

Electricity Bill Part 1: Understanding Your Bill

by Justin Smalley | Apr 15, 2020 | Sustainability

Your electricity bill gives a great deal of information, but only if you know what to look for. The most common misconception is that the delivery charges are all fixed fees, and reducing your electricity usage will have little to no impact on your bill. In fact, most of your bill is variable including most of the delivery charges. This myth is propagated since the long list of delivery charges and riders do not have their rates stated anywhere in the bill! In part 1, we will explore the components of your electricity bill, and how to read it. Our electricity retailer is EPCOR, but there are [many other retailers](#) that serve Edmonton. While other retailers may present the bill slightly differently, the same overall concepts apply.

The Inglewood Community League has three different electricity services, and three separate meters. Service 1 is for our field hall, which is slated for demolition and currently powered off at the main breaker. Service 2 is for our parking lot lights, which typically add about 5% to our monthly usage. Service 3 is for the main hall, including the solar panel installation. For simplicity, we will only discuss Service 3 in this article.

ELECTRICITY

Service 3

Site: ██████████ COMM/INDUSTRIAL < 50 KVA RRO

Billing period: Feb 27 to Mar 25, 2020

Meter Readings by EPCOR Dist. & Trans.

Meter: ██████████

Reading on Mar 25 (Actual)	1100.00
Reading on Feb 29 (Actual)	1085.00
Reading on Feb 26 (Actual)	1083.00
Units of electric energy you used	17.00
kWh multiplier	40.00
Amount of electric energy you used	680.00 kWh

Electric Energy Charges

Provided by EPCOR Energy Alberta GP Inc.

New charges based on 680.00 kWh

Mar 1-Mar 25	600.00 kWh at 7.104¢ / kWh	\$42.62
Feb 27-Feb 29	80.00 kWh at 8.722¢ / kWh	6.98
Administration Charge		5.59
MicroGen Mar 01-Mar 31	1280.00kWh @7.104¢	90.93 CR
Subtotal of Electric Energy Charges		\$35.74 CR

Delivery Charges

Provided by EPCOR Dist. & Trans. 1-780-412-4500

Consumption: 680.00 kWh

New Charges:

Distribution Charge	28.75
Transmission Charge	23.83
Transmission Deferral Rider K Jan2020 kWh	0.96 CR
Transmission True-Up Rider J Jan2020 kWh	1.54
Balancing Pool Allocation Rider	1.76
Local Access Fee Edmonton	6.12
Subtotal of Delivery Charges	\$61.04

GST (reg. 837273630RT) at 5% on \$25.30	1.26
Total for Service 3	\$26.56

The bill is broken down into two parts:

1. **Electric Energy Charges:** This pays for the actual electricity, an administration fee, and a credit for the electricity we sold back to the grid from our solar panels (MicroGen).
2. **Delivery Charges:** The delivery charges pay for the infrastructure to deliver electricity to your home.

Most of these fees are variable, however this is not made clear on the bill.

While electricity rates are clearly shown on the bill, delivery rates are not. The rates change month to month or quarter to quarter and can be found on the [EPCOR website](#), although unfortunately not in an easily accessible way.

There are three different types of charges, each highlighted a different colour on the bill:

- **Fixed:** The “Administration Charge” from EPCOR is \$5.59 per month.
- **Mixed:** The “Distribution Charge” has is made up of two components: a daily fixed fee (currently 37.844 ¢/day), plus a variable fee (currently 2.669 ¢/kWh). There were 28 days in this billing period, which means \$10.60 (about 1/3rd) is the daily fixed fee.
- **Variable:** All other fees are variable and are charged in ¢/kWh. These scale directly with **how much electricity you consume**.

VARIABLE COSTS: THE TRUE COST OF ELECTRICITY

All the variable costs on the bill are what we consumers actually pay to use electricity in our homes/buildings, and can be summed up into a single monthly rate with units of **¢/kWh**. The total variable cost we end up paying each month is often **2-3 times** the amount as the raw electricity rate we see written on our bill, that most of us tend to focus on.

	Feb	Mar
Electricity	7.104	8.722
Delivery		
Distribution Charge	2.669	2.669
Transmission Charge (System Access)	3.505	3.505
Rider K - Transmission True-Up Rider	-0.141	-0.141
Rider J - SAS True-Up Rider	0.227	0.227
Rider G - Balancing Pool Rider	0.259	0.259
Local Access Fee Edmonton	0.9	0.9
Subtotal	7.419	7.419
Total Variable Rate	14.523	16.141

2 Total electricity cost in ¢/kWh

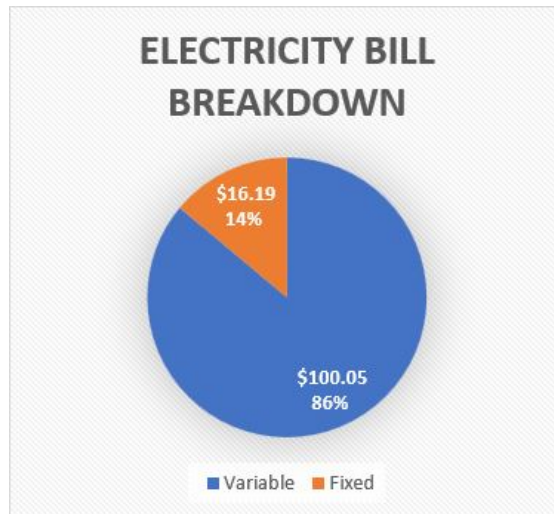
SIMPLIFIED ELECTRICITY BILL

The average consumer is not interested in the breakdown of electricity vs. delivery costs. From a billing perspective, it makes more sense to split between variable and fixed. A simplified bill is presented below using the total variable rate from above. I find this a much more transparent way to to breakdown how your money is actually being spent. Note that there is 1 cent difference between this and the EPCOR bill due to some early rounding from EPCOR.

<i>Variable Costs</i>	<i>kwh</i>	<i>¢/kwh</i>	<i>Cost</i>
Mar 1-Mar 25	600	14.523	\$ 87.14
Feb 26-Feb 29	80	16.141	\$ 12.91
Subtotal Variable Costs	680		\$ 100.05
<i>Fixed Costs</i>			
Administration			\$ 5.59
Distribution 28 days @ 37.844 ¢/day			\$ 10.60
Subtotal Fixed Costs			\$ 16.19
<i>MicroGen Export</i>			
Mar 01-Mar 31	1280	7.104	\$ (90.93)
Subtotal MicroGen			\$ (90.93)
Subtotal			\$ 25.31
GST			\$ 1.27
Total			\$ 26.57

3 Simplified Electricity Bill

A simple pie chart shows the breakdown of fixed vs. variable costs on this bill. For simplicity, and to make it more in line with an average home users bill, it excludes our solar panel export and GST.



4 Comparison of Fixed vs. Variable costs

Key takeaway: Delivery charges are not fixed! They are mostly variable and depend on your electricity consumption. They can effectively double or triple your electricity rate! Next up in Part 2, we will explore how our Solar panels impact our bill.