

Electricity Prices

Commodity Cost

Commodity cost comprises of two components, the wholesale price (the Hourly Ontario Energy Price) and the Global Adjustment. The commodity cost is only a portion of the total energy bill.

Class A

Month (¢/kWh)	JAN 2016	FEB 2016	MAR 2016	APR 2016	MAY 2016	JUN 2016	JUL 2016	AUG 2016	SEP 2016	OCT 2016	NOV 2016	DEC 2016	JAN 2017	FEB 2017	MAR 2017	2017 YTD
HOEP*	1.28	1.15	0.52	0.57	1.2	1.87	2.10	3.05	1.53	1.15	1.50	1.94	2.04	2.01	2.45	2.17
Average Class A Global Adjustment Rate	5.62	5.82	5.85	5.75	5.6	5.27	4.90	4.22	4.73	5.18	5.30	4.80	4.52	4.45	3.67	4.20
Total Cost of Commodity	6.90	6.97	6.37	6.32	6.8	7.14	7.00	7.05	6.26	6.33	6.80	6.74	6.56	6.46	6.12	6.37

*(Unweighted) average of Hourly Ontario Energy Prices to reflect a typical (flat) industrial consumption profile.

Source: IESO

Class B

Month (¢/kWh)	JAN 2016	FEB 2016	MAR 2016	APR 2016	MAY 2016	JUN 2016	JUL 2016	AUG 2016	SEP 2016	OCT 2016	NOV 2016	DEC 2016	JAN 2017	FEB 2017	MAR 2017	2017 YTD
HOEP**	1.37	1.26	0.59	0.61	1.34	2.02	2.34	3.29	1.75	1.24	1.61	2.09	2.16	2.11	2.60	2.29
Class B Global Adjustment Rate	9.18	9.85	10.61	11.13	10.75	9.55	8.31	7.10	9.53	11.23	11.11	8.71	8.23	8.64	7.14	8.00
Total Cost of Commodity	10.55	11.11	11.20	11.74	12.09	11.57	10.65	10.39	11.28	12.47	12.72	10.80	10.39	10.75	9.74	10.29

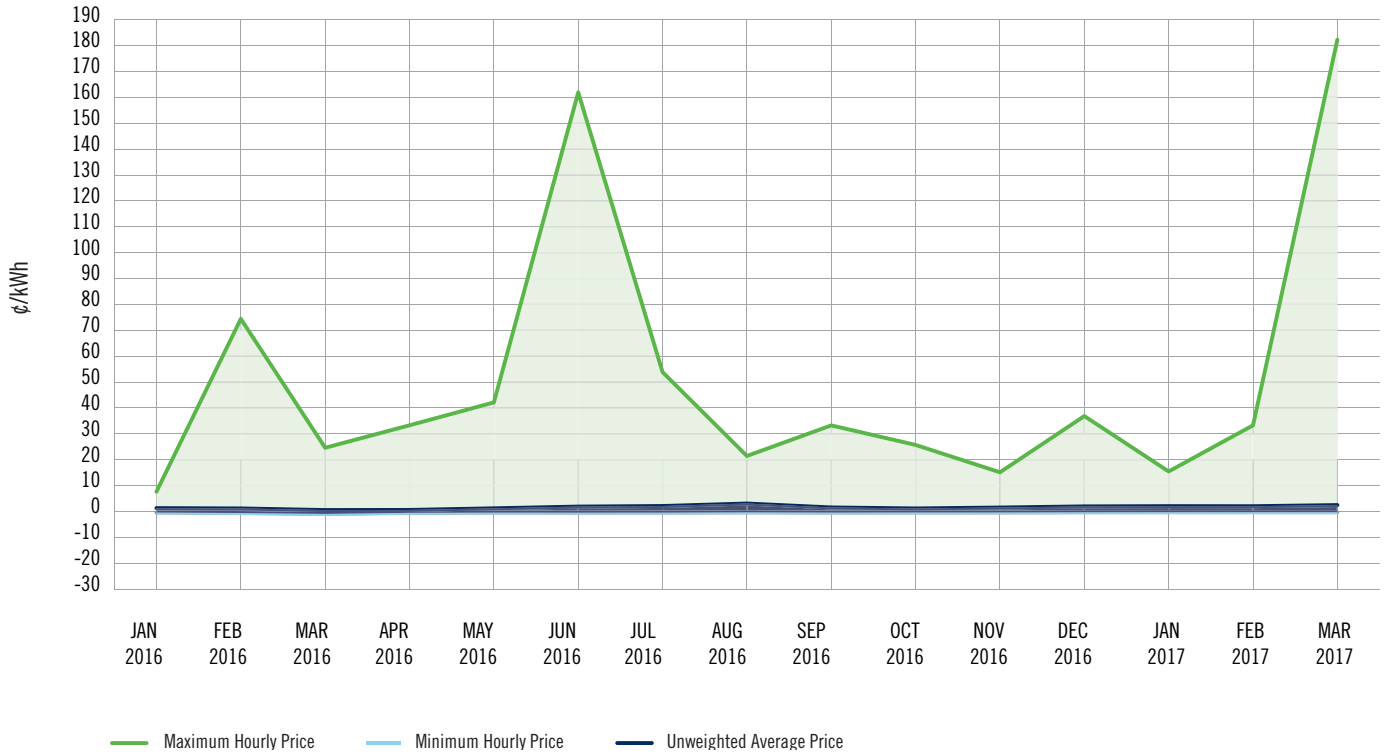
**Averages are weighted by the amount of electricity used throughout the province within each hour to broadly reflect the consumption profile of Class B (i.e., residential and commercial) consumers.

