

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)	JUL 2016	AUG 2016	SEP 2016	OCT 2016	NOV 2016	DEC 2016	JAN 2017	FEB 2017	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	2017 YTD
HOEP*	2.10	3.05	1.53	1.15	1.50	1.94	2.04	2.01	2.45	0.97	0.26	0.47	1.17	1.57	2.04	1.44
Average Class A Global Adjustment Rate	4.90	4.22	4.73	5.18	5.30	4.80	4.52	4.45	3.67	4.90	5.66	5.56	5.97	5.32	4.51	4.99
Total Cost of Commodity	7.00	7.27	6.26	6.33	6.80	6.74	6.56	6.46	6.12	5.87	5.92	6.03	7.14	6.89	6.55	6.43

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

Source: IESO

Class B

Month (¢/kWh)	JUL 2016	AUG 2016	SEP 2016	OCT 2016	NOV 2016	DEC 2016	JAN 2017	FEB 2017	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	2017 YTD
HOEP**	2.34	3.29	1.75	1.24	1.61	2.09	2.16	2.11	2.60	1.11	0.32	0.59	1.36	1.73	2.31	1.62
Class B Global Adjustment Rate	8.31	7.10	9.53	11.23	11.11	8.71	8.23	8.64	7.14	10.78	12.31	11.85	11.28	10.11	8.86	9.85
Total Cost of Commodity	10.65	10.39	11.28	12.47	12.72	10.80	10.39	10.75	9.74	11.89	12.63	12.44	12.64	11.84	11.17	11.47

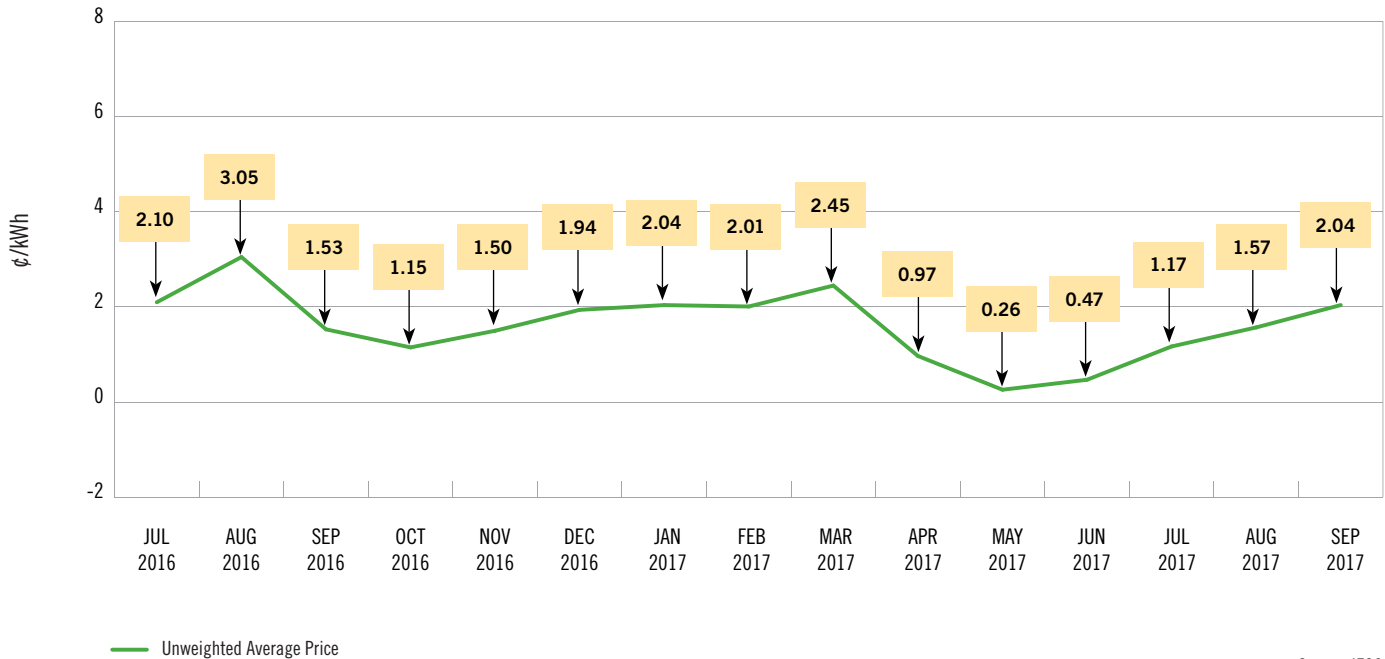
**Averages are weighted by the amount of electricity used throughout the province within each hour to broadly reflect the consumption profile of Class B (i.e., residential and commercial) consumers.

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 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, 1998*, the OEB developed the Regulated Price Plan (RPP), which provides residential and small business consumers with stable and predictable electricity pricing and encourages conservation. The plan has been in place since 2005.

