewed market continues to produce intuitive prices that are reflective of system conditions and generate efficient schedules for reliable operations.

After the first six months, pricing outcomes have aligned with underlying supply and demand fundamentals.

Spring: Abundant supply and seasonably low demand resulted in lower and occasional negative prices. Freshet impacted ability of some resources to provide operating reserve.

Summer: High electricity needs from sustained hot weather led to high prices as more expensive resources and imports were required. Prices were more volatile as supply was operating near capacity and very sensitive to small changes.

Fall: Lower demand levels brought prices back to moderate levels. Occasional price volatility occurred as planned resource outages reduced available supply ahead of winter.

Intuitive Price Formation

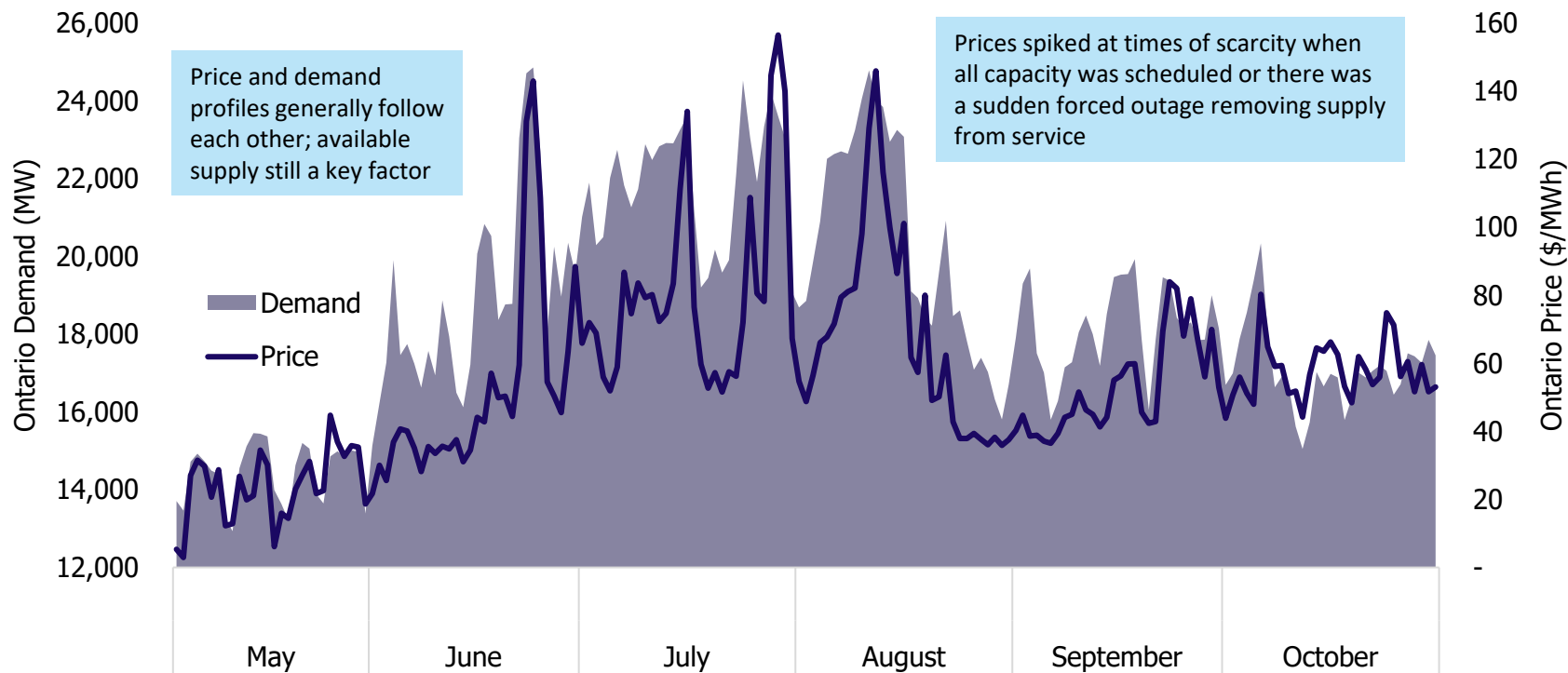
Real-time and day-ahead prices converged when actual conditions matched forecasts, and varied accordingly to deviations in real-time. Real-time price spikes corresponded to forced outages and unanticipated increases to load during tight supply conditions.

