



2019

Comparison of Electricity Prices in Major North American Cities

Rates in effect April 1, 2019

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INTRODUCTION

Every year, Hydro-Québec compares the monthly electricity bills of Québec customers in the residential, commercial, institutional and industrial sectors with those of customers of the various utilities serving 21 major North American cities.

This report details the principal conclusions of this comparative analysis of prices in effect on April 1, 2019. There are three sections. The first describes the method used to estimate electricity bills. The second examines the highlights of the seven consumption levels analyzed, with the help of charts. Finally, the third presents the results of the 21 consumption levels for which data were collected and compiled in the form of summary and detailed tables.

The most recent rate adjustments, time-of-use rates, adjustment clauses and applicable taxes, as well as a profile of the utilities in the study, appear in separate appendices.

MAJOR NORTH AMERICAN CITIES

AVERAGE PRICES FOR RESIDENTIAL CUSTOMERS^{1,2}
(IN ¢/kWh)³



Abbreviations Used

AB	Alberta
BC	British Columbia
CA	California
FL	Florida
IL	Illinois
MA	Massachusetts
MB	Manitoba
MI	Michigan
NB	New Brunswick
NL	Newfoundland and Labrador
NS	Nova Scotia
NY	New York
ON	Ontario
OR	Oregon
PE	Prince Edward Island
QC	Québec
SK	Saskatchewan
TN	Tennessee
TX	Texas
WA	Washington

1) For a monthly consumption of 1,000 kWh; rates in effect April 1, 2019.
2) Average prices excluding taxes.
3) In Canadian currency.

MAJOR NORTH AMERICAN CITIES

AVERAGE PRICES FOR LARGE-POWER CUSTOMERS^{1,2}
(IN ¢/kWh)³



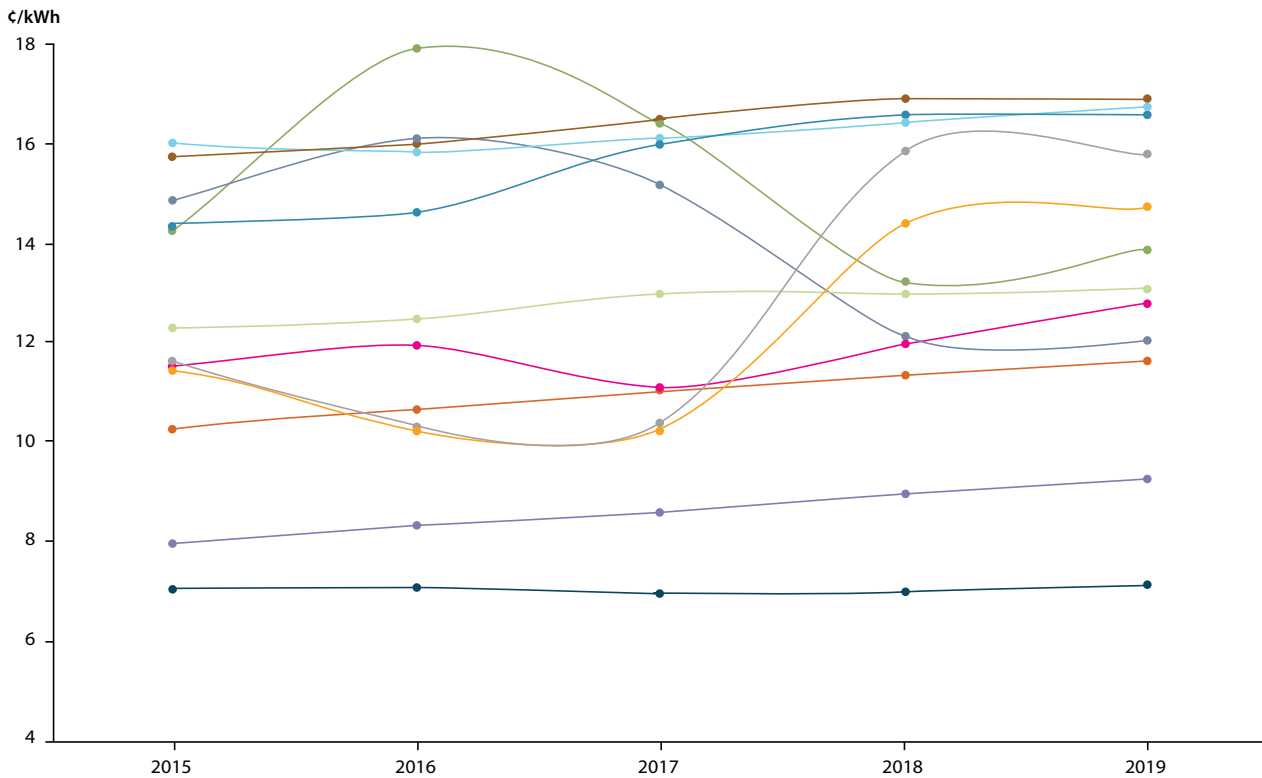
Abbreviations Used

AB	Alberta
BC	British Columbia
CA	California
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MA	Massachusetts
MB	Manitoba
MI	Michigan
NB	New Brunswick
NL	Newfoundland and Labrador
NS	Nova Scotia
NY	New York
ON	Ontario
OR	Oregon
PE	Prince Edward Island
QC	Québec
SK	Saskatchewan
TN	Tennessee
TX	Texas
WA	Washington

- 1) For a monthly consumption of 3,060,000 kWh and a power demand of 5,000 kW; rates in effect April 1, 2019.
- 2) Average prices excluding taxes.
- 3) In Canadian currency.

MAJOR CANADIAN CITIES

OVERVIEW OF CHANGES IN AVERAGE PRICES FOR RESIDENTIAL CUSTOMERS (IN ¢/kWh) – 2015 TO 2019^{1,2,3,4}



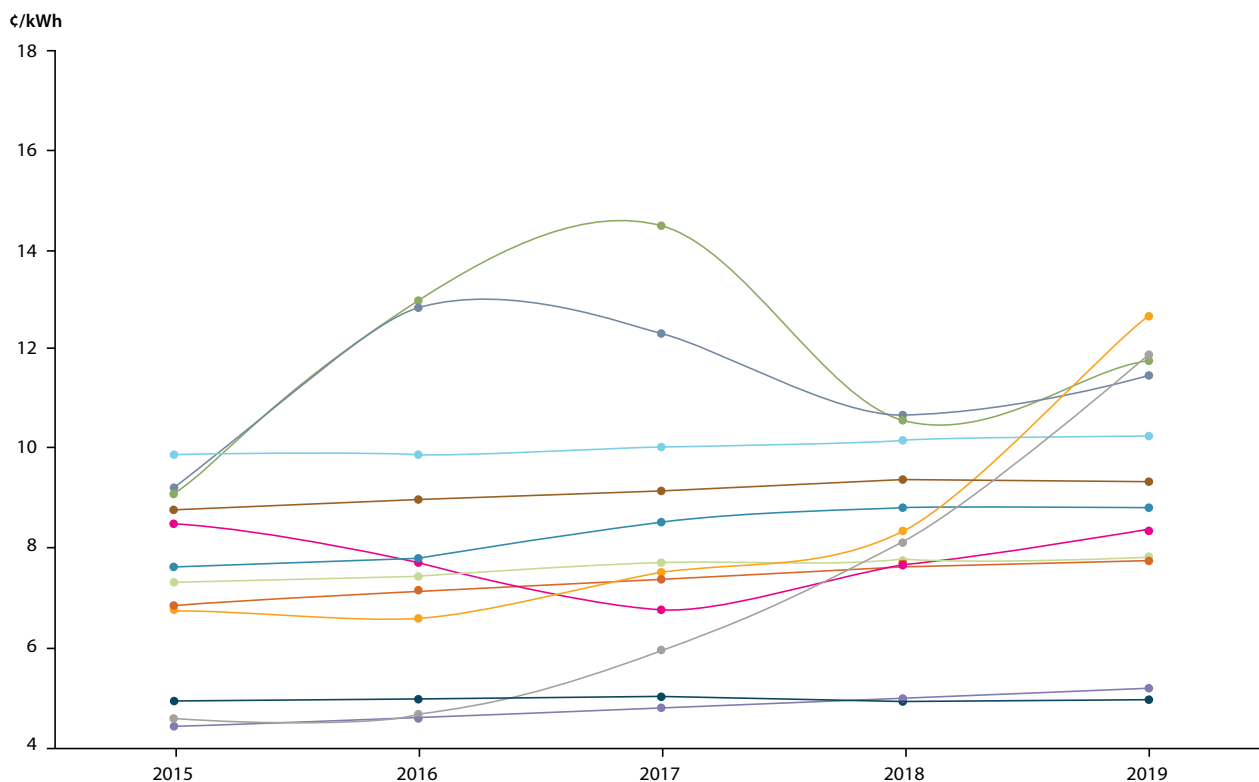
AVERAGE PRICES FOR RESIDENTIAL CUSTOMERS (IN ¢/kWh)^{1,2,3,4}

	2015	2016	2017	2018	2019
Canadian Cities					
● Montréal, QC	7.19	7.23	7.07	7.13	7.30
● Calgary, AB	11.66	10.40	10.45	15.79	15.74
● Charlottetown, PE	15.62	16.02	16.42	16.83	16.83
● Edmonton, AB	11.55	10.37	10.34	14.35	14.68
● Halifax, NS	16.03	15.88	16.15	16.41	16.69
● Moncton, NB	12.30	12.50	12.97	12.97	13.10
● Ottawa, ON	14.86	16.15	15.21	12.16	12.04
● Regina, SK	14.37	14.65	15.94	16.51	16.51
● St. John's, NL	11.55	11.96	11.15	12.03	12.80
● Toronto, ON	14.31	17.81	16.32	13.24	13.89
● Vancouver, BC	10.29	10.70	11.08	11.42	11.62
● Winnipeg, MB	8.11	8.43	8.71	9.00	9.37

1) For a monthly consumption of 1,000 kWh.
 2) In Canadian currency.
 3) Data from *Comparison of Electricity Prices in Major North American Cities* publications, Hydro-Québec, 2015-2019.
 4) Average prices excluding taxes.

MAJOR CANADIAN CITIES

OVERVIEW OF CHANGES IN AVERAGE PRICES FOR LARGE-POWER CUSTOMERS (IN ¢/kWh) – 2015 TO 2019^{1,2,3,4}



AVERAGE PRICES FOR LARGE-POWER CUSTOMERS (IN ¢/kWh)^{1,2,3,4}

	2015	2016	2017	2018	2019
Canadian Cities					
● Montréal, QC	5.17	5.17	5.18	5.18	5.20
● Calgary, AB	4.76	4.82	6.09	8.32	11.97
● Charlottetown, PE	8.90	9.12	9.31	9.51	9.51
● Edmonton, AB	6.97	6.78	7.68	8.53	12.80
● Halifax, NS	10.02	10.02	10.14	10.26	10.39
● Moncton, NB	7.48	7.60	7.86	7.86	7.93
● Ottawa, ON	9.30	12.91	12.46	10.80	11.57
● Regina, SK	7.81	7.97	8.67	8.98	8.98
● St. John's, NL	8.65	7.88	6.95	7.84	8.52
● Toronto, ON	9.22	13.04	14.55	10.66	11.91
● Vancouver, BC	7.04	7.35	7.54	7.77	7.91
● Winnipeg, MB	4.67	4.85	5.01	5.18	5.39

1) For a monthly consumption of 3,060,000 kWh and a power demand of 5,000 kW.

2) In Canadian currency.

3) Data from *Comparison of Electricity Prices in Major North American Cities* publications, Hydro-Québec, 2015-2019.

4) Average prices excluding taxes.

METHOD

In addition to Hydro-Québec, this comparative analysis of electricity prices across North America includes 22 utilities: 12 serving the principal cities in the 9 other Canadian provinces, and 10 utilities in American states. The results are based, in part, on a survey to which 15 utilities responded, and in part on estimates of bills calculated by Hydro-Québec.

The results presented here show the total bill for various consumption levels. If the bill is calculated according to an unbundled rate, it includes all components, including supply, transmission and distribution.

PERIOD COVERED

Monthly bills have been calculated based on rates in effect on April 1, 2019. The most recent rate adjustments applied by the Canadian utilities in the study between April 1, 2018, and April 1, 2019, are shown in Appendix A.

CONSUMPTION LEVELS

Seven consumption levels were selected for analysis. However, data were collected for 21 consumption levels and those results are presented in the Detailed Tables.

TAXES

With the exception of the bills presented in Section 2, taxes are not included in any of the calculations. Appendix C lists taxes applicable on April 1, 2019, by customer category; those which may be partially or fully refundable are also indicated.

OPTIONAL PROGRAMS

The bills have been calculated according to base rates. Optional rates or programs offered by some utilities to their residential, commercial, institutional or industrial customers have not been taken into account since the terms and conditions vary considerably from one utility to the next.

GEOGRAPHIC LOCATION

Electricity distributors sometimes offer different rates in the various cities they serve. As well, taxes may vary from one region to another. This, however, is not the case in Québec, where, with the exception of territories north of the 53rd parallel, taxes and rates are applied uniformly. For the purposes of this study, the bill calculations estimate as closely as possible the actual electricity bills of consumers in each target city, based on rates in effect on April 1, 2019.

TIME-OF-USE RATES

The rates offered by some utilities vary depending on the season and/or time of day when energy is consumed. In the United States, for example, a number of utilities set a higher price in summer, when demand for air-conditioning is stronger. In Québec, on the other hand, demand increases in winter because of heating requirements. Thus, for some utilities, April 1 may fall within a period in the year when the price is high, whereas for others it falls in a period when the price is low. An annual average price has therefore been calculated in the case of utilities with time-of-use rates which are listed in Appendix B.

