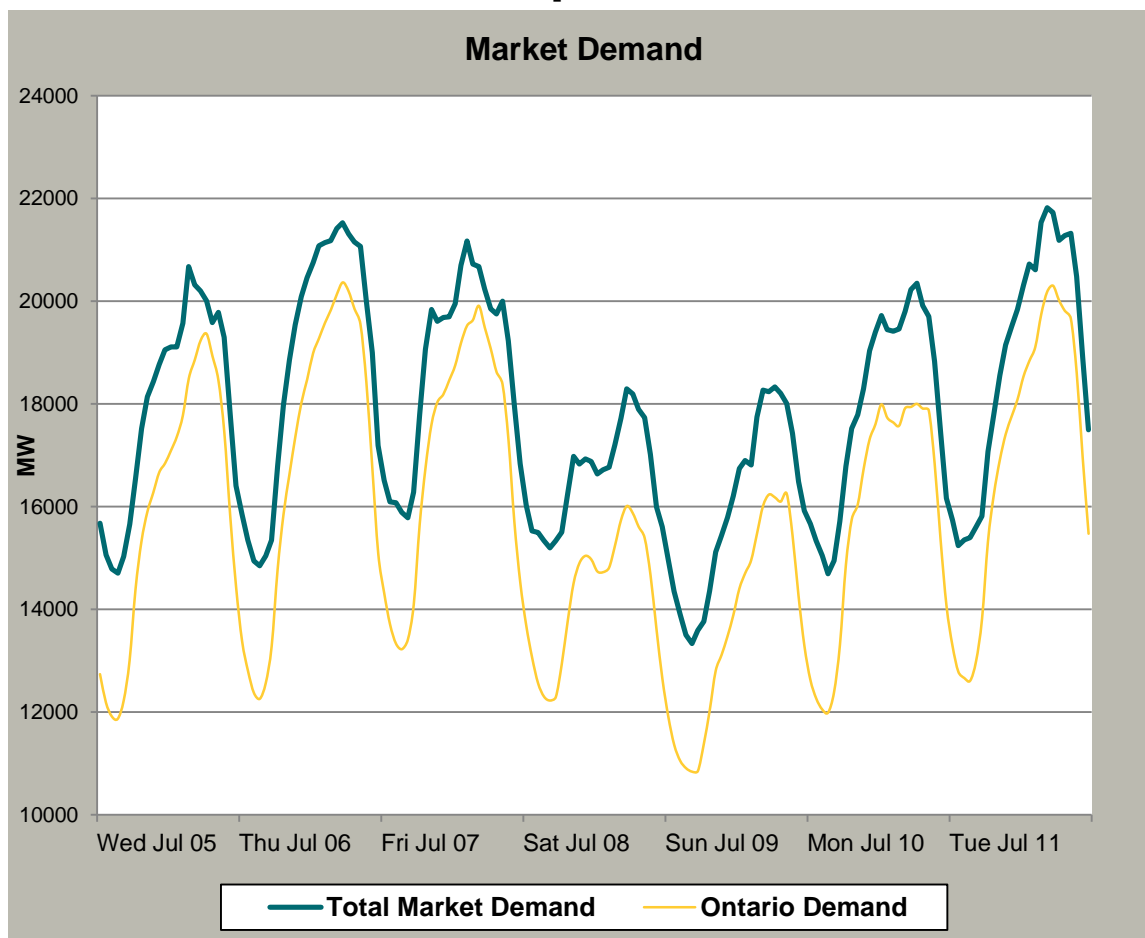


# Weekly Market Report

July 5, 2017 - July 11, 2017

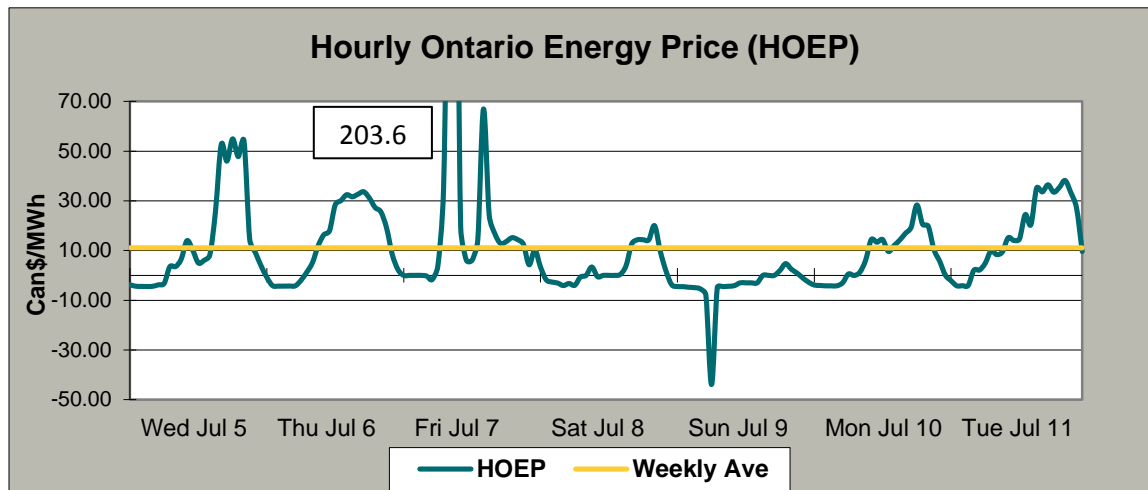
This report provides a summary of key market data from the IESO-administered markets. It is intended to provide a quick reference for all market stakeholders. It is composed of two sections: Section 1 provides graphical summaries of key market data, and will be repeated in each report. In all cases, the data used to produce all graphs in this report, are available for download from the [Market Summaries](#) page of the IESO Web site. Any data used in this report is provided for information purposes only, and should not be used for settlement purposes. Section 2 provides additional