Locational marginal prices (LMPs) are similar when there is no congestion on the system. Greater divergence in LMPs indicated periods when transmission lines operated near or at capacity and reflected the relative costs of congestion to meet locational needs.

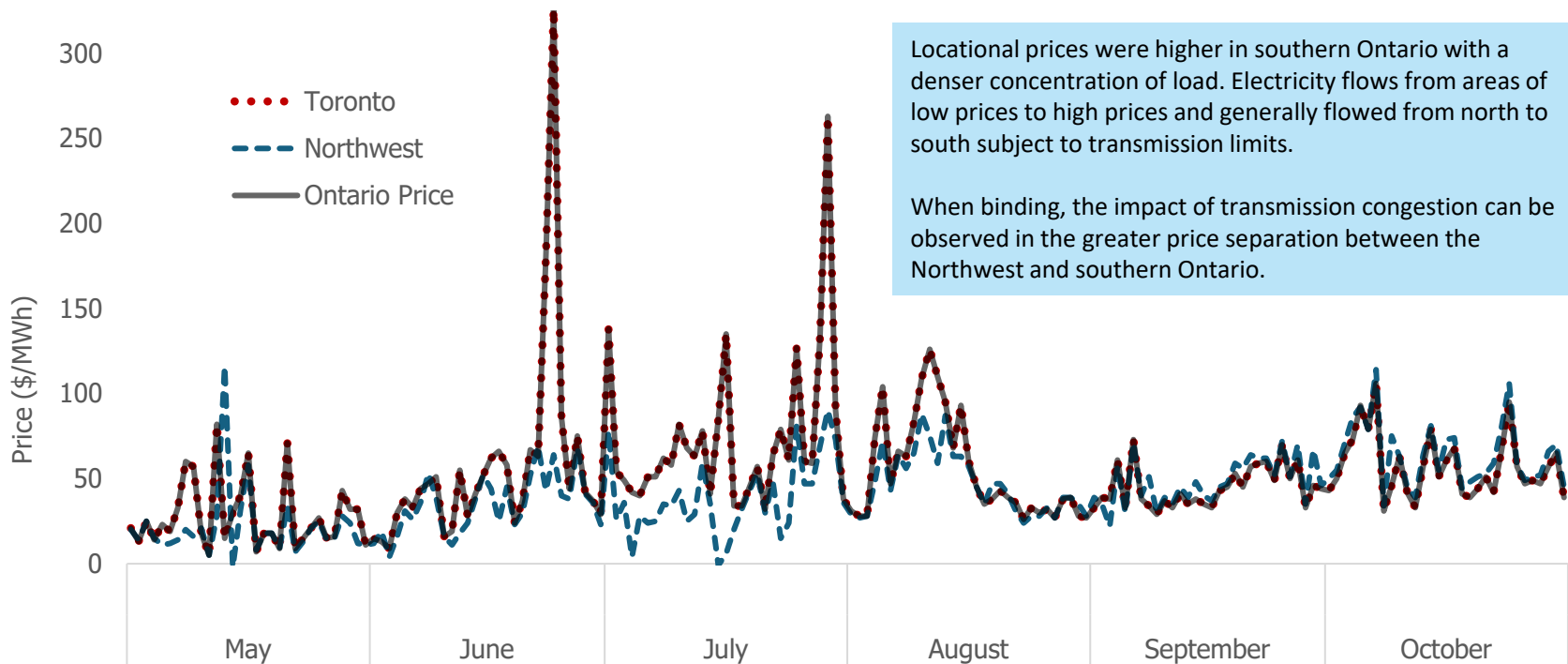
In addition to higher overall prices, during the summer there was greater price separation between day-ahead and real-time markets, and between locational marginal prices. This is to be expected as the cost of congestion/losses and the impact of DA/RT differences is larger when the system is under greatest stress.

As system conditions eased during the Fall, these prices once again began to converge.