ADJUSTMENT CLAUSES

The rates of some distributors include adjustment clauses that allow them to adjust their customers' electricity bills according to changes in different variables. Since these adjustments may be applied monthly, or over a longer period, the electricity bills issued by a given distributor may have varied between April 1, 2018, and April 1, 2019, even though base rates remained the same. Appendix B lists the adjustment clauses taken into account when calculating bills.

EXCHANGE RATE

The exchange rate used to convert bills in U.S. dollars into Canadian dollars is \$0.7498 (CA\$1 = US\$0.7498), the rate in effect at noon on April 1, 2019. The Canadian dollar had thus depreciated by 3.21% relative to the U.S. dollar on April 1, 2018.

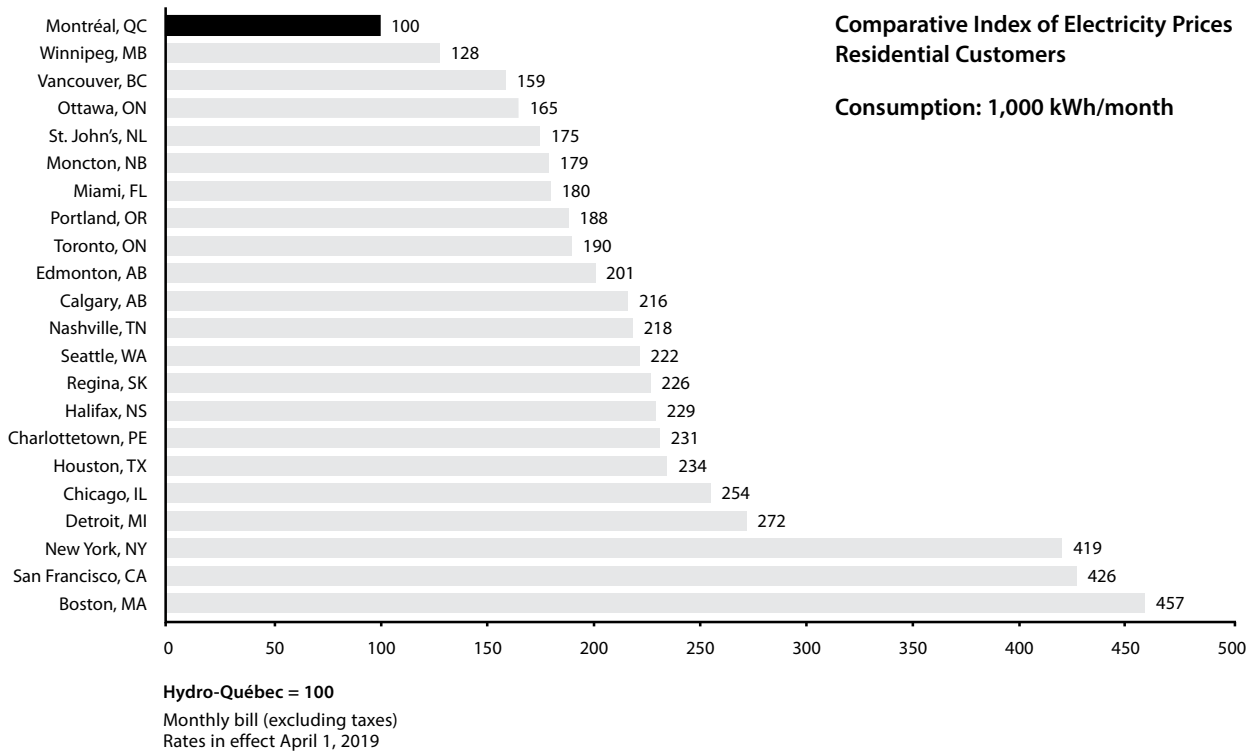
HIGHLIGHTS

The *Electricity Rates* effective April 1, 2019 sets out Hydro-Québec’s rates, as approved by the Régie de l’énergie (the Québec energy board) in accordance with Decision D-2019-037. Three types of rates are in effect: domestic rates, for residential customers, the industrial rate, for large-power industrial customers, and general rates, for other customers. General rates are applied according to minimum billing demand: small power, medium power and large power. For comparison purposes, the electricity bills of the utilities in the study have been analyzed according to these customer categories. The industrial rate has been used to calculate the bills of large-power customers.

RESIDENTIAL CUSTOMERS

The rate applicable to Hydro-Québec’s residential customers is among the most advantageous in North America. For customers whose monthly consumption is 1,000 kWh, Montréal is once again in *first* place. Figure 1 illustrates the results of this comparison.

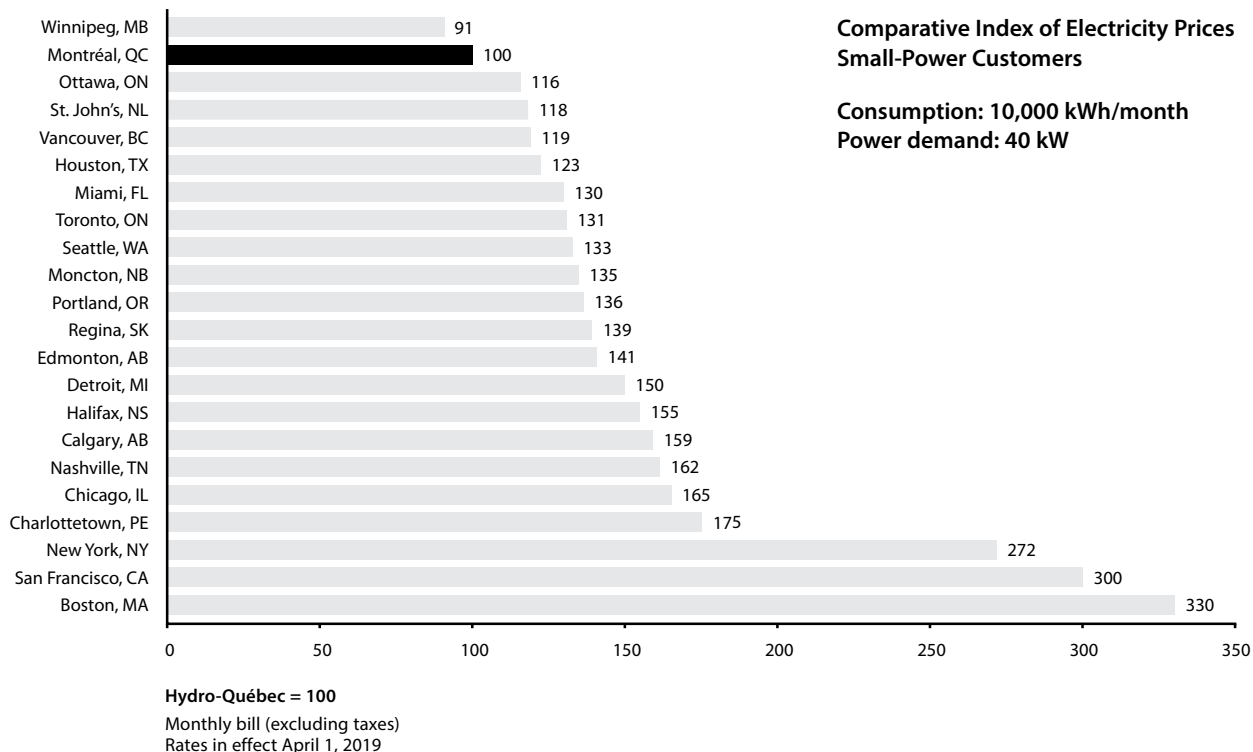
FIGURE 1



SMALL-POWER CUSTOMERS (LESS THAN 100 kW)

The comparison of bills for small-power customers is based on a monthly consumption of 10,000 kWh and a power demand of 40 kW. Montréal is in *second* place, as was the case last year. Figure 2 shows the comparative index of electricity prices.

FIGURE 2

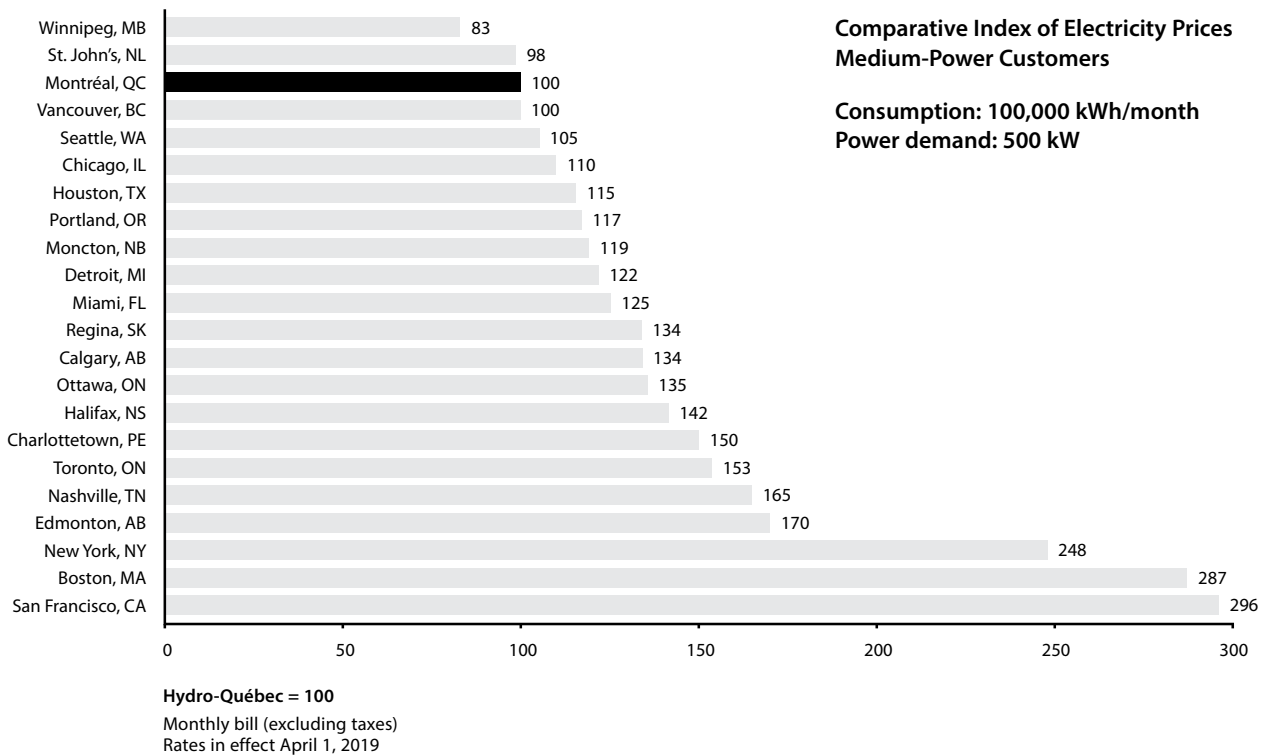


MEDIUM-POWER CUSTOMERS (100 TO 5,000 kW)

Three consumption levels were analyzed for medium-power customers. In all three cases, the bills of Hydro-Québec's customers have remained below the average of the other major North American cities. Figures 3, 4 and 5 show the comparative index of electricity prices for these consumption profiles.

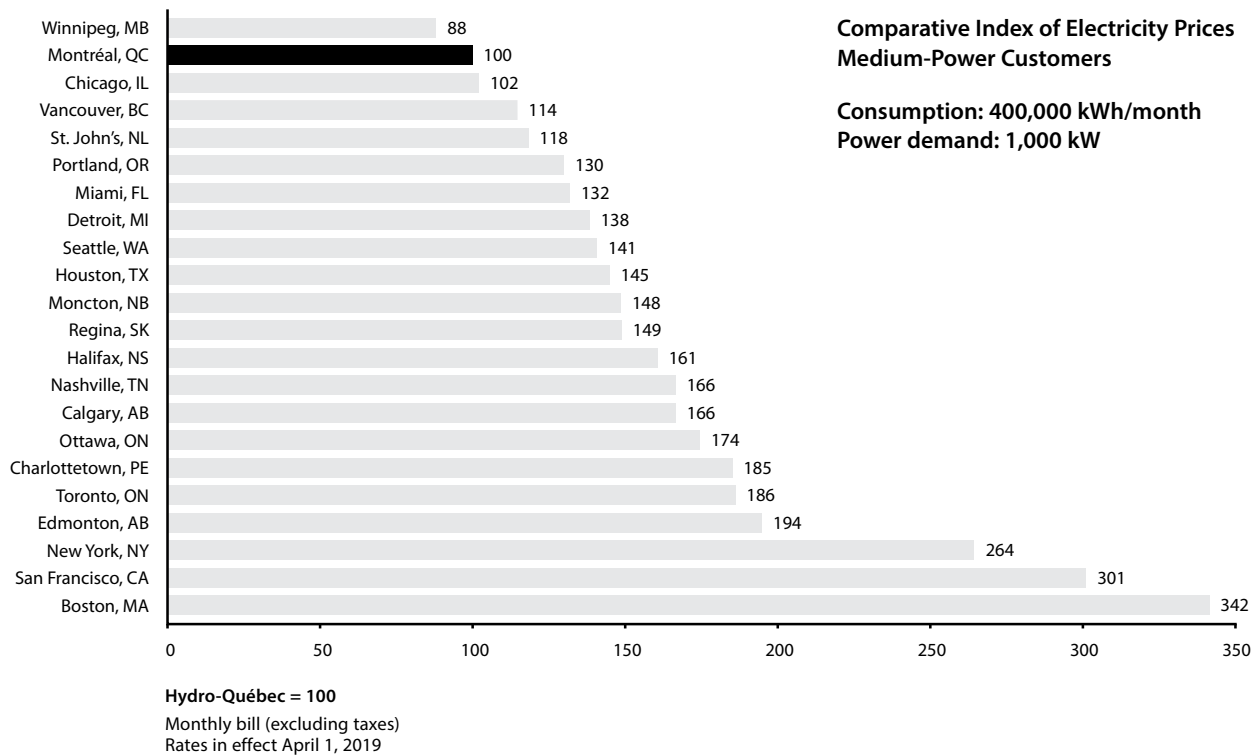
For medium-power customers with a monthly consumption of 100,000 kWh and a power demand of 500 kW, Montréal has climbed the ranking to *third* place, and is followed closely by Vancouver.

