Electricity Prices

Commodity Cost

Commodity cost comprises 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)	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018	MAR 2018	APR 2018	MAY 2018	JUN 2018	JUL 2018	AUG 2018	SEP 2018	OCT 2018	NOV 2018	DEC 2018	2018 YTD Avg.
HOEP*	0.80	1.30	1.93	3.03	1.80	1.65	2.86	1.15	1.67	2.86	2.89	2.69	1.28	2.36	2.66	2.24
Average Class A Global Adjustment Rate	5.64	4.77	5.48	4.04	4.33	4.92	4.99	5.24	5.99	5.21	4.77	4.75	6.30	5.25	4.87	5.06
Total Cost of Commodity	**6.44**	**6.07**	**7.41**	**7.07**	**6.13**	**6.58**	**7.85**	**6.39**	**7.66**	**8.07**	**7.66**	**7.44**	**7.58**	**7.61**	**7.53**	**7.30**

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

Source: IESO

Class B

Month (¢/kWh)	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018	MAR 2018	APR 2018	MAY 2018	JUN 2018	JUL 2018	AUG 2018	SEP 2018	OCT 2018	NOV 2018	DEC 2018	2018 YTD Avg.
HOEP**	0.88	1.40	2.06	3.21	1.90	1.72	2.97	1.31	1.83	3.04	3.06	2.99	1.38	2.51	2.79	2.43
Class B Global Adjustment Rate	12.56	9.70	9.21	6.74	8.17	9.48	9.96	10.79	11.90	7.74	7.49	8.58	12.06	9.86	7.40	9.07
Total Cost of Commodity	**13.44**	**11.11**	**11.27**	**9.95**	**10.07**	**11.20**	**12.93**	**12.10**	**13.73**	**10.78**	**10.55**	**11.57**	**13.44**	**12.37**	**10.19**	**11.50**

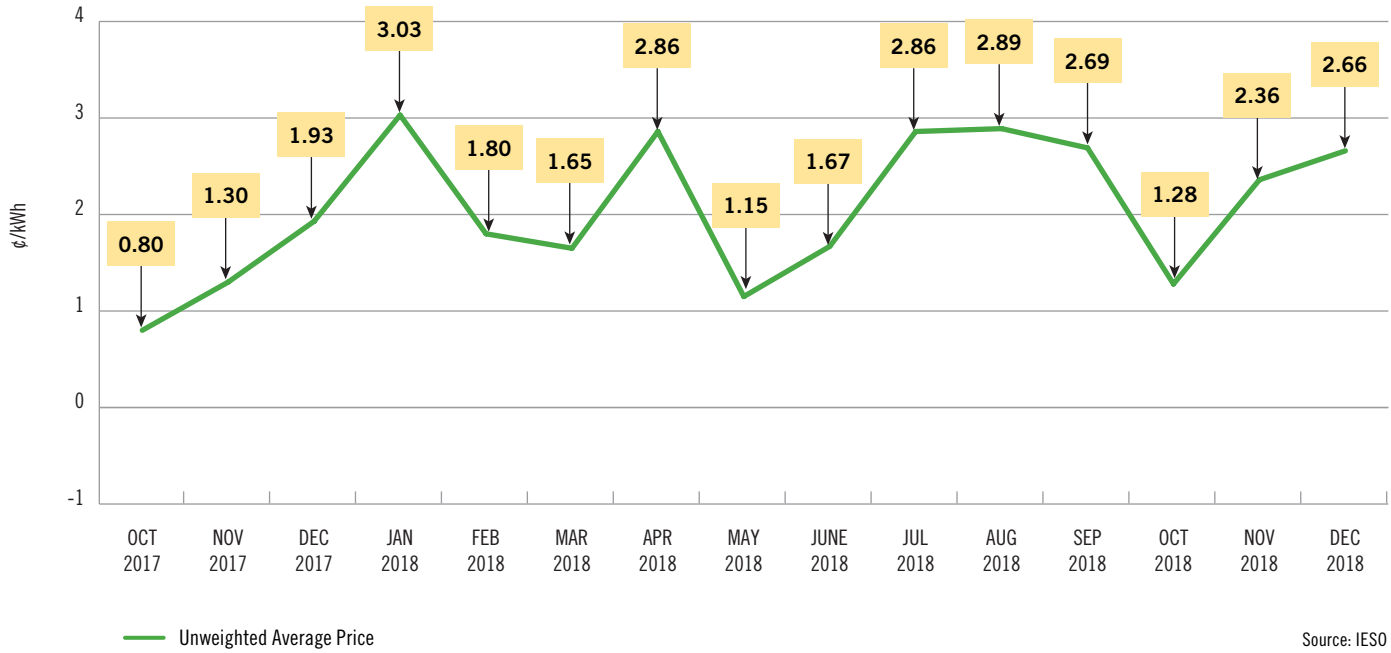
**Averages are weighted by the amount of electricity used throughout the province within each hour to broadly reflect the consumption profile of Class B (i.e., residential and commercial) consumers.

