

Tracking Energy Efficiency with a PowerCost Monitor



By [brwood \(view all posts by brwood\)](#) at 11:56AM Tuesday October 26, 2010
under [Product Review](#)

So if you'll remember, a few months ago I went around the house and measured the [water usage](#) of various faucets in my house. In doing so, I was able to come up with a plan to use less. Now if only there was some way to do the same with my electrical devices. Well, today I installed a device that does just that.

Thanks to [Microsoft Hohm](#), I got a package a few days ago with a PowerCost Monitor from Blue Line Innovations and a WiFi accessory to network it into my home network. The Hohm network is a home automation system that will allow you to network and monitor every item in your house. I discussed some uses for such a system in my blog post about [remote control locks](#). Basically the [PowerCost Monitor](#) system consists of three items:

1. Sensor Unit which attaches to your electrical meter outside, or in the basement or garage.
2. Display unit which displays information from the sensor, connecting wirelessly.
3. A WiFi network adapter which is sold separately and allows you to monitor things remotely via a Microsoft Hohm network.



Part one of the installation involves mostly reading the instructions and filling in a few bits of information from your electric bill or utility company. If you can program your DVR or home sprinkler system, you ought to have no problem with this part.

The hardest part, honestly, was understanding my utility bill. Even with all the information available on their web site, I was puzzled for a few minutes. Eventually I just divided my kW/Hr into my bill and got 13¢ and figured it was close enough.

Besides, the important thing to know was how much power I was using, not how much it cost me.



Once you have the display unit set up, it's time to mount the sensor. The sensor mounts to your electrical meter with a large metal clamp.

It also is all you need if you want to go as Jean Luc Picard as the Borg for Halloween: Just mount it on your head, thusly.

To properly install it, wrap the clamp around the round glass part of the meter and position the arm over the moving "wheel" in the meter. The arm is adjustable, in/out, and up/down, so just wiggle it until it looks right, and there you go. If you have the newer computerized meter, it goes on a little differently, but the instructions are very simple.



Next I had to push two buttons after which some red LEDs flash and the monitor starts giving you readings. In order to test it, I turned my air conditioner on full blast (*it's the biggest electricity hog I have*) and looked at the monitor. 1.1kW per hour up from .3kW (*with just a few light bulbs and the radio on*), so the AC uses .8kW at full blast.

Turning on the lights in my living room and the computer I type on right now, and the display went up to .4kW. So it definitely works. Since it reads the speed of the wheel in your meter, it can't give you instantaneous results, but it does change minute to minute.



Next week I will do some experiments, walking around the house and turning on and off various energy users--as well as network the system into my home computer with the WiFi adapter so I can monitor the usage remotely via the internet as well as build a usage history.

So stay tuned, and we'll see how little energy we can use



Incidentally, while typing this last paragraph, the fridge switched off and the reading on the monitor dropped to .3kW.

Woo-hoo!