FIGURE 3



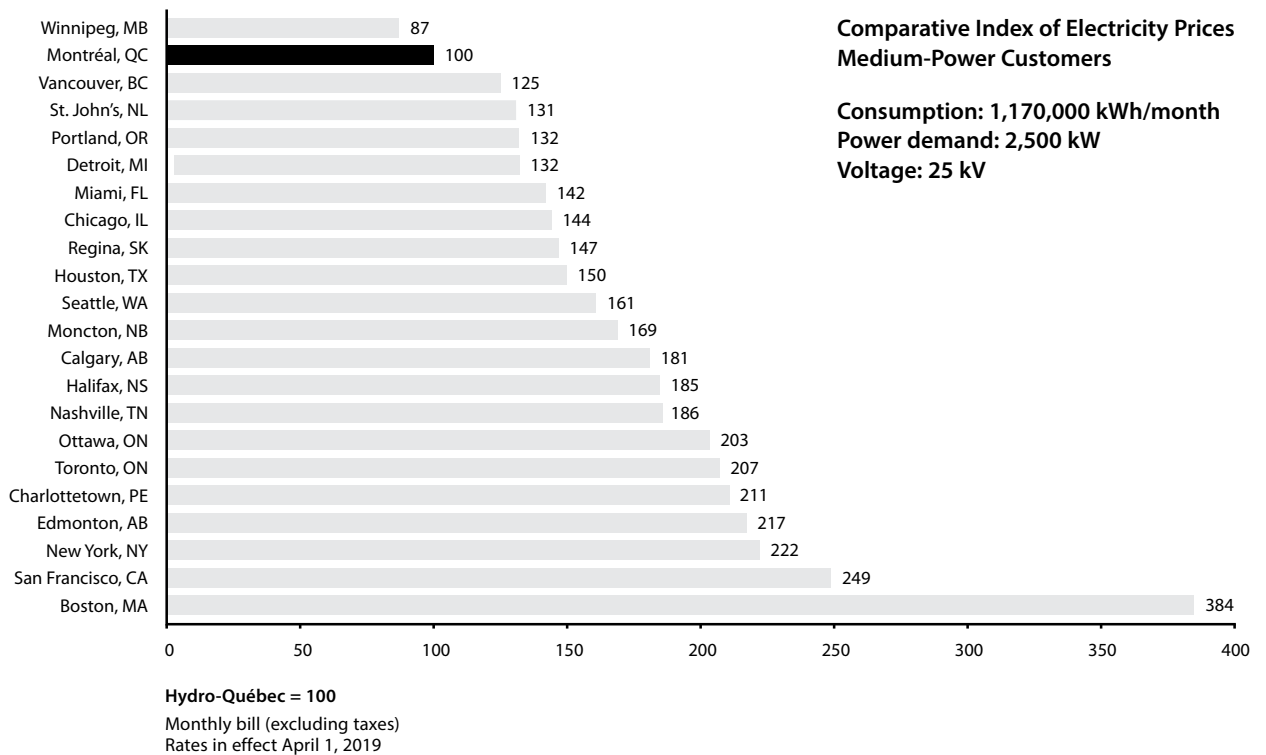
For customers with a monthly consumption of 400,000 kWh and a power demand of 1,000 kW, Montréal is in *second* place.

FIGURE 4



In the case of customers with a monthly consumption of 1,170,000 kWh and a power demand of 2,500 kW, Montréal holds *second* place, as was the case last year.

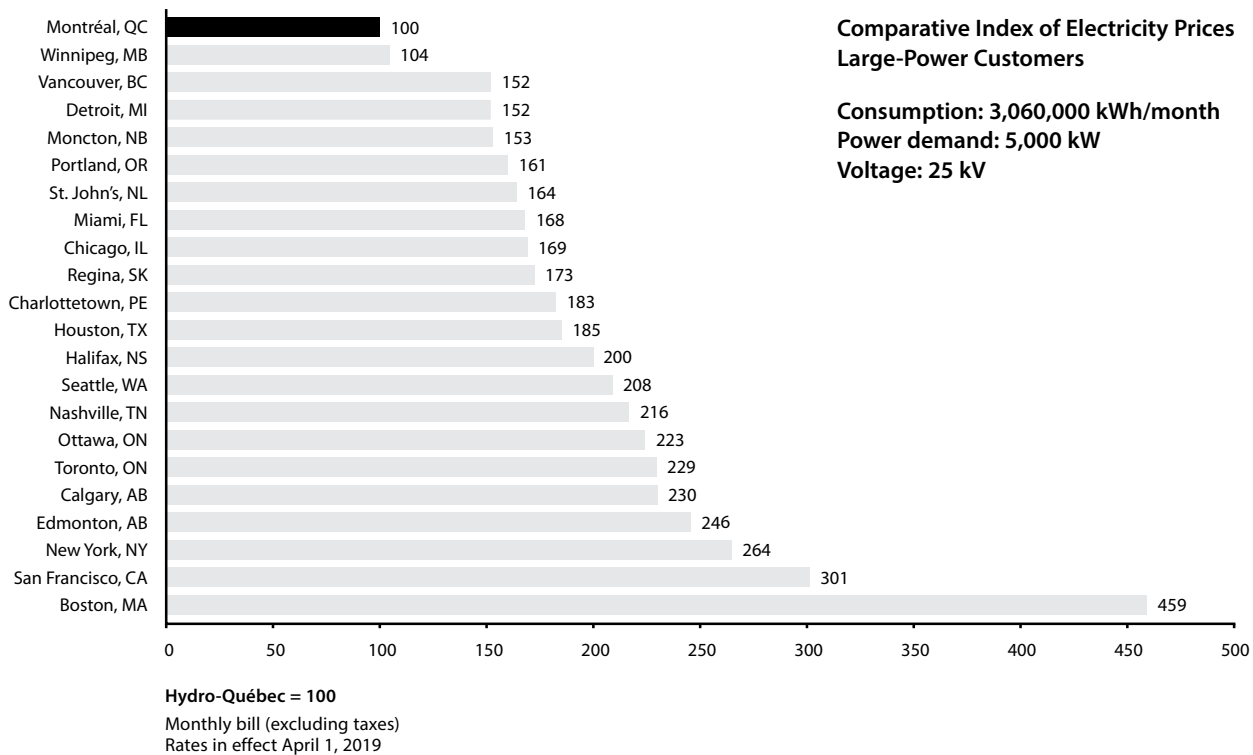
FIGURE 5



LARGE-POWER CUSTOMERS (5,000 kW OR MORE)

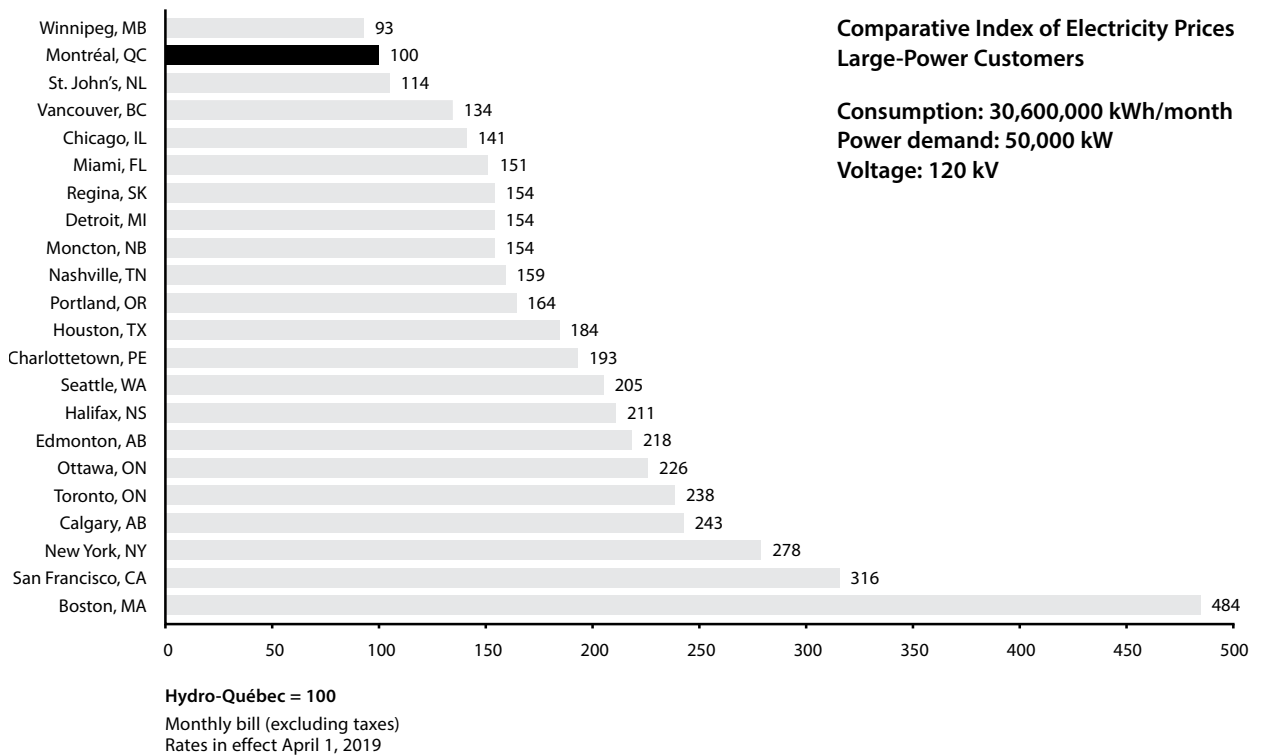
Figure 6 illustrates the comparative index of electricity prices for large-power customers with a monthly consumption of 3,060,000 kWh and a power demand of 5,000 kW. This year, Montréal has improved, moving up from second to *first* place.

FIGURE 6



For industrial customers with a power demand of 50,000 kW and a load factor of 85%, Montréal is in *second* place, coming in just behind Winnipeg.

FIGURE 7



01

Detailed Tables

Summary Tables (excluding taxes)

Monthly Bills

Average Prices

Comparative Index

MONTHLY BILLS ON APRIL 1, 2019

(in CA\$)

Summary Table (excluding taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ¹	5,000 kW ¹	50,000 kW ²
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	72.99	1,002.33	12,195.00	32,230.00	79,924.50	159,075.00	1,505,850.00
Calgary, AB	157.42	1,593.12	16,373.70	53,591.59	144,590.04	366,251.39	3,654,994.48
Charlottetown, PE ³	168.27	1,753.67	18,317.47	59,652.47	168,655.47	290,984.00	2,909,840.00
Edmonton, AB ⁴	146.83	1,415.16	20,746.76	62,680.48	173,122.98	391,595.82	3,283,225.24
Halifax, NS	166.86	1,555.50	17,260.50	51,987.00	147,637.65	317,874.69	3,178,770.84
Moncton, NB	130.95	1,354.09	14,558.49	47,733.49	135,155.49	242,808.73	2,316,500.00
Ottawa, ON	120.39	1,161.20	16,439.73	56,090.89	161,917.98	353,949.10	3,402,406.84
Regina, SK	165.07	1,398.04	16,347.97	48,027.97	117,239.17	274,788.38	2,312,973.29
St. John's, NL ⁵	128.02	1,179.13	11,994.65	37,910.29	104,588.13	260,590.26	1,717,898.00
Toronto, ON ³	138.90	1,313.64	18,603.42	59,981.65	165,088.07	364,478.60	3,583,733.35
Vancouver, BC	116.20	1,192.93	12,238.13	36,588.13	99,608.73	242,186.97	2,017,728.50
Winnipeg, MB	93.68	910.67	10,177.17	28,339.77	69,930.06	165,031.36	1,407,771.36
American Cities							
Boston, MA	333.73	3,304.45	35,043.86	110,096.05	306,736.75	729,677.32	7,293,772.35
Chicago, IL	185.36	1,651.16	13,361.18	32,959.81	115,016.87	268,649.27	2,130,349.34
Detroit, MI ³	198.61	1,500.09	14,817.63	44,586.79	105,625.62	242,397.21	2,316,274.13
Houston, TX ³	171.03	1,233.61	13,979.54	46,595.82	119,901.07	293,891.45	2,776,948.62
Miami, FL ³	131.57	1,300.78	15,222.73	42,396.87	113,485.53	267,716.47	2,274,380.42
Nashville, TN	159.21	1,620.73	20,132.69	53,556.55	148,508.75	343,196.67	2,393,476.25
New York, NY ³	305.61	2,727.64	30,286.86	84,940.68	177,641.80	419,178.54	4,190,053.43
Portland, OR ³	137.56	1,365.28	14,307.32	41,914.48	105,515.16	255,341.82	2,471,716.84
San Francisco, CA	311.08	3,006.87	36,086.13	97,101.48	199,321.54	478,610.04	4,762,438.83
Seattle, WA	161.91	1,337.70	12,776.85	45,398.01	128,870.92	330,320.43	3,081,818.37
AVERAGE	168.24	1,585.35	17,784.90	53,380.01	140,367.38	320,845.16	2,953,769.11

1) Supply voltage of 25 kV, customer-owned transformer.