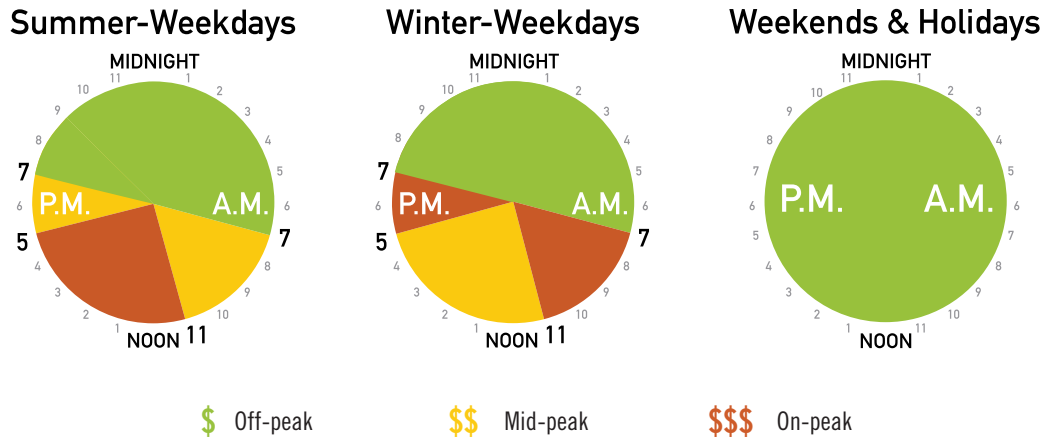
RPP consumers with eligible time-of-use (or “smart”) meters that can determine when electricity is consumed during the day pay RPP prices under a time-of-use price structure. The prices for this plan are based on three time-of-use periods per weekday. These periods are referred to as off-peak, mid-peak 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 reflect energy consumption patterns in those seasons, as explained below.

The *Ontario Fair Hydro Plan Act, 2017* came into effect on June 1, 2017. This legislation established the framework under which eligible consumers (referred to in the legislation as “specified consumers”) saw their electricity bills reduced effective July 1, 2017 and by which bill increases can, through adjustments to the commodity price, be held to the rate of inflation starting in May 2018. Under this new legislation, the OEB reset RPP prices effective July 1, 2017 to achieve a 25% total bill reduction for a “hypothetical regulated rate consumer” relative to what RPP prices would have been on May 1, 2017 without any regard to the government’s Fair Hydro Plan. The RPP time-of-use prices set by the OEB effective November 1, 2017 are set out below.

Some “specified consumers” that are eligible for bill reductions under the *Ontario Fair Hydro Plan Act, 2017* are not paying RPP prices, either because they are not eligible for the RPP or because they have chosen to opt out of the RPP in favour of a retail contract or market-based pricing. These “specified consumers” receive their bill relief in the form a reduction to the Global Adjustment charges that they would otherwise pay. To that end, the OEB also set a credit amount – referred to by the OEB as the “GA Modifier” that will apply to reduce the GA charges payable by these consumers. The GA Modifier has been set by the OEB at -\$32.90 effective July 1, 2017. The new, lower RPP prices and the GA Modifier set by the OEB will be in effect until April 30, 2018. At that time, the OEB will reset RPP prices and the GA Modifier in a way that holds increases to the rate of inflation in accordance with legislation.

Summer and Winter Time-of-Use Hours

The RPP time-of-use periods are different in the summer than they are in the winter to reflect seasonal variations in how customers use electricity. During the summer, people use more during the hottest part of the day, when air conditioners are running on high. In the winter, with less daylight, electricity use peaks twice: once when people wake up in the morning and turn on their lights and appliances, and again when people get home from work. The time-of-use (TOU) prices applicable in Q3 2017 for RPP consumers with eligible time-of-use meters are shown in the table below.



Source: OEB

RPP Time-of-use prices effective November 1, 2017

Time-of-use RPP Prices – ¢/kWh	Off-Peak	Mid-Peak	On-Peak	Average Price
Price (¢)	6.5	9.5	13.2	8.2

Sample Residential Monthly Bill

	Electricity	Delivery	Regulatory	DRC*	HST	8% Provincial Rebate	Total Bill
Monthly Cost (\$)	61.62	50.26	3.28	0.00	14.97	(9.21)	120.92