Source: IESO

***Totals do not sum due to dollar values that are rounded down to cents.

Monthly Wholesale Electricity Prices

The wholesale electricity price fluctuates by the hour. This chart shows the highest, lowest and average wholesale prices for each month. The monthly price varies depending on factors in the electricity market that shift the energy price higher or lower. A higher average monthly price exerts a downward pressure on costs that needs to be recovered through Global Adjustment, illustrated below.



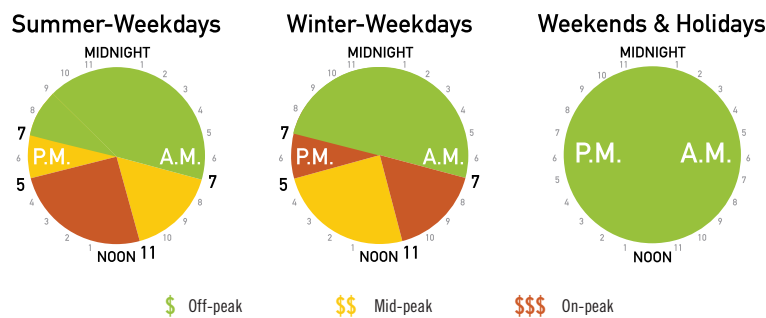
Source: IESO

Time-of-Use Pricing under the Regulated Price Plan (RPP)

In accordance with the mandate provided under the Ontario Energy Board Act, the OEB has developed the regulated price plan (RPP), which provides eligible residential and small business consumers with stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. The plan has been in place since 2005.

The RPP is established by forecasting the cost of supply for RPP customers for an upcoming year and determining the prices that will recover those forecast costs from eligible customers. Consumers with eligible time-of-use (or “smart”) meters that can determine when electricity is consumed during the day will pay the RPP under a time-of-use price structure. The prices for this plan are based on three time-of-use periods per weekday. These periods are referred to as off-peak, mid-peak and on-peak and are shown in the figure below. The hours for mid-peak and on-peak periods are different in the summer and winter months to match energy consumption patterns in those seasons.

Summer and Winter Time-of-Use Hours



Source: OEB

RPP prices reflect a forecast of prices on the Ontario wholesale electricity market, as well as other components of supply costs, such as those resulting from contracts. These costs are allocated to TOU consumption periods based on the type of supply that provides value at those times. For example, costs for always-on baseload sources of generation (such as nuclear) are allocated across all periods whereas costs for demand response conservation programs are only allocated to on-peak periods. The lowest (off-peak) price is below the average RPP supply cost, while the other two price periods are above it. The time-of-use (TOU) prices applicable in Q1 2017 for consumers with eligible time-of-use meters are shown in the table below.

RPP Time-of-use prices effective November 1, 2016

Time-of-use RPP Prices – ¢/kWh	Off-Peak	Mid-Peak	On-Peak	Average Price
Price (¢)	8.7	13.2	18.0	11.1
% of TOU Consumption	65%	17%	18%	

Sample Residential Monthly Bill

	Electricity	Delivery	Regulatory	DRC*	HST	OCEB	Total Bill
Monthly Cost (\$)	83.54	53.94	4.92	0.00	18.51	0.00	160.91

*The Debt Retirement Charge (DRC) ceased being effective as of December 31, 2015.