2) Supply voltage of 120 kV, customer-owned transformer.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

4) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

5) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

AVERAGE PRICES ON APRIL 1, 2019

(in ¢/kWh)¹

Summary Table (excluding taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ²	5,000 kW ²	50,000 kW ³
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	7.30	10.02	12.20	8.06	6.83	5.20	4.92
Calgary, AB	15.74	15.93	16.37	13.40	12.36	11.97	11.94
Charlottetown, PE ⁴	16.83	17.54	18.32	14.91	14.41	9.51	9.51
Edmonton, AB ⁵	14.68	14.15	20.75	15.67	14.80	12.80	10.73
Halifax, NS	16.69	15.56	17.26	13.00	12.62	10.39	10.39
Moncton, NB	13.10	13.54	14.56	11.93	11.55	7.93	7.57
Ottawa, ON	12.04	11.61	16.44	14.02	13.84	11.57	11.12
Regina, SK	16.51	13.98	16.35	12.01	10.02	8.98	7.56
St. John's, NL ⁶	12.80	11.79	11.99	9.48	8.94	8.52	5.61
Toronto, ON ⁴	13.89	13.14	18.60	15.00	14.11	11.91	11.71
Vancouver, BC	11.62	11.93	12.24	9.15	8.51	7.91	6.59
Winnipeg, MB	9.37	9.11	10.18	7.08	5.98	5.39	4.60
American Cities							
Boston, MA	33.37	33.04	35.04	27.52	26.22	23.85	23.84
Chicago, IL	18.54	16.51	13.36	8.24	9.83	8.78	6.96
Detroit, MI ⁴	19.86	15.00	14.82	11.15	9.03	7.92	7.57
Houston, TX ⁴	17.10	12.34	13.98	11.65	10.25	9.60	9.07
Miami, FL ⁴	13.16	13.01	15.22	10.60	9.70	8.75	7.43
Nashville, TN	15.92	16.21	20.13	13.39	12.69	11.22	7.82
New York, NY ⁴	30.56	27.28	30.29	21.24	15.18	13.70	13.69
Portland, OR ⁴	13.76	13.65	14.31	10.48	9.02	8.34	8.08
San Francisco, CA	31.11	30.07	36.09	24.28	17.04	15.64	15.56
Seattle, WA	16.19	13.38	12.78	11.35	11.01	10.79	10.07
AVERAGE	16.82	15.85	17.78	13.35	12.00	10.49	9.65

1) In Canadian currency.

2) Supply voltage of 25 kV, customer-owned transformer.

3) Supply voltage of 120 kV, customer-owned transformer.

4) These bills have been estimated by Hydro-Québec and may differ from actual bills.

5) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

6) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

COMPARATIVE INDEX ON APRIL 1, 2019

(Hydro-Québec = 100)

Summary Table (excluding taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ¹	5,000 kW ¹	50,000 kW ²
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	100	100	100	100	100	100	100
Calgary, AB	216	159	134	166	181	230	243
Charlottetown, PE ³	231	175	150	185	211	183	193
Edmonton, AB ⁴	201	141	170	194	217	246	218
Halifax, NS	229	155	142	161	185	200	211
Moncton, NB	179	135	119	148	169	153	154
Ottawa, ON	165	116	135	174	203	223	226
Regina, SK	226	139	134	149	147	173	154
St. John's, NL ⁵	175	118	98	118	131	164	114
Toronto, ON ³	190	131	153	186	207	229	238
Vancouver, BC	159	119	100	114	125	152	134
Winnipeg, MB	128	91	83	88	87	104	93
American Cities							
Boston, MA	457	330	287	342	384	459	484
Chicago, IL	254	165	110	102	144	169	141
Detroit, MI ³	272	150	122	138	132	152	154
Houston, TX ³	234	123	115	145	150	185	184
Miami, FL ³	180	130	125	132	142	168	151
Nashville, TN	218	162	165	166	186	216	159
New York, NY ³	419	272	248	264	222	264	278
Portland, OR ³	188	136	117	130	132	161	164
San Francisco, CA	426	300	296	301	249	301	316
Seattle, WA	222	133	105	141	161	208	205
AVERAGE	230	158	146	166	176	202	196

1) Supply voltage of 25 kV, customer-owned transformer.

2) Supply voltage of 120 kV, customer-owned transformer.

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02

Detailed Tables

Summary Tables (including taxes)

Monthly Bills

Average Prices

Comparative Index

MONTHLY BILLS ON APRIL 1, 2019

(in CA\$)

Summary Table (including taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ¹	5,000 kW ¹	50,000 kW ²
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	83.92	1,152.43	14,021.20	37,056.44	91,893.20	182,896.48	1,731,351.04
Calgary, AB	165.29	1,672.78	17,192.38	56,271.17	151,819.54	384,563.96	3,837,744.20
Charlottetown, PE ³	193.51	2,016.72	21,065.09	68,600.34	193,953.79	334,631.60	3,346,316.00
Edmonton, AB ⁴	154.17	1,485.92	21,784.10	65,814.50	181,779.13	411,175.61	3,447,386.50
Halifax, NS	175.20	1,788.83	19,849.58	59,785.05	169,783.30	365,555.89	3,655,586.47
Moncton, NB	150.59	1,557.20	16,742.26	54,893.51	155,428.81	279,230.04	2,663,975.00
Ottawa, ON	137.40	1,325.28	18,576.89	63,382.70	182,967.32	399,962.48	3,844,719.73
Regina, SK	193.08	1,731.78	20,196.75	59,672.51	145,982.97	343,087.66	2,902,025.44
St. John's, NL ⁵	147.22	1,356.00	13,793.85	43,596.83	120,276.35	299,678.80	1,975,582.70
Toronto, ON ³	158.53	1,499.27	21,021.86	67,779.26	186,549.52	411,860.82	4,049,618.69
Vancouver, BC	124.00	1,252.58	12,850.04	38,417.54	104,589.17	254,296.32	2,118,614.93
Winnipeg, MB	108.31	1,076.86	12,034.50	33,511.78	78,216.77	184,587.58	1,574,592.27
American Cities							
Boston, MA	333.73	3,501.42	37,138.57	116,594.94	324,790.14	772,359.05	7,720,402.08
Chicago, IL	198.13	1,754.71	14,304.16	36,535.51	125,071.69	293,810.64	2,349,002.84
Detroit, MI ³	216.49	1,665.10	16,447.57	49,491.34	117,244.44	269,060.91	2,571,064.29
Houston, TX ³	172.74	1,328.96	14,982.89	49,852.48	129,401.05	317,356.67	2,998,751.19
Miami, FL ³	155.30	1,643.03	19,270.62	53,367.69	142,635.98	335,743.72	2,825,362.38
Nashville, TN	159.21	1,734.19	21,541.98	57,305.51	158,904.36	367,220.44	2,561,019.58
New York, NY ³	332.88	3,042.21	33,780.09	94,734.12	198,112.71	467,479.68	4,672,864.80
Portland, OR ³	139.73	1,387.11	14,537.39	42,583.00	107,244.49	259,536.43	2,512,391.47
San Francisco, CA	311.48	3,161.21	37,930.45	102,116.60	209,755.74	503,764.87	5,012,804.13
Seattle, WA	161.91	1,337.70	12,776.85	45,398.01	128,870.92	330,320.43	3,081,818.37
AVERAGE	180.58	1,748.70	19,629.05	58,943.68	154,785.06	353,099.09	3,247,863.37

1) Supply voltage of 25 kV, customer-owned transformer.

2) Supply voltage of 120 kV, customer-owned transformer.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

4) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

5) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

AVERAGE PRICES ON APRIL 1, 2019

(in ¢/kWh)¹

Summary Table (including taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ²	5,000 kW ²	50,000 kW ³
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	8.39	11.52	14.02	9.26	7.85	5.98	5.66
Calgary, AB	16.53	16.73	17.19	14.07	12.98	12.57	12.54
Charlottetown, PE ⁴	19.35	20.17	21.07	17.15	16.58	10.94	10.94
Edmonton, AB ⁵	15.42	14.86	21.78	16.45	15.54	13.44	11.27
Halifax, NS	17.52	17.89	19.85	14.95	14.51	11.95	11.95
Moncton, NB	15.06	15.57	16.74	13.72	13.28	9.13	8.71
Ottawa, ON	13.74	13.25	18.58	15.85	15.64	13.07	12.56
Regina, SK	19.31	17.32	20.20	14.92	12.48	11.21	9.48
St. John's, NL ⁶	14.72	13.56	13.79	10.90	10.28	9.79	6.46
Toronto, ON ⁴	15.85	14.99	21.02	16.94	15.94	13.46	13.23
Vancouver, BC	12.40	12.53	12.85	9.60	8.94	8.31	6.92
Winnipeg, MB	10.83	10.77	12.03	8.38	6.69	6.03	5.15
American Cities							
Boston, MA	33.37	35.01	37.14	29.15	27.76	25.24	25.23
Chicago, IL	19.81	17.55	14.30	9.13	10.69	9.60	7.68
Detroit, MI ⁴	21.65	16.65	16.45	12.37	10.02	8.79	8.40
Houston, TX ⁴	17.27	13.29	14.98	12.46	11.06	10.37	9.80
Miami, FL ⁴	15.53	16.43	19.27	13.34	12.19	10.97	9.23
Nashville, TN	15.92	17.34	21.54	14.33	13.58	12.00	8.37
New York, NY ⁴	33.29	30.42	33.78	23.68	16.93	15.28	15.27
Portland, OR ⁴	13.97	13.87	14.54	10.65	9.17	8.48	8.21
San Francisco, CA	31.15	31.61	37.93	25.53	17.93	16.46	16.38
Seattle, WA	16.19	13.38	12.78	11.35	11.01	10.79	10.07
AVERAGE	18.06	17.49	19.63	14.74	13.23	11.54	10.61

1) In Canadian currency.

2) Supply voltage of 25 kV, customer-owned transformer.

3) Supply voltage of 120 kV, customer-owned transformer.

4) These bills have been estimated by Hydro-Québec and may differ from actual bills.

5) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

6) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

COMPARATIVE INDEX ON APRIL 1, 2019

(Hydro-Québec = 100)

Summary Table (including taxes)

	Residential	Small Power	Medium Power			Large Power	
Power demand		40 kW	500 kW	1,000 kW	2,500 kW ¹	5,000 kW ¹	50,000 kW ²
Consumption	1,000 kWh	10,000 kWh	100,000 kWh	400,000 kWh	1,170,000 kWh	3,060,000 kWh	30,600,000 kWh
Load factor		35%	28%	56%	65%	85%	85%
Canadian Cities							
Montréal, QC	100	100	100	100	100	100	100
Calgary, AB	197	145	123	152	165	210	222
Charlottetown, PE ³	231	175	150	185	211	183	193
Edmonton, AB ⁴	184	129	155	178	198	225	199
Halifax, NS	209	155	142	161	185	200	211
Moncton, NB	179	135	119	148	169	153	154
Ottawa, ON	164	115	132	171	199	219	222
Regina, SK	230	150	144	161	159	188	168
St. John's, NL ⁵	175	118	98	118	131	164	114
Toronto, ON ³	189	130	150	183	203	225	234
Vancouver, BC	148	109	92	104	114	139	122
Winnipeg, MB	129	93	86	90	85	101	91
American Cities							
Boston, MA	398	304	265	315	353	422	446
Chicago, IL	236	152	102	99	136	161	136
Detroit, MI ³	258	144	117	134	128	147	149
Houston, TX ³	206	115	107	135	141	174	173
Miami, FL ³	185	143	137	144	155	184	163
Nashville, TN	190	150	154	155	173	201	148
New York, NY ³	397	264	241	256	216	256	270
Portland, OR ³	167	120	104	115	117	142	145
San Francisco, CA	371	274	271	276	228	275	290
Seattle, WA	193	116	91	123	140	181	178
AVERAGE	215	152	140	159	168	193	188

1) Supply voltage of 25 kV, customer-owned transformer.

2) Supply voltage of 120 kV, customer-owned transformer.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

4) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

5) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

03

Detailed Tables

Residential

Monthly Bills

Average Prices

Comparative Index

RESIDENTIAL

Monthly Bills on April 1, 2019 (in CA\$)

Consumption	625 kWh	750 kWh	1,000 kWh	2,000 kWh	3,000 kWh
Canadian Cities					
Montréal, QC	50.19	57.79	72.99	160.19	253.99
Calgary, AB	107.48	124.13	157.42	290.60	423.78
Charlottetown, PE ¹	114.38	132.35	168.27	311.97	426.17
Edmonton, AB	101.11	116.36	146.83	268.74	390.65
Halifax, NS	108.35	127.85	166.86	322.89	478.92
Moncton, NB	90.04	103.68	130.95	240.05	349.15
Ottawa, ON	83.91	96.08	120.39	217.68	314.98
Regina, SK	111.72	129.50	165.07	307.35	449.63
St. John's, NL ²	85.94	99.97	128.02	240.19	352.37
Toronto, ON ¹	100.73	113.45	138.90	240.71	342.52
Vancouver, BC	65.42	80.77	116.20	257.90	399.60
Winnipeg, MB	61.70	72.36	93.68	178.95	264.22
American Cities					
Boston, MA	212.08	252.64	333.73	658.13	982.52
Chicago, IL	125.09	145.17	185.36	346.03	506.73
Detroit, MI ¹	124.46	149.18	198.61	396.35	594.10
Houston, TX ¹	122.90	143.36	171.03	334.76	498.49
Miami, FL ¹	86.37	101.44	131.57	279.50	427.44
Nashville, TN	110.29	126.60	159.21	289.67	425.46
New York, NY ¹	198.82	234.41	305.61	590.41	875.21
Portland, OR ¹	91.21	106.66	137.56	303.27	468.99
San Francisco, CA	174.14	219.82	311.08	850.52	1,490.82
Seattle, WA	95.59	117.70	161.91	338.76	515.61
AVERAGE	110.09	129.60	168.24	337.48	510.52

1) These bills have been estimated by Hydro-Québec and may differ from actual bills.

2) Newfoundland Power rates.

