

REAL people  
taking REAL action  
to protect our environment  
since 1989



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## Rideau Environmental Action League

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### **How to Use the Kill a Watt Meter**

This meter is very simple to use. Plug the three-prong device into 120 VAC, three-prong (grounded) electrical outlet, and then plug your appliance into the meter.

For appliances that cycle on and off, like fridges, freezers, pumps and water coolers, you will need to keep the Kill a Watt meter plugged in for 24 hours to get an accurate reading.

You will not be able to measure the electrical consumption of appliances that are directly wired, such as stoves, dishwashers, driers, water pumps, furnaces, electric hot water heaters or some lighting fixtures. As well, do not use this device with an inverter.

The manufacturer's instruction sheet that is included with the device explains how to view the readings on the LCD. The meter measures AC volts, AC amps, watts, volt-amps, frequency, power factor, kilowatt-hours (up to 9,999 KWH) and elapsed time (up to 9,999 hours.) Unless you are knowledgeable about electricity, you will probably just need the right-hand pink button, which toggles between Kilowatt-Hours (KWH) and cumulative time in hours and minutes.

### **Tips for Use**

- Start with something easy in an easily accessible location, such as a lamp at an outlet at counter level
- Let the other members of your household know what you are doing so they don't unplug it inadvertently
- Be sure to record the information you require BEFORE unplugging the device; once you unplug it the data is lost
- Unplugging the device momentarily will reset it

- The display is not backlit, so you may need a flashlight to read it in some locations, such as an outlet down by the floor
- Try comparing incandescent and compact fluorescent lighting
- Test the “phantom load” of equipment with instant on features, such as televisions and stereo systems
- Fridges built before 1992, which many people have demoted to “beer fridges,” are known energy guzzlers. Compare older fridges to newer, more energy efficient models
- Because some outlets are behind the appliance, such as with refrigerators, you may find it easier to pull the appliance out from the wall and use a small extension cord so you can push it back to the wall while testing
- Although the device is small, you may have difficulty having it plugged in along with another appliance; again, an extension cord is a solution

### **Calculate Your Appliance’s Electricity Costs**

Find your power rate by consulting your Hydro One statement. Rates vary depending on if you are residential, business or farm. You may be paying a two-tiered rate.

Keep in mind that in addition to the charges for power consumed, there are charges for delivery, Regulatory Charges and a Debt Retirement Charge.

#### **To determine the appliance’s annual electricity consumption:**

$\text{KWh from meter} \times (24 \text{ hrs OR est. hours/day in use}) \times (365 \text{ days OR est. days in use}) / \text{Hours from meter} = \text{annual consumption}$

E.g. An appliance in constant use:

$2.75 \text{ KWh} \times 24 \text{ hrs.} \times 365 \text{ days} / 36 \text{ hours} = 669 \text{ KWh}$

E.g. An appliance used occasionally:

$0.28 \text{ KWh} \times 2 \text{ hrs.} \times 52 \text{ days} / 2 \text{ hrs} = 14.56 \text{ KWh}$

To determine the appliance's annual electricity cost:

Annual consumption X electricity rate from bill = appliance's annual electricity cost

E.g. 669 KWh X \$0.05 = \$33.45

14.56 KWh X \$0.055 = \$0.84

## **Compare Costs**

Compare your results with the electricity consumption:

- Of the same appliance model by consulting the manufacturer's rating (on the appliance itself, or in your manual) to determine if your appliance may have a problem.
- Of other appliances in its class. Go to the website of Natural Resource Canada's Office of Energy Efficiency, look for Product Model Listings, and choose the appliance category.

Hydro One offers cost calculators on their Save on Energy, My Home pages:

- Use their Appliance Calculator to see the cost of running some typical appliances
- Use the Cost Calculators once you know how many kilowatts an appliance is using. It will show you the costs depending on time of use (Off Peak, Mid Peak, and On Peak).

## **Take Action to Reduce Your Electricity Use**

If you have determined that your appliance is not very efficient:

- Consider if that appliance can be tuned up to be more efficient. For example, on a fridge, are the seals adequate, have you vacuumed the coils, is it next to a heat-producing appliance?

- Consider replacing the appliance if the energy savings of a newer model are substantial. It may even be worthwhile to finance the new appliance. For example, if your old fridge costs \$90/month in electricity costs, and a new one only costs \$50/month in electricity, you would be further ahead to finance the new appliance at \$40/month, rather than keeping the old one going.
- Start shopping around so you will be ready to replace the appliance with an energy efficient model when it does wear out
- Consider if that appliance is actually required
- Be sure you dispose of the appliance properly. Hydro One's Fridge and Freezer pickup program is ending Dec. 31, 2014. Used electronics are accepted at the REAL Deal for recycling.

**These instructions are also available on REAL's website, [www.REALaction .ca](http://www.REALaction.ca).  
Look under the Energy tab.**

The Kill A Watt meters used in this program can be purchased through various suppliers for approximately \$30.