Source: OEB

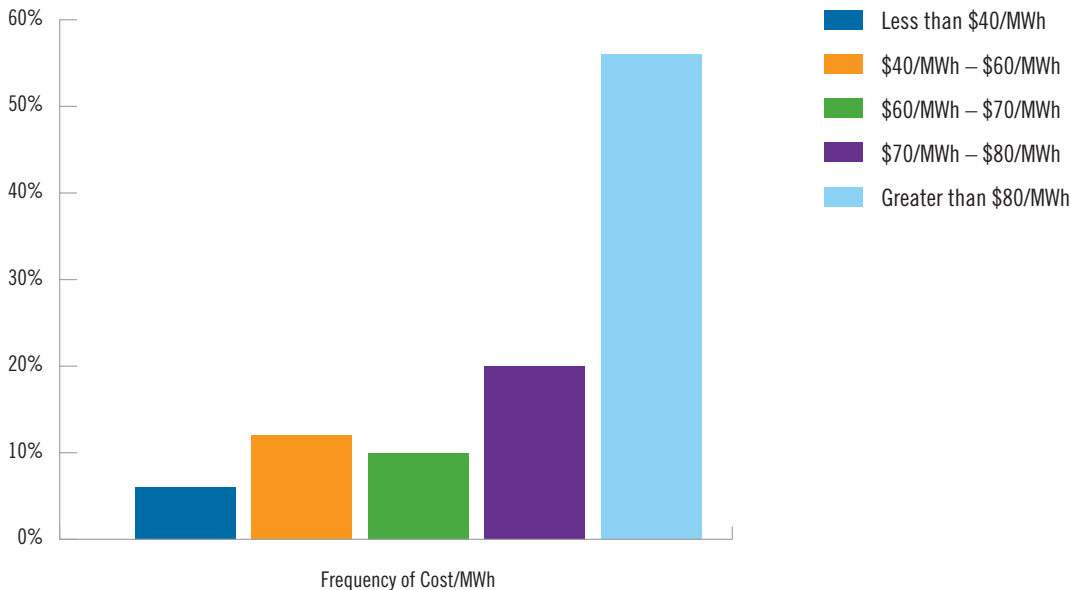
This table shows a residential monthly bill for a Toronto Hydro residential RPP TOU customer with monthly usage of 750 kWh⁴ as of May 1, 2016, with 65% of consumption occurring off-peak, 17% occurring mid-peak and 18% occurring on-peak. For consumers in other service territories, delivery cost will vary and is determined according to their local distributor’s distribution rates (as approved by the OEB). For additional information please see the OEB’s bill calculator www.oeb.ca/consumer-protection/energy-contracts/bill-calculator.

4. On April 14, 2016, the *Report of the Ontario Energy Board: Defining Ontario’s Typical Electricity Customer* was released in which the OEB determined that 750 kWh per month would be the standard used for illustrative purposes.

Ontario Industrial Electricity Rates

Industrial electricity consumers can either be directly connected to the high-voltage transmission grid or receive electricity from their local distributor (e.g., Toronto Hydro). Directly-connected consumers do not pay distribution charges, thus lowering their electricity cost. The table below shows the distribution of average all-in prices for all directly-connected consumers in Ontario for 2016. In Ontario, electricity rates for large industrial consumers in Ontario vary by customer as they are determined by individual consumption patterns. Generally speaking, the less energy a large industrial uses during peak hours, the more these consumers reduce their impact on the provincial power system as well as their electricity costs. For most, the commodity cost incorporates both the fluctuating market price and the allocation of the Global Adjustment based on their energy use during peaks.

Transmission-Connected Industrial Rates⁵ (2016)



Source: IESO and OEB

The table below shows average all-in electricity prices for a distribution-connected industrial consumer in several service territories.⁶

Distribution-Connected Industrial Rates (2016)

\$/MWh	Windsor (EnWin)	Hamilton (Horizon)	Ottawa	Sudbury	Toronto*
HOEP**	\$21.76	\$21.79	\$21.81	\$22.60	\$21.84
Class A Global Adjustment	\$46.26	\$46.33	\$46.37	\$48.05	\$46.44
Delivery	\$14.55	\$19.12	\$19.10	\$17.08	\$17.43
Regulatory	\$5.73	\$5.73	\$5.74	\$5.95	\$5.75
DRC	\$7.00	\$7.00	\$6.90	\$7.00	\$7.00
All-In Price	\$95.29	\$99.97	\$99.91	\$100.68	98.46

*The distribution cost estimate for an industrial customer in Toronto reflects the assumption that 1 kVA is 1 kW for billing purposes.