Source: OEB

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

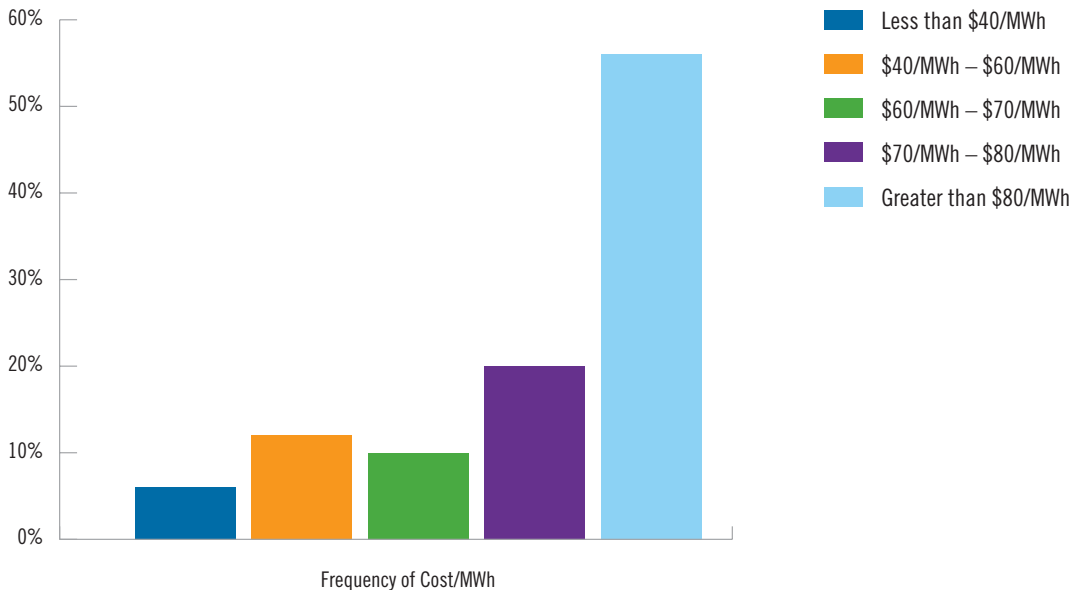
This table shows a monthly bill for a Toronto Hydro residential RPP TOU customer with monthly usage of 750 kWh⁴ as of November 1, 2017, with 65% of consumption occurring off-peak, 17% occurring mid-peak and 18% occurring on-peak. For consumers in other service territories, delivery charges will vary depending on which utility serves them. 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	21.79	22.60	21.84
Class A Global Adjustment	46.26	46.33	46.34	48.05	46.44
Delivery	15.42	19.34	20.17	16.56	21.19
Regulatory	6.03	6.04	6.04	6.26	6.05
DRC	7.00	7.00	6.90	7.00	7.00
All-In Price	96.46	100.49	101.23	100.47	102.53

*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 Q3 2017. 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.

2017 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 2017. 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	4.32	22. Idaho	7.77	43. Indiana	9.83
2. Newfoundland	4.90	23. South Carolina	7.82	44. Kansas	9.89
3. Quebec	4.91	24. Arizona	7.85	45. Nebraska	9.91
4. Alberta	5.67	25. North Carolina	7.92	46. Minnesota	10.04
5. Washington	6.08	26. Tennessee	7.93	47. Nova Scotia	10.14
6. British Columbia	6.29	27. Alabama	7.97	48. Wisconsin	10.15
7. Montana	6.41	28. Oregon	8.01	49. South Dakota	10.17
8. Ontario – North	6.56	29. New Mexico	8.02	50. Florida	10.51
9. Nevada	6.68	30. Mississippi	8.09	51. Delaware	10.59
10. Louisiana	6.69	31. Missouri	8.45	52. North Dakota	11.41
11. Oklahoma	6.87	32. Illinois	8.55	53. Maryland	11.48
12. Canadian Average	6.89	33. Ontario – South	8.56	54. Maine	12.58
13. Texas	7.11	34. Virginia	8.63	55. New Jersey	13.12
14. Iowa	7.19	35. Ohio	8.81	56. Vermont	13.44
15. Saskatchewan	7.30	36. U.S. Average	8.81	57. California	14.13
16. Arkansas	7.40	37. West Virginia	8.99	58. New Hampshire	16.51
17. Georgia	7.41	38. Pennsylvania	9.19	59. Connecticut	17.52
18. Kentucky	7.44	39. Wyoming	9.26	60. Massachusetts	17.81
19. New Brunswick	7.50	40. Prince Edward Island	9.31	61. Rhode Island	18.95
20. New York	7.54	41. Colorado	9.43	62. Alaska	22.42
21. Utah	7.57	42. Michigan	9.75	63. Hawaii	29.87

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

The Ontario industrial price is based on the average all-in price for year-to-date May 2017 and includes the Hourly Ontario Energy Price, Class A Global Adjustment, delivery, wholesale market service charges and the Debt Retirement Charge.

All other Canadian prices (except Ontario) are from the Hydro Quebec Rate Comparison for rates effective April 1, 2017 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 2017 data from the US Energy Information Administration's survey of approximately 500 of the largest electricity 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 = 1.33 CAD.