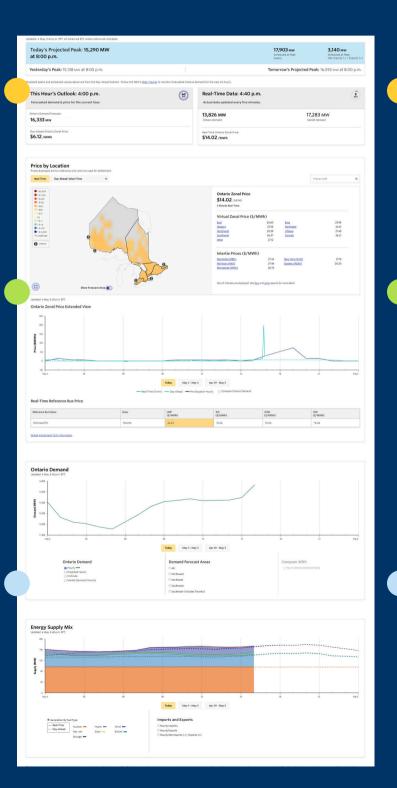


A New Way of Looking at the IESO Market



A renewed market requires a refreshed approach to displaying market information. The Market Data page provides a snapshot of the day-ahead and real-time markets showing how they work together to more accurately reflect the cost to provide electricity throughout the province.

OVERVIEW

Current market activity from hour to hour. Contrast demand forecasts and the prices from the day-ahead market, against real-time outcomes. Compare demand peaks, looking one day back and one day forward.

PRICE

With almost 1,000 local prices in the renewed market, follow price trends at a glance. Maps, charts and data can be configured to show the results for any interval or hour within the current market cycle.

DEMAND & SUPPLY

Track the four new regional demand and day-ahead supply mix forecasts now added to the IESO's data charts.

OVERVIEW

Take a quick look at demand peaks, Ontario Zonal Prices (OZPs) and capacity.

Updated: 4 May, 5:40 p.m. EPT. All times are EST unless otherwise indicated. Today's Projected Peak: 15,290 MW at 8:00 p.m.	b	17,903 mw Scheduled at Peak: Supply Net imports (-) / Exports (-)		
Yesterday's Peak: 15,138 mw at 8:00 p.m.	e	e Tomorrow's Projected Peak: 16,592 MW at 8:00 p.m.		
Projected peaks and scheduled values above are from the Day-Ahead Market. Follow the IESO's Peak	Tracker to monitor forecasted Ontario demand for the next 24 hours.			
This Hour's Outlook: 4:00 p.m. Forecasted demand & price for the current hour.	eeg g Real-Time Data: 4:40 p.m. Actual data updated every five minutes.	5 mm		
Ontario Demand Forecast: 16,333 MW	13,826 MW Ontario Demand	17,283 MW Market Demand		
Day-Ahead Ontario Zonal Price: \$6.12 /MWh	Real-Time Ontario Zonal Price: \$14.02 /MWh			



Today's Projected Peak:

The forecast Ontario Demand peak used in the day-ahead market. It is posted every evening at midnight.

b Scheduled at Peak — Supply:

Capacity scheduled in the day-ahead market, providing an indication of overall supply adequacy at that day's projected peak. As a day-ahead value, it won't exactly match real-time system needs. Differences between forecast and actual demand are managed in the real-time market.

c Scheduled at Peak — Net Exports and Imports:

Trade scheduled on the interties between Ontario and neighbouring jurisdictions at today's peak. A positive value shows Ontario is a net exporter, while a negative value shows net imports.

d Yesterday's Peak:

Actual energy consumed on the system at peak.

e Tomorrow's Projected Peak:

The forecast peak used to settle the day-ahead market. This value is greyed out until it is available each afternoon.



This Hour's Outlook:

Ontario demand and price, set in yesterday's day-ahead market, for the current hour. Posted at the beginning of each hour.

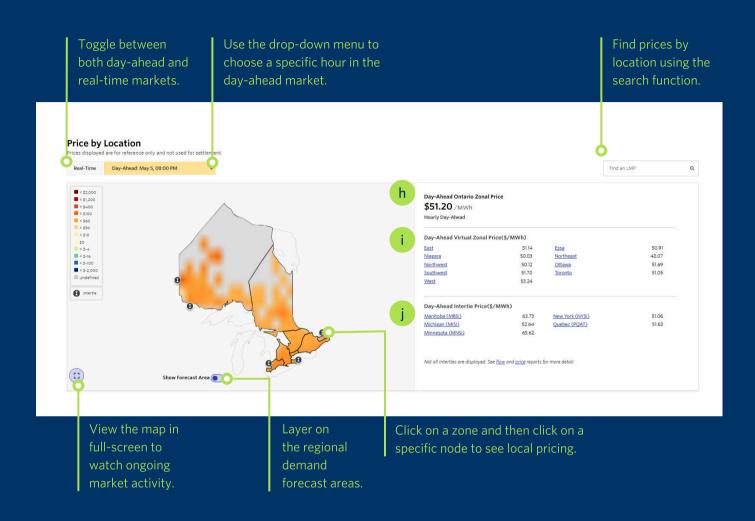


Real-Time Data:

Five-minute updates of actual Ontario and Market Demand (Ontario Demand plus exports) as well as the real-time OZP. Published after each five-minute interval.

