Power Cost Monitor helps homeowners save Electricity

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If you are a home-owner struggling to understand why your electricity bills are so high then you may be interested in a product from Blue Line innovations called the Power Cost Monitor.

The company tells Digital Home that tests in Ontario and elsewhere have shown that homeowners who use the real-time feedback device often reduce their electricity use by as much as five to 18 per cent.

What is the Power Cost Monitor?

Blue Line describes the PowerCost Monitor as a real-time direct feedback display device that informs consumers how much electricity is currently being consumed in their home along with the total electricity used in dollars and cents and in kilowatt hours.

For example, as you turn electrical appliances on or off, the monitor will display the adjustment right away on the clock-sized display (see image below) which is located inside your home.

The display unit, located inside the home, receives a wireless signal from the sensor unit which is attached to the outside of your electricity meter. The information sent by the sensor unit is processed by the display unit which then displays:

- what your current hourly usage is in terms of dollars and cents,
- wireless signal strength,
- the amount of electricity used in the last 24 hours in terms of dollars and cents,
- the current outdoor temperature and
- the time.

By toggling the KW button, owners can also view current consumption in kilowatt hours and consumption over the last 24 hours.

It should be noted upfront that the PowerCost Monitor will not reduce your electric bill on its own. The Monitor simply shows only your home's electricity usage in real-time and it is up to the consumer to use this information to reduce your electricity consumption.

Blue Line tells Digital Home that once consumers see the immediate impact of turning on a computer or dishwasher or other appliance in the home, they quickly see just how much that device is costing them. A periodic electricity bill does not help build an action plan for reducing consumption because there is no cause and effect. The Monitor gives homeowners the ability to see immediately the impact of turning an appliance on or off firmly implants in a consumers mind what can be done to reduce energy bills.

Setup

The PowerCost Monitor consists of two components: The sensor unit which attaches to your utility meter outside the house and the display unit which can be placed anywhere inside your home.

The PowerCost monitor arrived at our home in a shoebox sized box and inside we found the display unit, sensor unit, and four AA batteries, two rubber shims for use on smart meters, documentation and a DVD with electronic copies of the documentation.

Power Cost Monitor Contents

The sensor is quite easy to install on a regular utility meter. To install you insert two of the four AA batteries in the sensor unit, loosen the sensor coupling, place the sensor unit on the meter and tighten the coupling.

Since our home has a new smart meter rather than a standard utility meter, our installation was marginally more complicated. On the smart meter, the sensor units optical input must be place directly over the optical output. Since the Smart meters optical output is near the edge of the meter, we needed to place a rubber shim on the exterior of the meter and adjust the length of the sensor arm before tightening the coupling.

If you are installing on a smart meter, be sure to read the installation page in the manual. After reviewing the manual, the installation process was straightforward and we had the sensor unit installed in a couple of minutes. Once installed the sensor unit immediately begins sending out usage information wirelessly.

In case you're wondering, Blue Line informs us that the sensor does not affect the functioning of the meter in any way and does not violate any electric company restrictions.

With the sensor unit in place, the next step was to setup the display device.

How to prepare the display device is outlined in the manual. In a series of steps, we synced the display device to the sensor by pressing the sync button, and then we told the display device we were hooked up to a smart meter, the date and time, and the amount that we pay per kilowatt hour for electricity.

Since our local utility uses a two-tiered rate structure, we also input the two rates and the kilowatt usage level at which the higher rate came into effect.

Overall the setup of the device was very easy. The total amount of time spent unpacking the unit, reviewing the manual, setting up the sensor and display unit was about twenty minutes. If we had a regular utility meter, we probably could have knocked off about five minutes off that time.

Operation and Summary

With the sensor unit transmitting and the display unit functioning, we immediately began to see usage information on the display.

We immediately began to turn electrical devices on an off in our home to see what the response would be. Sure enough, very soon after turning appliances on and off, the usage numbers would change showing us our current cost of electricity and what we had used in the last 24 hours.

Over the following days, we would periodically check the monitor to see how things were progressing and became increasingly horrified at how much electricity we were consuming! When your display unit tells you that you have used $25 of electricity in the previous 24 hours, you sit up and take notice!

Once shocked into action, we began to correlate the numbers on the display with our usage. We began to understand how much various devices in our home were truly costing us. The biggest surprise for us was the amount of electricity being used by always on devices. Most people have been taught since childhood to turn off lights when you're not in a room, to turn down the thermostat and to only turn the dishwasher when you have a full load, but this device really showed us just how much of our energy usage was for devices that drew electricity 24 hours a day. Devices like our PVR or computer or appliances with instant on features.

An additional surprise was how our children also noticed. Like all parents, we tell the children that electricity costs money and to "turn those lights off!" Once our kids saw the effect of turning appliances on and off and our 24 hour electricity costs, they really began to understand what we were saying and compliance with our request went up dramatically.

Summary

The PowerCost Monitor is an easy to install, easy to use device that provides real-time direct feedback to consumers interested in learning how they can reduce their electricity consumption. The monitor won't reduce your electricity consumption on its own; however, the valuable feedback it provides can help you make intelligent decisions about how you can lower your energy bills.

The only drawback with the PowerCost Monitor is price. At $119, you'll need to save quite a bit of electricity to warrant the cost.

Despite the cost, sometimes you need to spend money to save money. Digital Home believes that most homeowners, with continued monitoring, should be able to learn enough in one or two months to affect real consumption changes in their home. The result could be the 5% to 20% savings that Blue Line says they've seen in their studies.

If you don't think the potential savings are worth $119, then our advice is to split the cost with a neighbour and each use the device for a month or two. The result would be reduced monitoring costs for both homes.

The PowerCost Monitor is available from Blue Line Innovations.

Discuss Energy Saving tips in our Home Automation, CCTV, Energy and Security forum.