comments on any specific events, which occurred during the reporting week. Finally, an Appendix is included, which contains a description of all terms used in this report.

## Section 1: Market Data Graphs



	<b><u>Total Market Demand (MW)</u></b>	<b><u>Ontario Demand (MW)</u></b>
Average hourly values for the week:	17,840	15,775
Maximum hourly values for the week:	21,823	20,366
Minimum hourly values for the week:	13,335	10,839

For a description of Total Market Demand and Ontario Demand, please see Section 1 of the [Appendix](#).



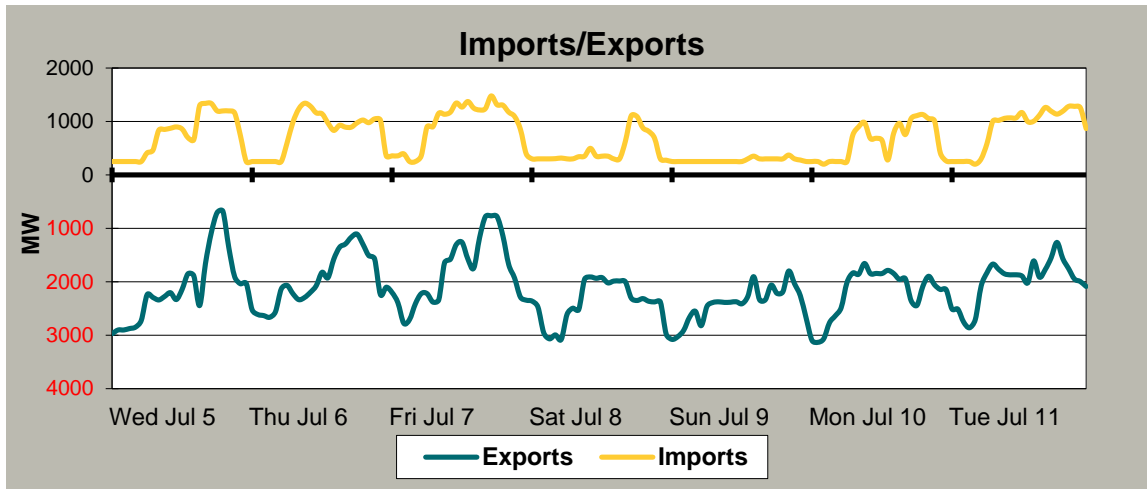
Hourly Ontario Energy Price \$/MWh			
	Weekly	On-Peak	Off-Peak
Average	11.09	24.27	-0.89
Maximum	203.69	203.69	20.01
Minimum	-43.93	-0.02	-43.93