RESIDENTIAL

Average Prices on April 1, 2019

(in ¢/kWh)¹

Consumption	625 kWh	750 kWh	1,000 kWh	2,000 kWh	3,000 kWh
Canadian Cities					
Montréal, QC	8.03	7.71	7.30	8.01	8.47
Calgary, AB	17.20	16.55	15.74	14.53	14.13
Charlottetown, PE ²	18.30	17.65	16.83	15.60	14.21
Edmonton, AB	16.18	15.51	14.68	13.44	13.02
Halifax, NS	17.34	17.05	16.69	16.14	15.96
Moncton, NB	14.41	13.82	13.10	12.00	11.64
Ottawa, ON	13.43	12.81	12.04	10.88	10.50
Regina, SK	17.87	17.27	16.51	15.37	14.99
St. John's, NL ³	13.75	13.33	12.80	12.01	11.75
Toronto, ON ²	16.12	15.13	13.89	12.04	11.42
Vancouver, BC	10.47	10.77	11.62	12.90	13.32
Winnipeg, MB	9.87	9.65	9.37	8.95	8.81
American Cities					
Boston, MA	33.93	33.69	33.37	32.91	32.75
Chicago, IL	20.01	19.36	18.54	17.30	16.89
Detroit, MI ²	19.91	19.89	19.86	19.82	19.80
Houston, TX ²	19.66	19.12	17.10	16.74	16.62
Miami, FL ²	13.82	13.53	13.16	13.98	14.25
Nashville, TN	17.65	16.88	15.92	14.48	14.18
New York, NY ²	31.81	31.26	30.56	29.52	29.17
Portland, OR ²	14.59	14.22	13.76	15.16	15.63
San Francisco, CA	27.86	29.31	31.11	42.53	49.69
Seattle, WA	15.29	15.69	16.19	16.94	17.19
AVERAGE	17.61	17.28	16.82	16.87	17.02

1) In Canadian currency.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Newfoundland Power rates.

RESIDENTIAL

Comparative Index on April 1, 2019
(Hydro-Québec = 100)

Consumption	625 kWh	750 kWh	1,000 kWh	2,000 kWh	3,000 kWh
Canadian Cities					
Montréal, QC	100	100	100	100	100
Calgary, AB	214	215	216	181	167
Charlottetown, PE ¹	228	229	231	195	168
Edmonton, AB	201	201	201	168	154
Halifax, NS	216	221	229	202	189
Moncton, NB	179	179	179	150	137
Ottawa, ON	167	166	165	136	124
Regina, SK	223	224	226	192	177
St. John's, NL ²	171	173	175	150	139
Toronto, ON ¹	201	196	190	150	135
Vancouver, BC	130	140	159	161	157
Winnipeg, MB	123	125	128	112	104
American Cities					
Boston, MA	423	437	457	411	387
Chicago, IL	249	251	254	216	200
Detroit, MI ¹	248	258	272	247	234
Houston, TX ¹	245	248	234	209	196
Miami, FL ¹	172	176	180	174	168
Nashville, TN	220	219	218	181	168
New York, NY ¹	396	406	419	369	345
Portland, OR ¹	182	185	188	189	185
San Francisco, CA	347	380	426	531	587
Seattle, WA	190	204	222	211	203
AVERAGE	219	224	230	211	201

1) These bills have been estimated by Hydro-Québec and may differ from actual bills.

2) Newfoundland Power rates.

04

Detailed Tables

Small Power

Monthly Bills

Average Prices

Comparative Index

SMALL POWER

Monthly Bills on April 1, 2019
(in CA\$)

Power demand	6 kW	14 kW	40 kW	100 kW	100 kW
Consumption	750 kWh	2,000 kWh	10,000 kWh	14,000 kWh	25,000 kWh
Load factor	17%	20%	35%	19%	35%
Canadian Cities					
Montréal, QC	86.58	210.33	1,002.33	1,834.20	2,715.50
Calgary, AB	141.36	298.25	1,593.12	2,409.30	3,632.65
Charlottetown, PE ¹	157.10	377.97	1,753.67	3,021.07	4,290.47
Edmonton, AB	120.82	295.72	1,415.16	2,617.72	3,602.11
Halifax, NS	124.81	305.70	1,555.50	2,731.38	3,888.75
Moncton, NB	121.19	285.19	1,354.09	2,355.89	3,379.99
Ottawa, ON	104.02	246.88	1,161.20	2,526.13	4,033.44
Regina, SK	133.66	304.52	1,398.04	2,687.72	3,650.47
St. John's, NL ²	105.31	274.53	1,179.13	2,054.03	2,940.57
Toronto, ON ¹	131.88	291.58	1,313.64	2,816.96	4,351.42
Vancouver, BC	105.06	261.69	1,192.93	1,905.33	2,970.13
Winnipeg, MB	87.79	198.99	910.67	1,830.95	2,404.49
American Cities					
Boston, MA	246.41	631.60	3,304.45	6,218.35	8,684.39
Chicago, IL	194.75	427.96	1,651.16	2,765.37	4,064.97
Detroit, MI ¹	127.38	316.31	1,500.09	2,091.98	3,719.68
Houston, TX ¹	95.92	331.56	1,233.61	2,175.29	3,041.86
Miami, FL ¹	106.13	259.59	1,300.78	2,466.65	3,199.31
Nashville, TN	188.09	404.62	1,620.73	3,769.17	4,577.09
New York, NY ¹	242.29	814.08	2,727.64	5,376.88	6,720.68
Portland, OR ¹	127.91	301.37	1,365.28	2,303.78	3,352.14
San Francisco, CA	245.44	632.61	3,006.87	5,001.49	7,241.12
Seattle, WA	100.33	267.54	1,337.70	1,943.20	3,065.51
AVERAGE	140.65	351.75	1,585.35	2,859.22	4,069.40

1) These bills have been estimated by Hydro-Québec and may differ from actual bills.

2) Newfoundland Power rates.

SMALL POWER

Average Prices on April 1, 2019

(in ¢/kWh)¹

Power demand	6 kW	14 kW	40 kW	100 kW	100 kW
Consumption	750 kWh	2,000 kWh	10,000 kWh	14,000 kWh	25,000 kWh
Load factor	17%	20%	35%	19%	35%
Canadian Cities					
Montréal, QC	11.54	10.52	10.02	13.10	10.86
Calgary, AB	18.85	14.91	15.93	17.21	14.53
Charlottetown, PE ²	20.95	18.90	17.54	21.58	17.16
Edmonton, AB	16.11	14.79	14.15	18.70	14.41
Halifax, NS	16.64	15.29	15.56	19.51	15.56
Moncton, NB	16.16	14.26	13.54	16.83	13.52
Ottawa, ON	13.87	12.34	11.61	18.04	16.13
Regina, SK	17.82	15.23	13.98	19.20	14.60
St. John's, NL ³	14.04	13.73	11.79	14.67	11.76
Toronto, ON ²	17.58	14.58	13.14	20.12	17.41
Vancouver, BC	14.01	13.08	11.93	13.61	11.88
Winnipeg, MB	11.71	9.95	9.11	13.08	9.62
American Cities					
Boston, MA	32.85	31.58	33.04	44.42	34.74
Chicago, IL	25.97	21.40	16.51	19.75	16.26
Detroit, MI ²	16.98	15.82	15.00	14.94	14.88
Houston, TX ²	12.79	16.58	12.34	15.54	12.17
Miami, FL ²	14.15	12.98	13.01	17.62	12.80
Nashville, TN	25.08	20.23	16.21	26.92	18.31
New York, NY ²	32.31	40.70	27.28	38.41	26.88
Portland, OR ²	17.05	15.07	13.65	16.46	13.41
San Francisco, CA	32.73	31.63	30.07	35.72	28.96
Seattle, WA	13.38	13.38	13.38	13.88	12.26
AVERAGE	18.75	17.59	15.85	20.42	16.28

1) In Canadian currency.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Newfoundland Power rates.

SMALL POWER

Comparative Index on April 1, 2019

(Hydro-Québec = 100)

Power demand	6 kW	14 kW	40 kW	100 kW	100 kW
Consumption	750 kWh	2,000 kWh	10,000 kWh	14,000 kWh	25,000 kWh
Load factor	17%	20%	35%	19%	35%
Canadian Cities					
Montréal, QC	100	100	100	100	100
Calgary, AB	163	142	159	131	134
Charlottetown, PE ¹	181	180	175	165	158
Edmonton, AB	140	141	141	143	133
Halifax, NS	144	145	155	149	143
Moncton, NB	140	136	135	128	124
Ottawa, ON	120	117	116	138	149
Regina, SK	154	145	139	147	134
St. John's, NL ²	122	131	118	112	108
Toronto, ON ¹	152	139	131	154	160
Vancouver, BC	121	124	119	104	109
Winnipeg, MB	101	95	91	100	89
American Cities					
Boston, MA	285	300	330	339	320
Chicago, IL	225	203	165	151	150
Detroit, MI ¹	147	150	150	114	137
Houston, TX ¹	111	158	123	119	112
Miami, FL ¹	123	123	130	134	118
Nashville, TN	217	192	162	205	169
New York, NY ¹	280	387	272	293	247
Portland, OR ¹	148	143	136	126	123
San Francisco, CA	283	301	300	273	267
Seattle, WA	116	127	133	106	113
AVERAGE	162	167	158	156	150

1) These bills have been estimated by Hydro-Québec and may differ from actual bills.

2) Newfoundland Power rates.

05

Detailed Tables

Medium Power

Monthly Bills

Average Prices

Comparative Index

MEDIUM POWER

Monthly Bills on April 1, 2019
(in CA\$)

Power demand	500 kW	500 kW	1,000 kW	1,000 kW	2,500 kW ¹
Consumption	100,000 kWh	200,000 kWh	200,000 kWh	400,000 kWh	1,170,000 kWh
Load factor	28%	56%	28%	56%	65%
Canadian Cities					
Montréal, QC	12,195.00	17,350.00	24,390.00	32,230.00	79,924.50
Calgary, AB	16,373.70	27,148.83	32,041.31	53,591.59	144,590.04
Charlottetown, PE ²	18,317.47	29,857.47	36,572.47	59,652.47	168,655.47
Edmonton, AB ³	20,746.76	32,561.12	39,051.77	62,680.48	173,122.98
Halifax, NS	17,260.50	25,993.50	34,521.00	51,987.00	147,637.65
Moncton, NB	14,558.49	23,868.49	29,113.49	47,733.49	135,155.49
Ottawa, ON	16,439.73	28,145.57	32,679.20	56,090.89	161,917.98
Regina, SK	16,347.97	24,021.97	32,679.97	48,027.97	117,239.17
St. John's, NL ⁴	11,994.65	19,607.72	22,831.91	37,910.29	104,588.13
Toronto, ON ²	18,603.42	30,326.22	36,770.49	59,981.65	165,088.07
Vancouver, BC	12,238.13	18,298.13	24,468.13	36,588.13	99,608.73
Winnipeg, MB	10,177.17	14,285.17	20,123.77	28,339.77	69,930.06
American Cities					
Boston, MA	35,043.86	55,154.72	69,874.32	110,096.05	306,736.75
Chicago, IL	13,361.18	16,578.68	26,524.83	32,959.81	115,016.87
Detroit, MI ²	14,817.63	22,513.92	29,614.90	44,586.79	105,625.62
Houston, TX ²	13,979.54	21,857.49	30,839.91	46,595.82	119,901.07
Miami, FL ²	15,222.73	21,251.06	30,340.22	42,396.87	113,485.53
Nashville, TN	20,132.69	26,910.56	40,000.82	53,556.55	148,508.75
New York, NY ²	30,286.86	42,503.15	60,508.10	84,940.68	177,641.80
Portland, OR ²	14,307.32	21,876.04	27,379.34	41,914.48	105,515.16
San Francisco, CA	36,086.13	50,611.21	69,747.48	97,101.48	199,321.54
Seattle, WA	12,776.85	22,979.65	25,173.03	45,398.01	128,870.92
AVERAGE	17,784.90	26,986.39	35,238.48	53,380.01	140,367.38

1) Supply voltage of 25 kV, customer-owned transformer.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

4) Newfoundland Power rates.

MEDIUM POWER

Average Prices on April 1, 2019

(in ¢/kWh)¹

Power demand	500 kW	500 kW	1,000 kW	1,000 kW	2,500 kW ²
Consumption	100,000 kWh	200,000 kWh	200,000 kWh	400,000 kWh	1,170,000 kWh
Load factor	28%	56%	28%	56%	65%
Canadian Cities					
Montréal, QC	12.20	8.68	12.20	8.06	6.83
Calgary, AB	16.37	13.57	16.02	13.40	12.36
Charlottetown, PE ³	18.32	14.93	18.29	14.91	14.41
Edmonton, AB ⁴	20.75	16.28	19.53	15.67	14.80
Halifax, NS	17.26	13.00	17.26	13.00	12.62
Moncton, NB	14.56	11.93	14.56	11.93	11.55
Ottawa, ON	16.44	14.07	16.34	14.02	13.84
Regina, SK	16.35	12.01	16.34	12.01	10.02
St. John's, NL ⁵	11.99	9.80	11.42	9.48	8.94
Toronto, ON ³	18.60	15.16	18.39	15.00	14.11
Vancouver, BC	12.24	9.15	12.23	9.15	8.51
Winnipeg, MB	10.18	7.14	10.06	7.08	5.98
American Cities					
Boston, MA	35.04	27.58	34.94	27.52	26.22
Chicago, IL	13.36	8.29	13.26	8.24	9.83
Detroit, MI ³	14.82	11.26	14.81	11.15	9.03
Houston, TX ³	13.98	10.93	15.42	11.65	10.25
Miami, FL ³	15.22	10.63	15.17	10.60	9.70
Nashville, TN	20.13	13.46	20.00	13.39	12.69
New York, NY ³	30.29	21.25	30.25	21.24	15.18
Portland, OR ³	14.31	10.94	13.69	10.48	9.02
San Francisco, CA	36.09	25.31	34.87	24.28	17.04
Seattle, WA	12.78	11.49	12.59	11.35	11.01
AVERAGE	17.78	13.49	17.62	13.35	12.00

1) In Canadian currency.

2) Supply voltage of 25 kV, customer-owned transformer.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

4) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

5) Newfoundland Power rates.