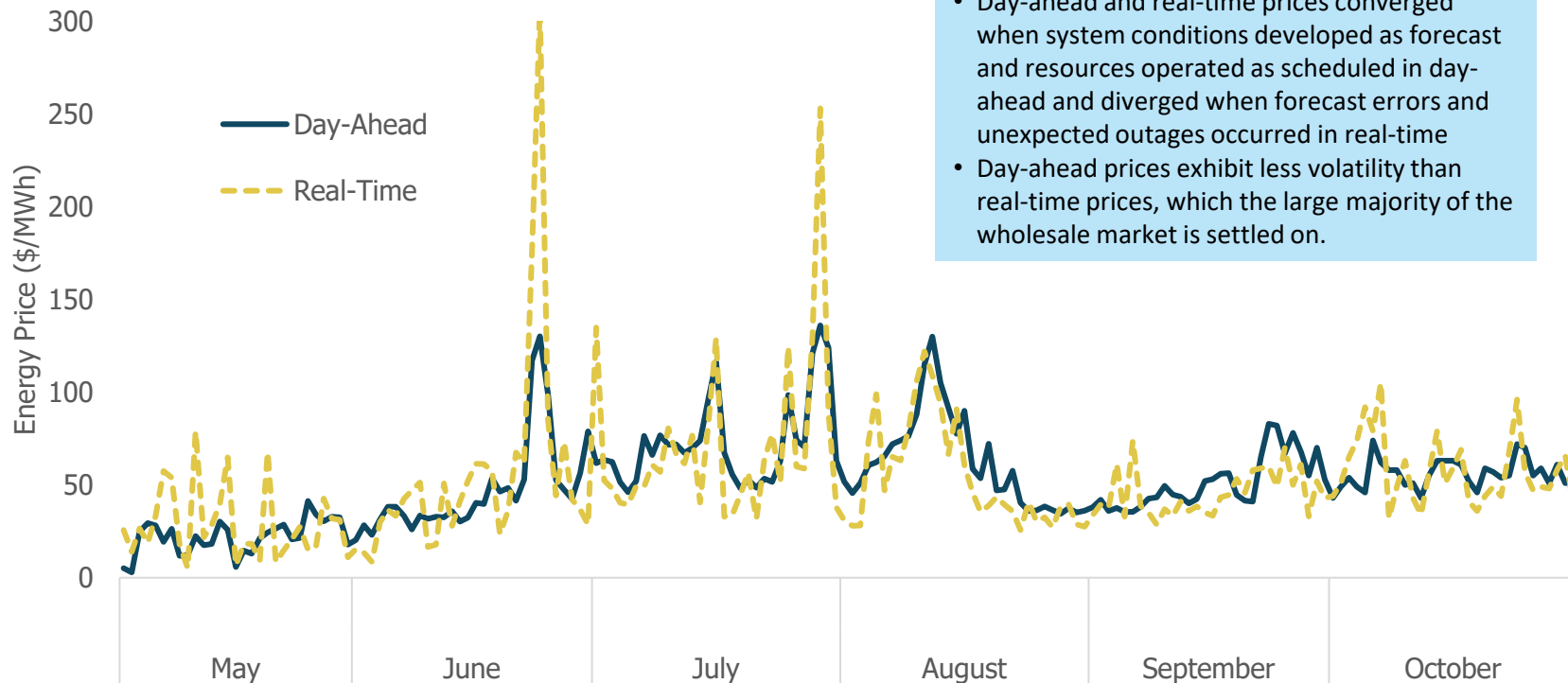
Prices Clearly Aligned With System Conditions



Price Separation Corresponding to Locational Conditions



Day-Ahead and Real-Time Prices



- Day-ahead and real-time prices converged when system conditions developed as forecast and resources operated as scheduled in day-ahead and diverged when forecast errors and unexpected outages occurred in real-time
- Day-ahead prices exhibit less volatility than real-time prices, which the large majority of the wholesale market is settled on.

Ongoing Performance Monitoring

The IESO continues to monitor market outcomes through its third season under different system conditions. Winter operations will present yet another opportunity to assess market performance under the renewed market design, with different operating challenges.