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.



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.

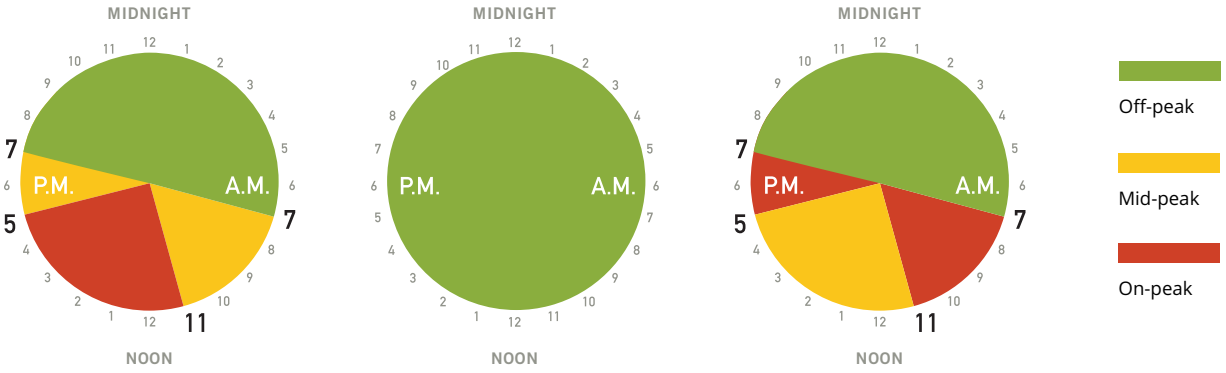
RPP consumers with eligible time-of-use (or "smart") meters that can determine when electricity is consumed during the day pay RPP prices under a time-of-use price structure. The prices for this plan are based on three time-of-use periods per weekday. These periods are referred to as off-peak, mid-peak 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 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 May 1, 2018 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 of 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 – $44.38 per MWh effective May 1, 2018. The RPP prices and the GA Modifier set by the OEB will be in effect until April 30, 2019.

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 electricity 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 Q4 2018 for RPP consumers with eligible time-of-use meters are shown in the table below.



Summer
(May 1 – October 31)
Weekdays

Weekends and Statutory Holidays

Winter
(November 1 – April 30)
Weekdays

Source: OEB

RPP Time-of-use prices effective May 1, 2018

Time-of-use RPP Prices – ¢/kWh	Off-Peak	Mid-Peak	On-Peak	Average Price
Price (¢)	6.5	9.4	13.2	8.2

Sample Residential Monthly Bill

	Monthly Cost ($)
Electricity	61.49
Delivery	52.43
Distribution	*39.41*
Transmission	*10.71*
Line Losses	*2.31*
Regulatory	3.28
HST	15.24
8% Provincial Rebate	(9.38)
Total Bill:	**123.06**

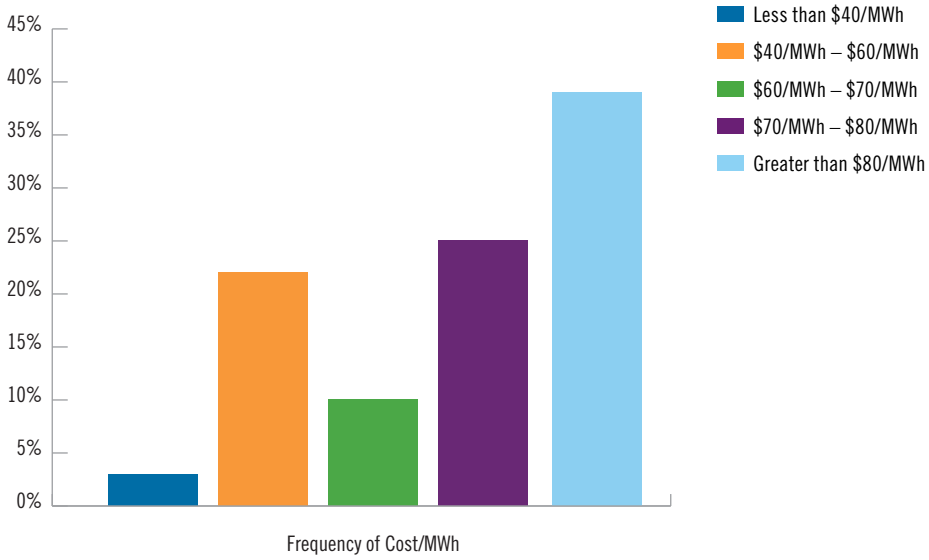
This table shows a monthly bill for a Toronto Hydro residential RPP TOU customer with monthly usage of 750 kWh as of October 1, 2018, with 65% of consumption occurring off-peak, 17% occurring mid-peak and 18% occurring on-peak. For consumers in other service territories, delivery charges will vary depending on which utility serves them. For additional information please see the OEB's bill calculator: 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 2018. 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 consumer 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 Rates[5] (2018)