MEDIUM POWER

Comparative Index on April 1, 2019

(Hydro-Québec = 100)

Power demand	500 kW	500 kW	1,000 kW	1,000 kW	2,500 kW ¹
Consumption	100,000 kWh	200,000 kWh	200,000 kWh	400,000 kWh	1,170,000 kWh
Load factor	28%	56%	28%	56%	65%
Canadian Cities					
Montréal, QC	100	100	100	100	100
Calgary, AB	134	156	131	166	181
Charlottetown, PE ²	150	172	150	185	211
Edmonton, AB ³	170	188	160	194	217
Halifax, NS	142	150	142	161	185
Moncton, NB	119	138	119	148	169
Ottawa, ON	135	162	134	174	203
Regina, SK	134	138	134	149	147
St. John's, NL ⁴	98	113	94	118	131
Toronto, ON ²	153	175	151	186	207
Vancouver, BC	100	105	100	114	125
Winnipeg, MB	83	82	83	88	87
American Cities					
Boston, MA	287	318	286	342	384
Chicago, IL	110	96	109	102	144
Detroit, MI ²	122	130	121	138	132
Houston, TX ²	115	126	126	145	150
Miami, FL ²	125	122	124	132	142
Nashville, TN	165	155	164	166	186
New York, NY ²	248	245	248	264	222
Portland, OR ²	117	126	112	130	132
San Francisco, CA	296	292	286	301	249
Seattle, WA	105	132	103	141	161
AVERAGE	146	156	144	166	176

1) Supply voltage of 25 kV, customer-owned transformer.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

4) Newfoundland Power rates.

06

Detailed Tables

Large Power

Monthly Bills

Average Prices

Comparative Index

LARGE POWER

Monthly Bills on April 1, 2019 (in CA\$)

Power demand	5,000 kW	5,000 kW	10,000 kW	30,000 kW	50,000 kW	50,000 kW
Consumption	2,340,000 kWh	3,060,000 kWh	5,760,000 kWh	17,520,000 kWh	23,400,000 kWh	30,600,000 kWh
Voltage ¹	25 kV	25 kV	120 kV	120 kV	120 kV	120 kV
Load factor	65%	85%	80%	81%	65%	85%

Canadian Cities

Montréal, QC	135,459.00	159,075.00	289,362.00	875,958.00	1,269,690.00	1,505,850.00
Calgary, AB	286,798.97	366,251.39	691,939.91	2,100,635.81	2,860,470.30	3,654,994.48
Charlottetown, PE ²	239,576.00	290,984.00	556,264.00	1,685,928.00	2,395,760.00	2,909,840.00
Edmonton, AB ³	315,260.31	391,595.82	630,966.76	1,902,847.48	2,667,466.84	3,283,225.24
Halifax, NS	257,934.69	317,874.69	605,779.37	1,837,330.11	2,579,370.84	3,178,770.84
Moncton, NB	204,441.73	242,808.73	444,400.00	1,345,800.00	1,938,500.00	2,316,500.00
Ottawa, ON	331,635.61	353,949.10	681,509.88	2,021,504.33	3,179,271.93	3,402,406.84
Regina, SK	225,093.98	274,788.38	446,691.58	1,339,513.04	1,873,125.29	2,312,973.29
St. John's, NL ⁴	206,308.09	260,590.26	487,977.03	998,541.60	1,441,922.00	1,717,898.00
Toronto, ON ²	341,329.60	364,478.60	708,979.06	2,125,588.91	3,357,180.99	3,583,733.35
Vancouver, BC	199,209.45	242,186.97	385,189.42	1,167,812.16	1,650,672.50	2,017,728.50
Winnipeg, MB	137,246.56	165,031.36	269,156.78	815,740.27	1,159,875.36	1,407,771.36

American Cities

Boston, MA	589,411.55	729,677.32	1,388,888.33	4,212,753.39	5,891,114.72	7,293,772.35
Chicago, IL	229,082.01	268,649.27	411,933.20	1,232,690.38	1,734,676.73	2,130,349.34
Detroit, MI ²	210,676.81	242,397.21	448,214.27	1,353,827.35	2,006,272.11	2,316,274.13
Houston, TX ²	237,099.11	293,891.45	528,976.66	1,601,404.73	2,214,498.67	2,776,948.62
Miami, FL ²	226,655.58	267,716.47	439,179.34	1,323,894.04	1,915,625.79	2,274,380.42
Nashville, TN	293,531.82	343,196.67	440,156.77	1,294,038.08	1,950,927.98	2,393,476.25
New York, NY ²	355,091.16	419,178.54	806,120.95	2,439,340.42	3,549,179.63	4,190,053.43
Portland, OR ²	209,552.98	255,341.82	475,476.60	1,434,805.95	2,048,544.82	2,471,716.84
San Francisco, CA	395,233.80	478,610.04	912,902.90	2,761,242.65	3,928,676.50	4,762,438.83
Seattle, WA	257,894.15	330,320.43	583,346.47	1,771,666.59	2,409,084.46	3,081,818.37
AVERAGE	267,478.32	320,845.16	574,245.97	1,711,039.24	2,455,541.25	2,953,769.11

1) Customer-owned transformer.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

4) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

LARGE POWER

Average Prices on April 1, 2019

(in ¢/kWh)¹

Power demand	5,000 kW	5,000 kW	10,000 kW	30,000 kW	50,000 kW	50,000 kW
Consumption	2,340,000 kWh	3,060,000 kWh	5,760,000 kWh	17,520,000 kWh	23,400,000 kWh	30,600,000 kWh
Voltage ²	25 kV	25 kV	120 kV	120 kV	120 kV	120 kV
Load factor	65%	85%	80%	81%	65%	85%

Canadian Cities

Montréal, QC	5.79	5.20	5.02	5.00	5.43	4.92
Calgary, AB	12.26	11.97	12.01	11.99	12.22	11.94
Charlottetown, PE ³	10.24	9.51	9.66	9.62	10.24	9.51
Edmonton, AB ⁴	13.47	12.80	10.95	10.86	11.40	10.73
Halifax, NS	11.02	10.39	10.52	10.49	11.02	10.39
Moncton, NB	8.74	7.93	7.72	7.68	8.28	7.57
Ottawa, ON	14.17	11.57	11.83	11.54	13.59	11.12
Regina, SK	9.62	8.98	7.76	7.65	8.00	7.56
St. John's, NL ⁵	8.82	8.52	8.47	5.70	6.16	5.61
Toronto, ON ³	14.59	11.91	12.31	12.13	14.35	11.71
Vancouver, BC	8.51	7.91	6.69	6.67	7.05	6.59
Winnipeg, MB	5.87	5.39	4.67	4.66	4.96	4.60

American Cities

Boston, MA	25.19	23.85	24.11	24.05	25.18	23.84
Chicago, IL	9.79	8.78	7.15	7.04	7.41	6.96
Detroit, MI ³	9.00	7.92	7.78	7.73	8.57	7.57
Houston, TX ³	10.13	9.60	9.18	9.14	9.46	9.07
Miami, FL ³	9.69	8.75	7.62	7.56	8.19	7.43
Nashville, TN	12.54	11.22	7.64	7.39	8.34	7.82
New York, NY ³	15.17	13.70	14.00	13.92	15.17	13.69
Portland, OR ³	8.96	8.34	8.25	8.19	8.75	8.08
San Francisco, CA	16.89	15.64	15.85	15.76	16.79	15.56
Seattle, WA	11.02	10.79	10.13	10.11	10.30	10.07
AVERAGE	11.43	10.49	9.97	9.77	10.49	9.65

1) In Canadian currency.

2) Customer-owned transformer.

3) These bills have been estimated by Hydro-Québec and may differ from actual bills.

4) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

5) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

LARGE POWER

Comparative Index on April 1, 2019

(Hydro-Québec = 100)

Power demand	5,000 kW	5,000 kW	10,000 kW	30,000 kW	50,000 kW	50,000 kW
Consumption	2,340,000 kWh	3,060,000 kWh	5,760,000 kWh	17,520,000 kWh	23,400,000 kWh	30,600,000 kWh
Voltage ¹	25 kV	25 kV	120 kV	120 kV	120 kV	120 kV
Load factor	65%	85%	80%	81%	65%	85%

Canadian Cities

Montréal, QC	100	100	100	100	100	100
Calgary, AB	212	230	239	240	225	243
Charlottetown, PE ²	177	183	192	192	189	193
Edmonton, AB ³	233	246	218	217	210	218
Halifax, NS	190	200	209	210	203	211
Moncton, NB	151	153	154	154	153	154
Ottawa, ON	245	223	236	231	250	226
Regina, SK	166	173	154	153	148	154
St. John's, NL ⁴	152	164	169	114	114	114
Toronto, ON ²	252	229	245	243	264	238
Vancouver, BC	147	152	133	133	130	134
Winnipeg, MB	101	104	93	93	91	93

American Cities

Boston, MA	435	459	480	481	464	484
Chicago, IL	169	169	142	141	137	141
Detroit, MI ²	156	152	155	155	158	154
Houston, TX ²	175	185	183	183	174	184
Miami, FL ²	167	168	152	151	151	151
Nashville, TN	217	216	152	148	154	159
New York, NY ²	262	264	279	278	280	278
Portland, OR ²	155	161	164	164	161	164
San Francisco, CA	292	301	315	315	309	316
Seattle, WA	190	208	202	202	190	205
AVERAGE	197	202	198	195	193	196

1) Customer-owned transformer.

2) These bills have been estimated by Hydro-Québec and may differ from actual bills.

3) Bills corresponding to consumption levels of 500 kW or more have been estimated by Hydro-Québec based on the applicable general rate.

4) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

A

Appendix

Rate Adjustments

Average Adjustments

Adjustments by
Customer Category

RATE ADJUSTMENTS

All Categories

	Before April 2018		Between April 1, 2018, and April 1, 2019		Comments
	Year	%	Date	%	
Canadian Utilities					
Hydro-Québec, QC	2018	0.3	April 1, 2019	0.9	
ENMAX, AB	2018	3.08	January 1, 2019	1.17	Applicable to distribution portion only
Maritime Electric, PE	2018	2.3	—	—	
EPCOR, AB	2017	n.a.	—	—	
Nova Scotia Power, NS	2018	n.a.	January 1, 2019	n.a.	
NB Power, NB	2017	2.05	August 1, 2018	0.88	
Hydro Ottawa, ON	2018	n.a.	January 1, 2019	n.a.	
SaskPower, SK	2018	3.5	—	—	
Newfoundland Power, NL ¹	2017	8.5	July 1, 2018	6.8	
Newfoundland and Labrador Hydro, NL ¹	2018	n.a.	January 1, 2019	n.a.	
Toronto Hydro, ON	2018	n.a.	January 1, 2019	n.a.	
BC Hydro, BC	2018	3.0	April 1, 2019	6.85	
Manitoba Hydro, MB	2017	3.34	June 1, 2018	3.6	

Data concerning American utilities not available.

n.a.: Not available.

1) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

RATE ADJUSTMENTS (Between April 1, 2018, and April 1, 2019)

Adjustments by Customer Category

	Date	Residential %	General %	Industrial %	Average %
Canadian Utilities					
Hydro-Québec, QC	April 1, 2019	0.9	0.9 ¹ 0.8 ² 0.9 ³	0.3	0.9
ENMAX, AB	January 1, 2019	1.96 ⁴	n.a.	n.a.	1.17 ⁴
Maritime Electric, PE	—	—	—	—	—
EPCOR, AB	—	—	—	—	—
Nova Scotia Power, NS	January 1, 2019	1.7	1.9 ¹ 0.9 ² 3.8 ³	1.3 ⁵ 1.6 ⁶ 1.5 ⁷	n.a.
NB Power, NB	August 1, 2018	0.96	0.4	0.96	0.88
Hydro Ottawa, ON	January 1, 2019	0.12	0.94	7.37	n.a.
	May 1, 2018	-0.13	-0.13	14.18	n.a.
	April 1, 2018	-0.21	-5.03	0.74	n.a.
SaskPower, SK	—	—	—	—	—
Newfoundland Power, NL ⁸	July 1, 2018	6.6	7.2	8.3	6.8
Newfoundland and Labrador Hydro, NL ⁸	January 1, 2019	—	—	4.6	—
Toronto Hydro, ON	January 1, 2019	n.a.	n.a.	n.a.	n.a.
BC Hydro, BC	April 1, 2019	6.85	6.85	6.85	6.85
Manitoba Hydro, MB	June 1, 2018	4.04	3.64	3.3	3.6

Data concerning American utilities not available.

n.a.: Not available.

1) Small power.

2) Medium power.

3) Large power.

4) Distribution charge only.

5) Small industrial.

6) Medium industrial.

7) Large industrial.

8) Newfoundland and Labrador Hydro rates for customers with a power demand of 30,000 kW or more; Newfoundland Power rates for all other customer categories.

Note: Because of adjustment clauses (see list in Appendix B), electricity bills issued by a utility may vary, even though base rates have not changed.

B

Appendix

Time-of-Use Rates

Adjustment Clauses

TIME-OF-USE RATES

The utilities listed below apply time-of-use rates for different consumption levels. For the purposes of this study, an annual average has been calculated for utilities whose rates vary according to the season or time of day (or both). In the case of utilities whose supply costs are determined by the market, the average for the month of March 2019 was used.

CenterPoint Energy, TX	All levels
Commonwealth Edison, IL	All levels
Consolidated Edison, NY	All levels
DTE Electric, MI	500–50,000 kW
ENMAX, AB	All levels
EPCOR, AB	All levels
Eversource Energy, MA	General: All levels
Hydro Ottawa, ON	All levels
Nashville Electric Service, TN	All levels
Newfoundland Power, NL	Residential General: 14–10,000 kW
Pacific Gas and Electric, CA	All levels
Pacific Power and Light, OR	1,000–50,000 kW
Seattle City Light, WA	Residential General: 1,000–50,000 kW
Toronto Hydro, ON	All levels

ADJUSTMENT CLAUSES

Below is a list of utilities whose rates include adjustment clauses that may cause fluctuations in the price of electricity even though base rates have not been adjusted.