Weekly Weighted Average based on Ontario Demand: \$13.41 /MWh or 1.34 ¢/kWh

Weighted Average based on Ontario Demand since Jan 1, 2017: \$14.93 /MWh or 1.49 ¢/kWh

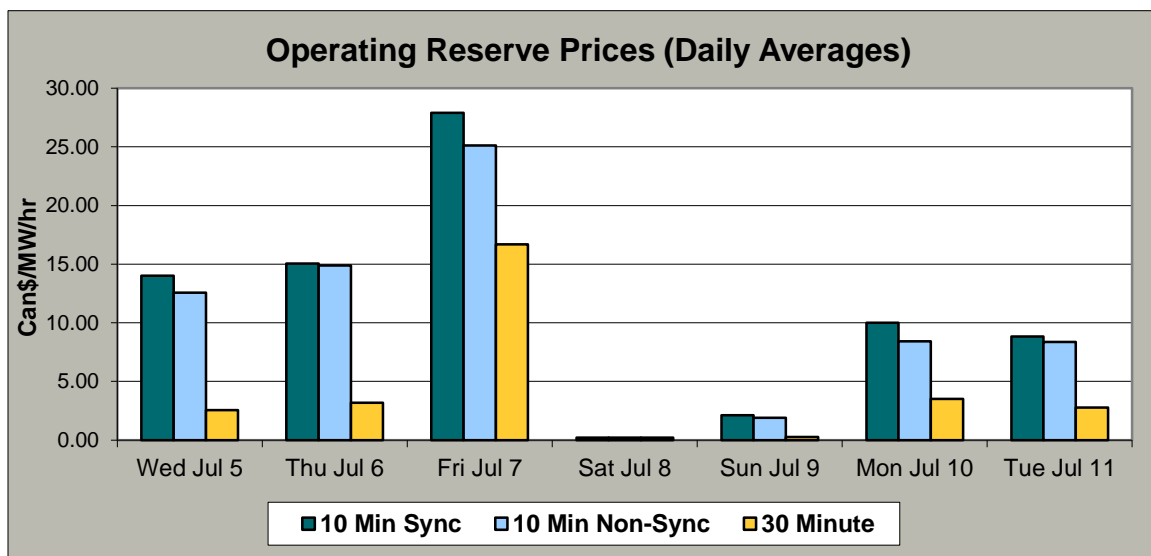
For a description of Hourly Ontario Energy Price, please see Section 2 of the attached [Appendix](#).

NOTE: At the request of market participants, the IESO has shifted the On Peak definition by one hour (from 7 to 22, to 8 to 23) as of December 2004, to better reflect the industry practice.



Average export schedule for the week: 2,127 MW  
 Average import schedule for the week: 674 MW  
 Average net intertie schedule: 1,453 MW net export

For a description of Imports/Exports, please see Section 3 of the attached [Appendix](#).



Average Operating Reserve Prices for the week were:  
 10 minute synchronized reserve: \$11.16 /MWh  
 10 minute non-synchronized reserve: \$10.21 /MWh  
 30 minute reserve: \$4.17 /MWh

For a description of Operating Reserve, please see Section 4 of the [Appendix](#).

## Section 2: Comments about the Week

The negative and zero MCPs are listed below:

Date	Hour	MCP											
		1	2	3	4	5	6	7	8	9	10	11	12
2017/07/05	1	-0.02	-4.00	-4.00	-4.00	-4.10	-4.10	-4.10	-4.10	-4.10	-4.30	-4.30	-4.30
	2	-4.30	-4.30	-4.30	-4.30	-4.30	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40
	3	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.50	-4.50	-4.50	-4.50
	4	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.40	-4.40	-4.50	-4.40	-4.40
	5	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.40	-4.30
	6	-4.40	-4.40	-4.30	-4.30	-4.30	-4.30	-4.10	-4.10	-4.00	-4.00	-3.00	-0.25
	7	-4.50	-4.30	-4.10	-4.10	-4.10	-4.00	-4.00	-4.00	-3.00	-3.00	0.00	0.00
	8	-3.00	0.00	0.00	0.00								
	9	-3.00	0.00	0.00									
	22												0.00
	23											0.00	-0.02
	24									-3.00	-4.00	-4.00	-4.00
2017/07/06	1				0.00	0.00	-3.00	-3.00	-4.00	-4.00	-4.00	-4.10	-4.10
	2	-4.00	-4.10	-4.00	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.10	-4.30	-4.30
	3	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.40	-4.40
	4	-4.30	-4.30	-4.30	-4.30	-4.30	-4.40	-4.40	-4.30	-4.30	-4.30	-4.30	-4.30
	5	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.30	-4.10
	6	-4.70	-4.40	-4.40	-4.30	-4.30	-4.10	-4.10	-4.10	-4.10	-4.00	-4.00	-4.00
	7	-4.30	-4.10	-4.00	-4.00	-3.00	-3.00	-3.00	-3.00	0.00	0.00	0.00	
	8	-3.00	-3.00	0.00	0.00	0.00	0.00	0.00	0.00				
	9	0.00											
	23											0.00	0.00
	24						0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2017/07/07	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02
3		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.02
4		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5		-3.00	-0.02	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6		-4.30	-4.00	-3.00	-3.00	-3.00	-3.00	0.00	0.00	0.00	0.00	0.00	0.00
7		-3.00	-0.10	0.00	0.00	0.00							
22													0.00
23								0.00	0.00	0.00	0.00	0.00	0.00
24													0.00

2017/07/08	1									-3.00	-3.00	-3.00	-3.00	-3.00	
	2	-3.00	0.00	-3.00	-3.00	-3.00	-3.00	0.00	0.00	-0.25	-0.10	-3.00	-3.00		
	3	0.00	-0.02	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-4.00	-4.00		
	4	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-4.00	-3.00		
	5	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.30	-4.30	-4.30	-4.30		
	6	-4.00	-4.00	-4.00	-4.00	-4.00	-3.00	-4.00	-3.00	-3.00	-3.00	-3.00	-3.00	-0.10	
	7	-4.50	-4.30	-4.30	-4.30	-4.30	-4.30	-4.00	-4.00	-4.00	-4.00	-3.00	-3.00		
	8	-4.30	-4.00	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	10	0.00		0.00								0.00		0.00	
	11	0.00	-3.00	-3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.25	
	12	0.00	0.00	0.00	0.00	0.00	0.00	-0.02	0.00	0.00	0.00	0.00	0.00	-0.02	
	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	16	0.00	0.00	0.00	0.00	0.00	0.00								
	22												0.00	-0.02	
	23					0.00	0.00	0.00	-3.00	-3.00	-3.00	-4.00	-4.00		
	24	-0.25	-3.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.40	-4.30	-4.30	-4.40	-4.40		
	2017/07/09	1	-4.40	-4.40	-4.40	-4.40	-4.40	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.70	
		2	-4.40	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.70	-4.70	
		3	-4.70	-4.70	-4.80	-4.80	-4.70	-4.80	-4.80	-4.80	-4.80	-4.80	-4.80	-4.80	
		4	-5.00	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-5.00	-5.00	-5.00	
		5	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-10.00	-5.00
6		-15.00	-15.00	-5.00	-10.00	-15.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-4.90	
7		-129.10	-129.00	-50.00	-129.00	-50.00	-10.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	
8		-4.90	-4.90	-4.90	-4.90	-4.90	-4.90	-4.80	-4.80	-4.80	-4.80	-4.80	-4.80	-4.70	
9		-4.70	-4.70	-4.70	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	-4.50	
10		-4.50	-4.40	-4.40	-4.40	-4.40	-4.40	-4.30	-4.40	-4.40	-4.40	-4.40	-4.30	-4.30	
11		-4.30	-4.30	-4.30	-4.30	-4.30	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	
12		-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	
13		-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	
14		-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	
15		-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	
16		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
18		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
19		0.00	0.00	0.00	0.00	0.00	0.00	0.00							
20														0.00	
21		0.00							0.00	0.00	0.00	0.00	0.00	0.00	
22				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
23		0.00	0.00	0.00	0.00	0.00	-0.25	-0.25	-0.10	-3.00	-3.00	-3.00	-3.00	-3.00	
24		0.00	0.00	-0.25	-3.00	-3.00	-3.00	-3.00	-4.00	-4.00	-4.00	-4.20	-4.20		