Initial observations indicate proper functioning; on-going monitoring and feedback from participants will inform the scope of potential design improvements, if necessary.

For example, the IESO identified necessary adjustments to how Real-time Make Whole Payments are calculated to avoid unwarranted payments that can occur under very specific limited circumstances. More information on the related stakeholder engagement is available here: [**Adjustments to Real-Time Make-Whole Payments**](#).



Common Questions

Common Questions

Q: My offer price was uneconomic when compared to the price. Why was it scheduled?.

A: LMP prices do not tell the whole story and cannot always be used to determine if an offer/bid should or should not have cleared the market at their submitted prices.

The IESO implemented scheduling processes based on multi-interval optimization (MIO) as the most efficient and cost-effective way to maximize the gains from trade, respect resource operating restrictions and to maintain the security of the IESO-controlled grid. MIO looks across its entire look-ahead period and finds the most economical overall solution. For pricing, the IESO incorporated the fundamental principle that the marginal price at each location should be set by an offer or bid from a resource that can serve the next increment of demand at that location during the interval being priced.

Suppliers can meet that demand when they can be scheduled without restriction due to system or operational constraints. Operational constraints can include minimum/maximum output, ability to ramp up/down and safety or regulatory related constraints.

Resources not able to meet incremental demand in the current interval are excluded from price-setting. This has the effect of occasionally creating mismatches between settlement prices and resource schedules, especially for those with transactions priced near the margin. As a result, scheduled resources offered or bid near the margin can appear uneconomic when compared to the settlement price. Dispatchable Ontario-based resources will receive a make-whole payment (MWP) if they are affected, as will intertie transactions in most cases. A Guide to IESO Market Calculation Engines that provides more information on the optimization processes will be available by the end of November. IESO can review specific results to confirm that a transaction was scheduled correctly by the algorithm.

Common Questions

Q: Some public and confidential reports are missing data in them. Is this an error?

A: The IESO would like to thank market participants for their cooperation in helping us to identify missing data or missing reports. This has led to an early identification of tool defects that were uncovered after the launch of the renewed market. If participants observe missing data or reports, these issues should continue to be reported to IESO Customer Relations.

The IESO also observed an increased number of enquiries related to why resources or data may be missing, as well as clarification on what specific values or fields mean in these reports. Participants are encouraged to use the following materials to help them understand the processes and inputs that drive the outputs of these files:

- report help files,
- various Market Manuals under [Renewed Market Rules & Manuals Library](#) (particularly MM4: Market Operations and MM 14: Market Power Mitigation), and
- [Training Materials](#) under the IESO Marketplace Training.

If further clarification is required, participants are also encouraged to submit their questions to IESO Customer Relations.

Common Questions

Q: Participants have been requesting more information on registering and participating as a Price Responsive Load or a Virtual Trader.

A: Below is a list of relevant training materials that are available on the IESO website for new participation and resource types:

- [Price Responsive Loads](#)
- [Introduction to Virtual Trading](#)
- [MRP - eLearning Modules](#) for Virtual Transaction and Price Responsive Load
- [Guide to Submitting New Registration Parameters and Forms for Online IESO](#) (Details PRL registration)
- [PRL Quick Take eLearning Course](#)
- [Prudential Training Guide](#)

IESO's instructor-led courses:

- [Instructor-Led Courses](#) new dates for the Intro to Markets, Settlement Process and Invoice Reconciliation and Interjurisdictional Trading will be announced soon



Upcoming Engagements

Upcoming Engagements

- The IESO will continue to offer quarterly engagement webinars to provide stakeholders ongoing insight into performance of the renewed market over the first year of operation
- IESO is seeking qualified candidates to join the Renewed Market Advisory Forum to discuss opportunities for enhancements to the market. More information will be posted on the IESO website on November 27 and expressions of interest should be submitted by December 19.
- Feedback from the November 21 engagement session on the Adjustments to Make-Whole Payments is being requested by December 1. More information is available here: [Adjustments to Real-Time Make-Whole Payments](#)

For More Information

- The recording and presentation for this engagement can be found on the [Renewed Market Operations page](#)
- If you have any questions on the information shared today, please contact IESOCustomerRelations@ieso.ca

Thank You

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