BC Hydro, BC	Deferral Account
CenterPoint Energy, TX	Accumulated Deferred Federal Income Tax Credit Distribution Cost Recovery Factor Energy Efficiency Cost Recovery Factor Nuclear Decommissioning Charge Rate Case Expenses Surcharge System Benefit Fund Charge Transition Charges Transmission Cost Recovery Factor
Commonwealth Edison, IL	Energy Efficiency Pricing & Performance Energy Efficiency Demand Response Balancing Adjustment Mechanism Environmental Cost Recovery Adjustment Franchise Cost Addition Renewable Energy Adjustment Retail Customer Assessments Zero Emission Adjustment
Consolidated Edison, NY	Adjustment Factors – MSC and MAC Billing and Payment Processing Charge Clean Energy Standard Supply Surcharge Delivery Revenue Surcharge Dynamic Load Management Surcharge Market Supply Charge Market Supply Charge Capacity Merchant Function Charge Monthly Adjustment Clause Revenue Decoupling Mechanism Adjustment Statement of Tax Sur-Credit System Benefits Charge
DTE Electric, MI	Energy Waste Reduction Surcharge Low Income Energy Assistance Fund Factor Nuclear Surcharge Power Supply Cost Recovery Clause Renewable Energy Plan Surcharge Tax Credit B
ENMAX, AB	Balancing Pool Allocation Rider DAS Adjustment Rider Local Access Fee Transmission Access Charge Deferral Account Rider

EPCOR, AB	Balancing Pool Rider DAS True-up Rider Local Access Fee SAS True-up Rider Transmission Charge Deferral Account True-Up Rider
Eversource Energy, MA	Attorney General Consultant Expense Basic Service Cost True-up Factor Distributed Solar (SMART) Energy Efficiency Charge Long Term Renewable Contract Adjustment Net Metering Recovery Surcharge Pension Adjustment Factor Renewable Energy Charge Residential Assistance Adjustment Factor Revenue Decoupling Adjustment Mechanism Solar Program Cost Adjustment Factor Solar Expansion Cost Recovery Factor Storm Cost Recovery Adjustment Factor Storm Reserve Adjustment Transition Cost Adjustment Transmission Service Cost Adjustment Vegetation Management Tax Act Credit Factor
Florida Power and Light, FL	Energy Conservation Cost Recovery Clause Capacity Payment Recovery Clause Environmental Cost Recovery Clause Fuel Cost and Purchase Power Recovery Clause Storm Restoration Charge
Hydro Ottawa, ON	Capacity Based Recovery Disposition of Group 1 Deferral/Variance Accounts (2019) Disposition of Global Adjustment Account (2019) Rural or Remote Electricity Rate Protection Charge Smart Metering Entity Charge
Maritime Electric, PE	Energy Cost Adjustment Mechanism
Nashville Electric Service, TN	TVA Fuel Cost Adjustment
Newfoundland and Labrador Hydro, NL	CDM Cost Recovery Adjustment Rate Stabilization Plan Adjustment
Nova Scotia Power, NS	Demand Side Management Cost Recovery Rider Fuel Adjustment Mechanism (AA/BA)
Pacific Gas and Electric, CA	California Climate Credit Competition Transition Charge DWR Bond Energy Cost Recovery Amount New System Generation Charge Nuclear Decommissioning Public Purpose Programs Reliability Services Transmission Rate Adjustments

Pacific Power and Light, OR

Adjustment Associated with the Pacific Northwest Electric
Power Planning Conservation Act
Adjustment to Remove Deer Creek Mine Investment from Base Rate
Base Supply Service
Energy Conservation Charge
Deferred Accounting Adjustment
Federal Tax Act Adjustment
Generation Investment Adjustment
Independent Evaluator Cost Adjustment
Intervenor Funding Adjustment
Klamath Dam Removal Surcharges
Net Power Costs
Oregon Solar Incentive Program Deferral
Pilot Program Cost Adjustment
Property Sales Balancing Account Adjustment
Public Purpose Charge
Rate Mitigation Adjustment
Renewable Adjustment Clause
Renewable Resource Deferral Adjustment
TAM Adjustment for Other Revenues

Toronto Hydro, ON

Application of IFRS – 2014 Derecognition
Capacity Based Recovery (CBR)
Disposition of Capacity Based Recovery Account (2019)
Disposition of Deferral/Variance Accounts (2019)
Disposition of Global Adjustment Account (2019)
Disposition of LRAM Variance Account
Recovery of Hydro One Capital Contributions Variance
Recovery of Stranded Meter Assets
Recovery of the Gain on the Sale of Named Properties
Recovery of 2015 Foregone Revenue
Recovery of 2016 Foregone Revenue
Rural or Remote Electricity Rate Protection Charge
Smart Metering Entity Charge



Appendix

Applicable Taxes

Residential Sector

General Sector

Industrial Sector

TAXES APPLICABLE TO RESIDENTIAL SERVICE

On April 1, 2019

	Tax	% (or other)	Applicable
Canadian Cities			
Montréal, QC	Goods and services tax	5	To base amount of bill
	Québec sales tax	9.975	To base amount of bill
Calgary, AB	Goods and services tax	5	To base amount of bill
Charlottetown, PE	Harmonized sales tax	15	To base amount of bill
Edmonton, AB	Goods and services tax	5	To base amount of bill
Halifax, NS	Harmonized sales tax	5	To base amount of bill
Moncton, NB	Harmonized sales tax	15	To base amount of bill
Ottawa, ON	Harmonized sales tax	13	To base amount of bill
Regina, SK	Municipal tax	10	To base amount of bill
	Carbon levy	¢/kWh	To energy consumption
	Goods and services tax	5	To base amount of bill
St. John's, NL	Harmonized sales tax	15	To base amount of bill
Toronto, ON	Harmonized sales tax	13	To base amount of bill
Vancouver, BC	Regional transit levy	\$1.90	Monthly
	Goods and services tax	5	To base amount of bill + regional transit levy
Winnipeg, MB	Provincial sales tax	8	To base amount of bill (heating other than electric)
		1.4	To base amount of bill (electric heating)
	Municipal tax	2.5	To base amount of bill (heating other than electric)
		0.5	To base amount of bill (electric heating)
	Goods and services tax	5	To base amount of bill + municipal tax
American Cities			
Boston, MA	None		
Chicago, IL	State tax	¢/kWh	Tax varies by energy block
	Municipal tax	¢/kWh	Tax varies by energy block
Detroit, MI	State sales tax	4	To base amount of bill
	City of Detroit utility users' tax	5	To base amount of bill
Houston, TX	Municipal tax	1	To base amount of bill
Miami, FL	Gross receipts tax	2.5641	To base amount of bill
	Franchise fee	5.997	To base amount of bill + gross receipts tax
	Municipal tax	10	To a portion of base amount of bill
Nashville, TN	None		
New York, NY	Commodity gross receipts tax	2.4066	To commodity component
	Delivery gross receipts tax	4.9898	To other components
	Sales tax	4.5	To base amount of bill + gross receipts tax
Portland, OR	Multnomah County business income tax	0.23	To a portion of base amount of bill
	City of Portland franchise tax	1.5	To a portion of base amount of bill
San Francisco, CA	Energy Commission tax	¢/kWh	To energy consumption
Seattle, WA	State utility tax	3.8734	Tax included in rate schedule prices
	Seattle occupation tax	6	Tax included in rate schedule prices

TAXES APPLICABLE TO GENERAL SERVICE

On April 1, 2019

Tax	% (or other)	Applicable
Canadian Cities		
Montréal, QC	Goods and services tax	5 To base amount of bill (tax refundable)
	Québec sales tax	9.975 To base amount of bill (tax refundable) ¹
Calgary, AB	Goods and services tax	5 To base amount of bill
Charlottetown, PE	Harmonized sales tax	15 To base amount of bill (tax refundable)
Edmonton, AB	Goods and services tax	5 To base amount of bill
Halifax, NS	Harmonized sales tax	15 To base amount of bill (tax refundable)
Moncton, NB	Harmonized sales tax	15 To base amount of bill (tax refundable)
Ottawa, ON	Harmonized sales tax	13 To base amount of bill
Regina, SK	Municipal tax	10 To base amount of bill
	Provincial sales tax	6 To base amount of bill + municipal tax
	Carbon levy	¢/kWh To energy consumption
	Goods and services tax	5 To base amount of bill
St. John's, NL	Harmonized sales tax	15 To base amount of bill (tax refundable)
Toronto, ON	Harmonized sales tax	13 To base amount of bill (tax refundable)
Vancouver, BC	Goods and services tax	5 To base amount of bill
Winnipeg, MB	Provincial sales tax	8 To base amount of bill (industries other than mining and manufacturing)
		1.6 To base amount of bill (mining and manufacturing companies)
	Municipal tax	5 To base amount of bill (heating other than electric)
		1 To base amount of bill (electric heating)
	Goods and services tax	5 To base amount of bill + municipal tax (tax refundable)
	American Cities	
Boston, MA	State sales tax	6.25 To a portion of base amount of bill
Chicago, IL	State tax	¢/kWh Tax varies by energy block
	Municipal tax	¢/kWh Tax varies by energy block
Detroit, MI	State sales tax	6 To base amount of bill
	City of Detroit utility users' tax	5 To base amount of bill
Houston, TX	State tax	6.25 To base amount of bill
	Municipal tax	1 To base amount of bill
	Transit tax	1 To base amount of bill
Miami, FL	Gross receipts tax	2.5641 To base amount of bill
	Franchise fee	5.997 To base amount of bill + gross receipts tax
	Municipal tax	10 To a portion of base amount of bill
	State sales tax	6.95 To base amount of bill + gross receipts tax + franchise fee
	Local tax	1 To base amount of bill + gross receipts tax + franchise fee
Nashville, TN	State sales tax	7 To base amount of bill

1) Commercial customers with revenue below \$10 million and customers in the manufacturing sector are entitled to a refund of this tax.

TAXES APPLICABLE TO GENERAL SERVICE (cont'd)

On April 1, 2019

	Tax	% (or other)	Applicable
New York, NY	Commodity gross receipts tax	2.4066	To commodity component
	Delivery gross receipts tax	2.4562	To other components
	Sales tax	8.875	To base amount of bill + gross receipts tax
Portland, OR	Multnomah County business income tax	0.23	To a portion of base amount of bill
	City of Portland franchise tax	1.5	To a portion of base amount of bill
San Francisco, CA	Energy Commission tax	¢/kWh	To energy consumption
	San Francisco utility users' tax	5	To base amount of bill
Seattle, WA	State utility tax	3.8734	Tax included in rate schedule prices
	Seattle occupation tax	6	Tax included in rate schedule prices

TAXES APPLICABLE TO INDUSTRIAL SERVICE

On April 1, 2019

	Tax	% (or other)	Applicable
Canadian Cities			
Montréal, QC	Goods and services tax	5	To base amount of bill (tax refundable)
	Québec sales tax	9.975	To base amount of bill (tax refundable) ¹
Calgary, AB	Goods and services tax	5	To base amount of bill
Charlottetown, PE	Harmonized sales tax	15	To base amount of bill (tax refundable)
Edmonton, AB	Goods and services tax	5	To base amount of bill
Halifax, NS	Harmonized sales tax	15	To base amount of bill (tax refundable)
Moncton, NB	Harmonized sales tax	15	To base amount of bill (tax refundable)
Ottawa, ON	Harmonized sales tax	13	To base amount of bill
Regina, SK	Municipal tax	10	To base amount of bill
	Provincial sales tax	6	To base amount of bill + municipal tax
	Carbon levy	¢/kWh	To energy consumption
	Goods and services tax	5	To base amount of bill
St. John's, NL	Harmonized sales tax	15	To base amount of bill (tax refundable)
Toronto, ON	Harmonized sales tax	13	To base amount of bill (tax refundable)
Vancouver, BC	Goods and services tax	5	To base amount of bill
Winnipeg, MB	Provincial sales tax	8	To base amount of bill (industries other than mining and manufacturing)
		1.6	To base amount of bill (mining and manufacturing companies)
	Municipal tax	5	To base amount of bill (heating other than electric)
		1	To base amount of bill (electric heating)
	Goods and services tax	5	To base amount of bill + municipal tax (tax refundable)
American Cities			
Boston, MA	State sales tax	6.25	To a portion of base amount of bill
Chicago, IL	State tax	¢/kWh	Tax varies by energy block
	Municipal tax	¢/kWh	Tax varies by energy block
Detroit, MI	State sales tax	6	To base amount of bill
	City of Detroit utility users' tax	5	To base amount of bill
Houston, TX	State tax	6.25	To base amount of bill
	Municipal tax	1	To base amount of bill
	Transit tax	1	To base amount of bill
Miami, FL	Gross receipts tax	2.5641	To base amount of bill
	Franchise fee	5.997	To base amount of bill + gross receipts tax
	Municipal tax	10	To a portion of base amount of bill
	State sales tax	6.95	To base amount of bill + gross receipts tax + franchise fee
	Local tax	1	To base amount of bill + gross receipts tax + franchise fee
Nashville, TN	State sales tax	7	To base amount of bill

1) Commercial customers with revenue below \$10 million and customers in the manufacturing sector are entitled to a refund of this tax.