PRICE

View prices within the day ahead and real time markets. Choose a time and data will automatically refresh the maps and charts.





Ontario Zonal Price:

The hourly load-weighted average of the locational marginal prices (LMPs) for non-dispatchable loads.



Virtual Zonal Price:

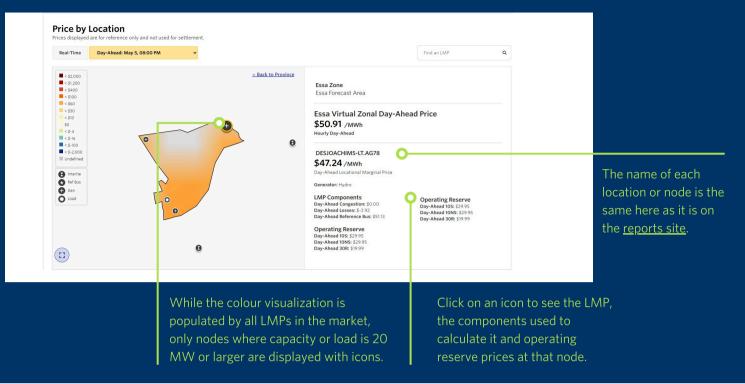
Load-weighted average of the LMPs at all non-dispatchable load points within each zone. Virtual zonal prices are used to settle virtual bids and offers within each zone.



Intertie Prices:

Prices from the largest, or the only connection if there is just one, from each jurisdiction. Prices for all interties can be found in the <u>reports site</u>.

LOCATIONAL MARGINAL PRICES



INTERTIE PRICES AND FLOWS

Arrows indicate which jurisdiction is the net exporter. If the arrow points away from the province, it indicates that Ontario is a net exporter at that interconnection.

Real-Time Day-Ahead: / lay 5, 08	:00 PM 🗸		Find an LMP Q	
	-Back to Provin	Northwest Zone Northwest Forecast Area Northwest Virtual Zonal Day \$50.12 /MWh Hourly Day-Abead Manitoba (MBSI) \$63,74,70,700 Day-Ahead 108:55 Day-Ahead 108:55 Day-Ahead 108:513 Day-Ahead Interchange Scheduling L		

Note that where there are more than one interconnection with a neighbouring jurisdiction, prices are only shown for the largest intertie. For scheduled flows, data is shown for the largest intertie with Manitoba and Quebec and aggregated data for each U.S. state.

PRICE

Compare prices against demand over various time spans.



legend as the map to show price differences.

Real-Time Reference Bus Prices:

Used in the calculation of LMPs. The reference bus price, the marginal cost of energy at the reference bus, forms the basis for all prices on the system.



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Predispatch OZP:

An hourly value generated through the real-time market that provides an indication of the balancing needs of the system.

DEMAND & ENERGY SUPPLY

Compare forecast and actual demand for Ontario, the market and the four new regional demand zones. See how Ontario's generators have supplied the market over the past week.



m Ontario Demand:

Hourly projected, hourly actual and five-minute actual demand updated as new data is available. Market Demand is also available as a real-time hourly value.

n Energy Supply Mix:

Breakdown of generator output by fuel type for each hour – using the same timescale options as the pricing graph. The supply mix graph now also features day-ahead scheduled output.

QUICK TIPS:

Watch the clock:

With the introduction of the day-ahead market, market data is posted at different points in time. Day-ahead prices are hourly values posted in advance. Real-time prices are posted every five minutes after the fact.

Not all data is on the market data page:

Given the sheer volume of data produced by the renewed market, the Market Data page only complements the data available on the reports site. Visit the <u>Data Directory</u> as a guide to find links to all market data – including the almost 1,000 LMPs.

Use the Peak Tracker to follow the demand forecast:

The Market Data page shows the demand forecasts used to settle the day-ahead market. The <u>IESO Peak Tracker</u> and <u>Power Data</u> page will continue to show changes in the IESO's Control Room demand forecast in response to changing system conditions.



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WHO PAYS WHICH PRICE?

In the IESO administered market, different prices apply to different types of market participants.

Locational Marginal Price:

Dispatchable generators, dispatchable loads, selfscheduling and intermittent suppliers and price-responsive loads.

The Ontario Price:

Non-dispatchable loads (e.g., Local Distribution Companies).

Business customers that pay the wholesale price through their local distribution company also pay the Ontario Price.

Intertie Price:

Exports from Ontario to neighbouring jurisdictions and Imports to Ontario from neighbouring jurisdictions.

Virtual Zone Price:

Virtual transactions are settled on price differences between the day-ahead and real-time markets.

QUESTIONS?

Contact the IESO at <u>customer.relations@ieso.ca</u>