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

Distribution-Connected Industrial Rates (2018)

$/MWh	Windsor (EnWin)	Hamilton (Alectra)	Ottawa	Sudbury	Toronto*
HOEP**	21.06	21.10	21.10	21.88	21.15
Class A Global Adjustment	52.74	52.82	52.83	54.78	52.95
Delivery	16.61	16.36	18.64	17.27	17.39
Regulatory	3.92	3.92	3.92	4.07	3.93
All-In Price	**94.33**	**94.20**	**96.43**	**98.00**	**95.42**

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

Source: IESO and OEB

** HOEP is based on a three-month arithmetic average (October to December 2018). The Global Adjustment shown in the table is an average of all distribution-connected Class A consumers for October to December 2018. Both quantities have been adjusted for losses using the applicable primary metered loss factor for each distributor.

Note: The DRC ended for all electricity users on March 31, 2018.

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 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.

2018 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	4.47	23.	Alabama	7.50	43.	Delaware	9.50
2.	Quebec	4.91	24.	New Brunswick	7.50	44.	Prince Edward Island	9.51
3.	Newfoundland	5.30	25.	Alberta	7.56	45.	Nebraska	9.59
4.	Montana	6.02	26.	Saskatchewan	7.56	46.	Wisconsin	9.61
5.	Washington	6.05	27.	Arizona	7.64	47.	Florida	9.61
6.	Oklahoma	6.35	28.	Oregon	7.64	48.	South Dakota	9.65
7.	Arkansas	6.47	29.	North Carolina	7.70	49.	Nova Scotia	10.26
8.	British Columbia	6.48	30.	Idaho	7.84	50.	Maryland	10.63
9.	Texas	6.62	31.	Missouri	8.03	51.	District of Columbia	10.66
10.	Nevada	6.68	32.	Illinois	8.24	52.	Maine	10.81
11.	Louisiana	6.81	**33.**	**U.S. Average**	**8.38**	53.	North Dakota	10.84
12.	Utah	6.84	34.	Pennsylvania	8.39	54.	New Jersey	12.12
13.	Kentucky	6.88	35.	West Virginia	8.44	55.	Vermont	13.00
14.	Georgia	6.99	36.	Ohio	8.57	56.	California	14.04
15.	New York	7.10	37.	Wyoming	8.65	57.	New England	16.23
16.	Tennessee	7.10	38.	Virginia	8.66	58.	New Hampshire	17.01
17.	Ontario - North	7.26	39.	Kansas	8.87	59.	Connecticut	17.44
18.	**Canadian Average**	**7.28**	40.	Minnesota	8.91	60.	Massachusetts	18.36
19.	New Mexico	7.38	41.	Indiana	9.12	61.	Rhode Island	18.91
20.	Iowa	7.41	42.	Colorado	9.14	62.	Alaska	23.19
21	South Carolina	7.44	43.	Ontario - South	9.26	63.	Hawaii	31.83
22.	Mississippi	7.49	44.	Michigan	9.31			

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

The Ontario price is based on April 2018 data and includes the Hourly Ontario Energy Price, Class B Global Adjustment, delivery, and wholesale market service charges.

All other Canadian prices are from the Hydro Quebec Rate Comparison for rates effective April 1, 2018 for select local distribution companies servicing specific cities and reflects a 5 MW consumer with an 65% load factor. 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.

American jurisdictions reflect April 2018 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 = 1.27 CAD.