TAXES APPLICABLE TO INDUSTRIAL SERVICE (cont'd)

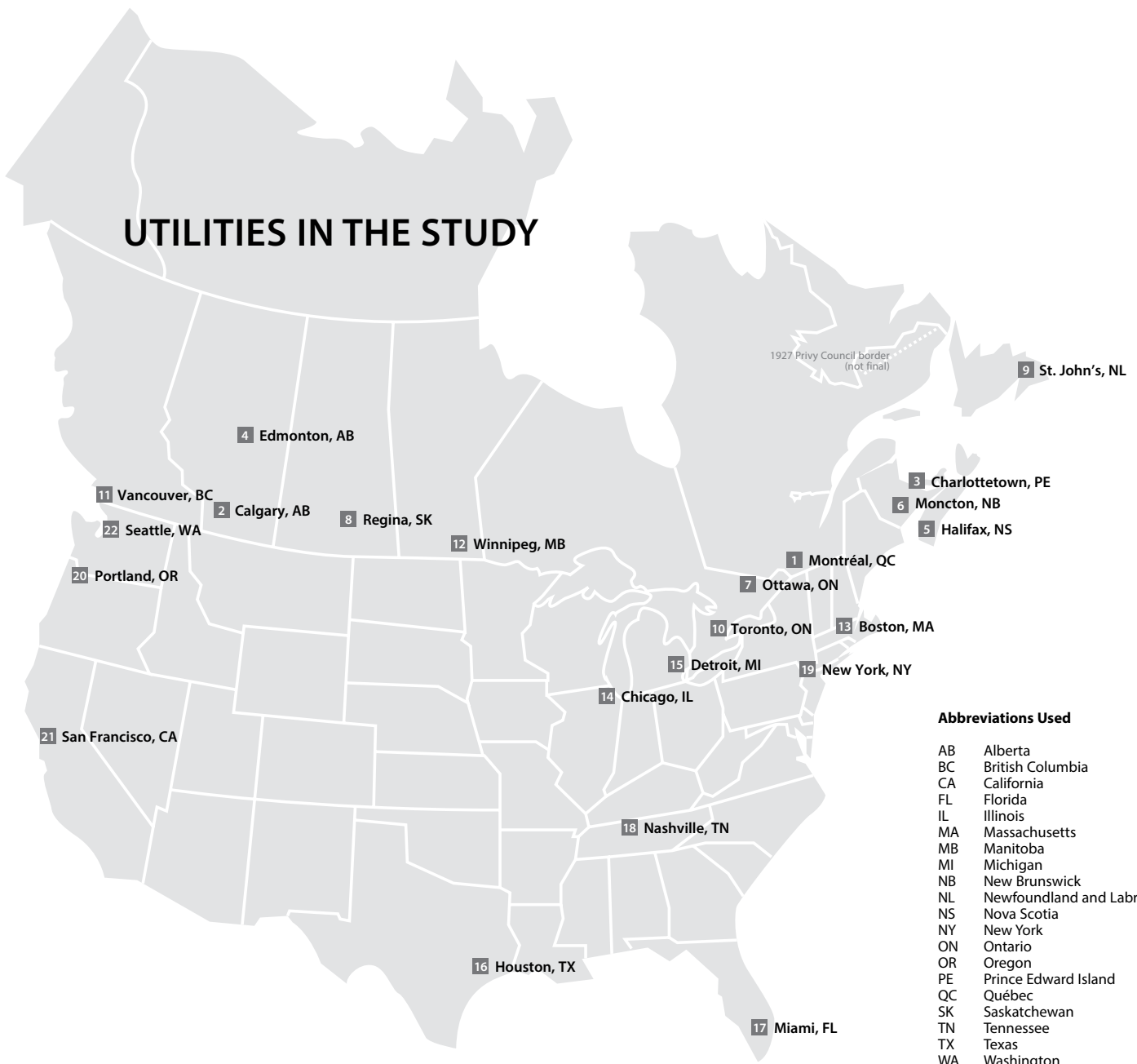
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	San Francisco utility users' tax	5	To base amount of bill
Seattle, WA	State utility tax	3.8734	Tax included in rate schedule prices
	Seattle occupation tax	6	Tax included in rate schedule prices

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Appendix
Utilities in the Study

UTILITIES IN THE STUDY



Abbreviations Used

AB	Alberta
BC	British Columbia
CA	California
FL	Florida
IL	Illinois
MA	Massachusetts
MB	Manitoba
MI	Michigan
NB	New Brunswick
NL	Newfoundland and Labrador
NS	Nova Scotia
NY	New York
ON	Ontario
OR	Oregon
PE	Prince Edward Island
QC	Québec
SK	Saskatchewan
TN	Tennessee
TX	Texas
WA	Washington

CANADIAN UTILITIES

- 1- Hydro-Québec
- 2- ENMAX
- 3- Maritime Electric
- 4- EPCOR
- 5- Nova Scotia Power
- 6- NB Power
- 7- Hydro Ottawa
- 8- SaskPower
- 9- Newfoundland and Labrador Hydro
(customers with a power demand of 30,000 kW or more)
Newfoundland Power
(all other customer categories)
- 10- Toronto Hydro
- 11- BC Hydro
- 12- Manitoba Hydro

AMERICAN UTILITIES

- 13- Eversource Energy
- 14- Commonwealth Edison
- 15- DTE Electric
- 16- CenterPoint Energy
- 17- Florida Power and Light
- 18- Nashville Electric Service
- 19- Consolidated Edison
- 20- Pacific Power and Light
- 21- Pacific Gas and Electric
- 22- Seattle City Light

CANADIAN UTILITIES

HYDRO-QUÉBEC

Montréal, Québec

A government-owned company whose lines of business are unbundled, Hydro-Québec is one of the largest electric utilities in North America.

The *Act respecting the Régie de l'énergie* [Québec energy board] established an annual maximum heritage pool of 165 TWh that Hydro-Québec Production must supply to Hydro-Québec Distribution. The division also purchases electricity on the market, primarily through calls for tenders. The average supply cost of heritage pool electricity, set at a fixed price of 2.79¢/kWh since 1998, is indexed on January 1 since 2014 at a rate corresponding to the annual variation in the all-item consumer price index for Québec, with the exception of the large-power industrial rate (Rate L), which is exempt from the indexation of heritage pool electricity.

The Régie de l'énergie approved an average increase of 0.9% in the rates of Hydro-Québec Distribution, effective April 1, 2019, with the exception of large-power customers, for whom the approved increase is of 0.3%.

Activities: Generation, transmission and distribution

Installed capacity: 37,310 MW

Main sources: Hydroelectric generating stations and wind power purchases (more than 99% of power generated is clean and renewable)

Number of accounts: About 4.3 million residential, commercial, institutional and industrial customer accounts, nine municipal systems and one regional cooperative

Distribution regulator: Régie de l'énergie [Québec energy board]

Wholesale market: Open

Retail market: –

ENMAX

Calgary, Alberta

Activities: Generation, transmission and distribution

Installed capacity: 1,503 MW

Main sources: Natural gas (90%) and wind (10%)

Number of accounts: 667,700

Distribution regulator: Alberta Utilities Commission

Wholesale market: Open

Retail market: Open

MARITIME ELECTRIC

Charlottetown, Prince Edward Island

Activities: Distribution

Installed capacity: About 145 MW for reserve purposes

Main sources: Purchased from NB Power

Number of accounts: About 80,000

Distribution regulator: Island Regulatory and Appeals Commission

Wholesale market: –

Retail market: –

EPCOR

Edmonton, Alberta

Activities: Transmission and distribution

Installed capacity: –

Main sources: Purchased on market

Number of accounts: About 600,000 customers throughout province of Alberta, including about 380,000 customers in Edmonton

Distribution regulator: Alberta Utilities Commission

Wholesale market: Open

Retail market: Open

NOVA SCOTIA POWER

Halifax, Nova Scotia

Activities: Generation, transmission and distribution

Installed capacity: 2,453 MW

Main sources: Coal, petroleum coke, wind, hydropower and others

Number of accounts: 500,000

Distribution regulator: Nova Scotia Utility and Review Board

Wholesale market: –

Retail market: –

NB POWER

Moncton, New Brunswick

Activities: Generation, transmission and distribution

Installed capacity: 3,515 MW

Main sources: Thermal (1,439 MW), hydroelectric (889 MW), nuclear (660 MW) and combustion turbines (525 MW)

Number of accounts: Over 400,000 direct and indirect customers

Distribution regulator: New Brunswick Energy and Utilities Board

Wholesale market: –

Retail market: –

HYDRO OTTAWA

Ottawa, Ontario

Activities: Distribution

Installed capacity: –

Main sources: Purchased from Ontario Power Generation

Number of accounts: Over 332,000

Distribution regulator: Ontario Energy Board

Wholesale market: Open

Retail market: Open, but rate for the supply of electricity is regulated by Ontario Energy Board

SASKPOWER

Regina, Saskatchewan

Activities: Generation, transmission and distribution

Installed capacity: 4,493 MW

Main sources: Natural gas (40%), coal (34%), hydroelectric (20%), wind (5%) and other (1%)

Number of accounts: About 533,000

Distribution regulator: Saskatchewan Rate Review Panel reviews SaskPower's rate applications and advises government

Wholesale market: Partially open

Retail market: Partially open

NEWFOUNDLAND AND LABRADOR HYDRO

(customers with a power demand of 30,000 kW or more)
St. John's, Newfoundland and Labrador

Activities: Generation and distribution

Installed capacity: 1,763 MW

Main sources: Hydroelectric generating stations and fuel

Number of accounts: 38,000 direct customers

Distribution regulator: Newfoundland and Labrador Board of Commissioners of Public Utilities

Wholesale market: –

Retail market: –

NEWFOUNDLAND POWER

(all other customer categories)
St. John's, Newfoundland and Labrador

Activities: Generation, transmission and distribution

Installed capacity: 140 MW

Main sources: Purchased from Newfoundland and Labrador Hydro (93%)

Number of accounts: About 266,000 customers throughout the island of Newfoundland

Distribution regulator: Newfoundland and Labrador Board of Commissioners of Public Utilities

Wholesale market: –

Retail market: –

TORONTO HYDRO

Toronto, Ontario

Activities: Distribution

Installed capacity: –

Main sources: Purchased from Ontario Power Generation

Number of accounts: About 772,000

Distribution regulator: Ontario Energy Board

Wholesale market: Open

Retail market: Open, but rate for the supply of electricity is regulated by Ontario Energy Board

BC HYDRO

Vancouver, British Columbia

Activities: Generation, transmission and distribution

Installed capacity: Almost 12,100 MW

Main sources: Hydroelectric generating stations (about 98%)

Number of accounts: More than 2 million

Distribution regulator: British Columbia Utilities Commission

Wholesale market: Open

Retail market: –

MANITOBA HYDRO

Winnipeg, Manitoba

Activities: Generation, transmission and distribution

Installed capacity: 5,648 MW

Main sources: Hydroelectric (about 96%), thermal and diesel

Number of accounts: Over 580,000

Distribution regulator: Manitoba Public Utilities Board

Wholesale market: –

Retail market: –

AMERICAN UTILITIES

EVERSOURCE ENERGY

Boston, Massachusetts

Activities: Transmission and distribution

Installed capacity: –

Main sources: Purchased from ISO New England.

Number of accounts: Close to 3.7 million residential, commercial and industrial customers in Massachusetts, Connecticut and New Hampshire

Distribution regulator: Massachusetts Department of Public Utilities

Wholesale market: Open

Retail market: Open

COMMONWEALTH EDISON (ComEd)

Chicago, Illinois

Activities: Transmission and distribution

Installed capacity: –

Main sources: Purchases from Midcontinent Independent System Operator

Number of accounts: Over 4 million customers in northern Illinois

Distribution regulator: Illinois Commerce Commission

Wholesale market: Open

Retail market: Open

DTE ELECTRIC

Detroit, Michigan

Activities: Generation, transmission and distribution

Installed capacity: 11,084 MW

Main sources: Coal, nuclear, natural gas, hydroelectric and other renewables

Number of accounts: 2.2 million customers in southeastern Michigan

Distribution regulator: Michigan Public Service Commission

Wholesale market: Open

Retail market: Partially open

CENTERPOINT ENERGY

Houston, Texas

Activities: Transmission and Distribution

Installed capacity: –

Main sources: Purchased from Texas ISO

Number of accounts: Over 2.4 million

Distribution regulator: Public Utility Commission of Texas

Wholesale market: Open

Retail market: Open

FLORIDA POWER AND LIGHT (FPL)

Miami, Florida

Activities: Generation, transmission and distribution

Installed capacity: Over 24,000 MW

Main sources: Nuclear, combined-cycle, coal, fuel and solar

Number of accounts: Over 5 million

Distribution regulator: Florida Public Service

Wholesale market: Open

Retail market: –

NASHVILLE ELECTRIC SERVICE

Nashville, Tennessee

Activities: Distribution

Installed capacity: –

Main sources: Purchased from Tennessee Valley Authority

Number of accounts: Over 385,000

Distribution regulator: Tennessee Valley Authority

Wholesale market: –

Retail market: –

CONSOLIDATED EDISON (ConEd)

New York, New York

Activities: Distribution

Installed capacity: –

Main sources: Purchased from New York Independent System Operator

Number of accounts: 3.5 million customers in and around New York City and Westchester County

Distribution regulator: New York State Public Service Commission

Wholesale market: Open

Retail market: Open

PACIFIC POWER AND LIGHT

Portland, Oregon

Activities: Generation, transmission and distribution

Installed capacity: Over 10,880 MW

Main sources: Coal, natural gas, hydroelectric, wind and geothermal

Number of accounts: Close to 764,000 customers across three states

Distribution regulator: Public Utility Commission of Oregon

Wholesale market: Open

Retail market: Partially open

PACIFIC GAS AND ELECTRIC (PG&E)

San Francisco, California

Activities: Generation, transmission and distribution

Installed capacity: 7,684 MW

Main sources: Purchased from California ISO and thermal, hydroelectric, solar and other generating stations

Number of accounts: 5.4 million

Distribution regulator: California Public Utilities Commission

Wholesale market: Open

Retail market: Partially open

SEATTLE CITY LIGHT

Seattle, Washington

Activities: Generation, transmission and distribution

Installed capacity: 1,968 MW

Main sources: Purchased from Bonneville Power Administration and hydroelectric, wind, biogas generating stations and others

Number of accounts: About 455,000 customers in city of Seattle and certain surrounding communities

Distribution regulator: City of Seattle

Wholesale market: Open

Retail market: –

Information sources

Annual reports and websites of the Canadian and American utilities in the study.

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