2017/07/10	1	-3.00	-3.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.20	-4.00	-4.20	-4.20
	2	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.00	-4.20	-4.20	-4.20
	3	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20
	4	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20
	5	-4.30	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.00	-4.20	-4.00
	6	-4.30	-4.20	-4.20	-4.20	-4.00	-4.00	-4.00	-3.00	-3.00	-0.25	-0.10	0.00
	7	-4.00	-3.00	-3.00	-0.10	0.00	0.00	0.00	0.00	0.00			
	8	-0.10	-0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
	10			0.00	0.00								
	23									0.00	0.00	-4.00	-4.00
	24					0.00	0.00	0.00	-4.00	-3.00	-4.00	-4.00	-4.00
2017/07/11	1	0.00	0.00	0.00	0.00	-0.02	-3.00	-4.00	-3.00	-4.00	-4.00	-4.00	-4.00
	2	-4.00	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20
	3	-4.00	-4.20	-4.00	-4.20	-4.20	-4.00	-4.20	-4.20	-4.20	-4.20	-4.20	-4.20
	4	-4.00	-4.00	-4.00	-4.20	-4.20	-4.20	-4.20	-4.00	-4.00	-4.00	-4.00	-4.00
	5	-4.00	-4.00	-4.00	-4.00								
	6	-4.30	-4.20	-4.00	-4.00	-4.00							
	7	-4.00	-4.00	-3.00	0.00								
	8	-3.00		0.00									

There were no instances of administered prices during this timeframe.

# Appendix: Additional Background Information

## 1. Market Demand

**Total Market Demand** represents the total energy that was supplied from the IESO-Administered Market.

The IESO calculates Total Market Demand by summing all output from generators registered in the Market plus all scheduled imports to the province. It is also equal to the sum of all load supplied from the Market plus exports from the province, plus all line losses incurred on the IESO-controlled grid.

**Ontario Demand** represents the total energy that was supplied from the IESO-Administered Market for the sake of supplying load within Ontario.

The IESO calculates Ontario Demand by subtracting exports from the Total Market Demand quantity. It is also equal to the sum of all load within Ontario which is supplied from the Market, plus all line losses incurred on the IESO-controlled grid.

## 2. Hourly Ontario Energy Price (HOEP)

**HOEP** is the hourly price that is charged to Local Distributing Companies and other non-dispatchable loads. HOEP is also paid to self-scheduling generators.

HOEP is defined as the hourly arithmetic average of the uniform Ontario energy price determined for each of the 12, 5-minute dispatch intervals in a particular hour.

On Peak average price is the straight arithmetic average of HOEP in hours 8 to 23 EST, Monday to Friday (5 x 16). Off Peak average price is the straight arithmetic average of HOEP for all remaining hours in the week.

Weeks with statutory holidays will cause the on-peak average to be calculated using 4 weekdays (4 x 16). The wholesale market does not use a formal definition of on and off-peak hours. The IESO is providing this calculation purely for information purposes, and will continue to use this definition throughout the year.

**NOTE: At the request of market participants, the IESO has shifted the On Peak definition by one hour (from 7 to 22, to 8 to 23) as of December 2004, to better reflect the industry practice.**

## 3. Import and Export Quantities

Economic **imports** and **exports** are scheduled into/out of Ontario on an hourly basis, up to the physical capabilities of the Grid and the interconnections between the systems. The import and export quantities are measured in MWh. The units for the graphed hourly quantities are MWh/hour, and are therefore labeled as MW on the graph.

## 4. Operating Reserve

Operating Reserve is generation capacity or load reduction capacity that the IESO can call upon on short notice to restore a balance between supply and demand, in the event of an unexpected load increase or generator outage. The IESO purchases defined amounts of Operating Reserve from Participants via three real-time markets.

## 5. Administrative Prices

The Market Rules recognize that there are occasions where it may be appropriate or necessary to apply administrative prices and schedules to replace those calculated by the market dispatch algorithm or when a price can not be calculated by the dispatch algorithm. These occasions include forced or planned outages to market software, hardware, or communications systems, market suspensions, and data losses due to operational metering or market software failures.

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Questions on any information contained in this report should be directed to:

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customer.relations@ieso.ca

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