Source: IESO and OEB

**HOEP is the arithmetic average for all hours in 2016. The Global Adjustment shown in the table is an average of all distribution-connected Class A consumers for 2016. Both quantities have been adjusted for losses using the applicable primary metered loss factor for each distributor.

5. Does not include Northern Industrial Electricity Rate Program.

6. Data in the table is for a hypothetical consumer with a monthly peak demand of 5 megawatts and an 85% load factor, reflecting delivery and regulatory charges in effect in Q4 2016. Load factor is an expression of how much energy was used in a time period, expressed as a percentage of what would have been used if consuming at full potential for the entire period. A 30 day month is assumed.

2015 Indicative Industrial Electricity Prices (Canadian ¢/kWh)

The table below compares indicative retail industrial electricity prices across North American jurisdictions. For reference, Ontario – South reflects the average price for year-to-date May 2015. Ontario – North is based on the same figure, along with the 2 cent per kilowatt hour Northern Industrial Electricity Rate Program rebate. See footnote for more details.

Jurisdiction	Cost	Jurisdiction	Cost	Jurisdiction	Cost
1. Manitoba	4.67	22. Oregon	7.72	43. Virginia	9.23
2. Quebec	5.17	23. West Virginia	7.80	44. South Dakota	9.31
3. Washington	5.64	24. Saskatchewan	7.81	45. Kansas	9.54
4. Alberta	5.87	25. Nevada	7.83	46. Nebraska	9.56
5. Ontario – North	6.35	26. Arizona	8.00	47. Pennsylvania	9.59
6. Oklahoma	6.64	27. Idaho	8.05	48. Wisconsin	9.87
7. Montana	6.68	28. North Carolina	8.09	49. Nova Scotia	10.02
8. Kentucky	6.80	29. New Mexico	8.09	50. North Dakota	10.75
9. British Columbia	7.04	30. Illinois	8.24	51. Florida	10.79
10. Iowa	7.06	31. Ontario – South	8.35	52. Delaware	10.96
11. Louisiana	7.06	32. Mississippi	8.41	53. Maryland	11.86
12. Canadian Average	7.31	33. Newfoundland	8.65	54. Maine	12.64
13. Missouri	7.32	34. U.S. Average	8.71	55. Vermont	13.14
14. Georgia	7.35	35. New York	8.72	56. California	13.85
15. Texas	7.37	36. Indiana	8.74	57. New Jersey	14.44
16. New Brunswick	7.48	37. Ohio	8.75	58. New Hampshire	17.17
17. Arkansas	7.49	38. Wyoming	8.87	59. Massachusetts	17.56
18. Tennessee	7.53	39. Minnesota	8.89	60. Connecticut	17.58
19. Alabama	7.58	40. Prince Edward Island	8.90	61. Alaska	18.85
20. South Carolina	7.68	41. Colorado	9.05	62. Rhode Island	19.97
21. Utah	7.70	42. Michigan	9.13	63. Hawaii	31.10

Note: Estimates may differ from actual costs to a consumer based on location, connection, and operational characteristics. Prices exclude taxes and, in other jurisdictions, participation in any applicable jurisdictional benefit programs.

The Ontario industrial price is based on the average all-in price for year-to-date May 2015, and includes the Hourly Ontario Energy Price (arithmetic average), Class A Global Adjustment, delivery, wholesale market service charges and the Debt Retirement Charge. The 2 cent per kilowatt hour difference between northern Ontario and southern Ontario reflects the Northern Industrial Electricity Rate Program rebate.

All other Canadian prices (except Ontario) are from the Hydro Quebec Rate Comparison for rates effective April 1, 2015 for select local distribution companies servicing specific cities. Where Hydro Quebec reports prices for two cities in a province (e.g., Calgary and Edmonton), an average of the two is used; in provinces where only one city is reported (e.g., Vancouver in BC, Montreal in QC), that one price is used to represent the province for indicative comparison purposes. In the Hydro Quebec Rate Comparison, a large consumer reflects 5 MW with monthly consumption of 3,060 MWh.

American jurisdictions reflect year-to-date May 2015 data from the US Energy Information Administration's survey of approximately 500 of the largest electric utilities. The price reflects the average revenue reported by the electric utility from electricity sold to the industrial sector. The value represents an estimated average retail price, but does not necessarily reflect the price charged to an individual consumer. Prices are converted at an exchange rate of 1 USD = 1.30 CAD, an approximation of the average for 2015 (1 USD = 1.2787 CAD).