

# Treehugger

By A.K. Streeter, Portland, Oregon  
on April 21, 2011

## 10 Ways to Monitor Power in a Tiny Apartment



We've been hearing about the smart grid and the smart home for years, but if you start from scratch, how smart can you actually make your 420-square-foot apartment in terms of its energy and other resource consumption?

## Monitor and Manage Power in a Tiny Apartment

As part of the [LifeEdited](#) project to renovate his small New York apartment, TreeHugger founder

Graham Hill wants to find out.

After a web search of power monitoring systems, we've selected 10 that -- at bare minimum -- are designed to monitor overall electricity consumption. Some systems go beyond to detail where a home or apartment's [energy vampires](#) and energy hogs might be lurking, suggest solutions, and even give owners a chance to turn off problem power eaters before they wreak wallet havoc.



## Home Base From Energy Hub

**Price:** Hardware around \$500; software to be determined.

**Pros:** This modular system can work well for a compact apartment -- add-on sockets or strips let

you get detailed information down to the plug. Smart phone app available.

**Cons:** Currently available only through participating utilities -- residential beta program to begin soon.

**Extras:** Works with [Google PowerMeter](#).



## EMonitor From Powerhouse Dynamics

**Price:** \$700 plus a two-year \$249 subscription.

**Pros:** Monitors a home's different electric circuits rather than just the main circuit, allowing users to look at areas or rooms for a more accurate picture of energy use. Smart phone app with alerts.

**Cons:** Could be too much system (and long time to see return on product investment) for this small apartment.

**Extras:** Can monitor a home's solar or wind production!



## FIDO From EcoDog

**Price:** \$999.

**Pros:** FIDO has circuit-level, room-by-room data on energy use. Special algorithms suggest ways to save energy. System sends user text message alerts. No subscription fees that some others have.

**Cons:** Maybe too much system for a smaller apartment.

**Extras:** Remote on/off feature for individual circuits -- if you need to cut power to a certain circuit.



## Talking Plug From Zerofootprint

**Price:** Around \$30 per plug.

**Pros:** A completely different take on measuring usage. Truly smart plugs, like Kill-a-watt on steroids, incorporate RFID to give detailed consumption and usage of any device -- because of a unique identifier, you can connect any appliance to any plug...the system remembers.

**Cons:** Currently works only with 110V devices.

**Extras:** TreeHugger's Jacob Gordon called these plugs the anti-vampire bazookas. True. Once they can be used with 220V devices and other electricity sources, watch out world!

## TED 5000-C From The Energy Detective



**Price:** Starts at \$240.

**Pros:** TED has been the gold standard of energy monitoring, and the 5000-C is a wireless gateway to integrate with Google Power Meter. Can do solar net metering.

**Cons:** Does not manage individual circuits. Does allow monitoring of up to five individual appliances.

**Extras:** Easy to use software.

## Power Cost Monitor Wifi Edition From Blueline Innovations

**Price:** \$209.

**Pros:** Solid solution, Wifi gateway allows integration with [Microsoft Hohm](#). Inexpensive.

**Cons:** Not circuit or plug level. Can add Kill-A-Watts for individual appliances, but this info is not automatically integrated into reports.

**Extras:** Monitor is sleek, not too conspicuous.



## Envi From PowerSave

**Price:** \$318.

**Pros:** With the purchase of the Envi display and the Web Bridge, the system can post energy use data to the display as well as to Google Power Meter.

**Cons:** No circuit or device-level energy readings.

**Extras:** Individual appliance monitoring plugs that send data to display coming later this year.



## Efegy E2

**Price:** \$138.

**Pros:** One of the few systems not requiring an electrician for installation.

**Cons:** No device or circuit-level detection.

**Extras:** Newer model does allow transmission of data to PC-based software.

## Google Power Meter

**Price:** Free.

**Pros:** Google is making the Power Meter API open. This gives you the option of changing or adding on hardware in the future, while still using the Power Meter software.

**Cons:** You can't really get any good information without either the compliance of your utility, or hardware that Google is supporting. Luckily, there are lots of [hardware choices](#) (and a handful of utilities supporting Power Meter).

**Extras:** Google is taking big steps towards the smart grid. A smarter grid will not likely equal cheaper power, but will probably give consumers ways to measure and control their usage more precisely.



Double-click on a home to compare

## Your Home

Add your address

Oregon (97214)

Year Built: 1912  
 Bedrooms: -  
 Bathrooms: -  
 Sq Ft: 2500  
 Air conditioning: none (default)  
 Heating: central gas furnace (default)



What is a Hohm Score?

Estimated Hohm Score<sup>†</sup>

## Your Annual Energy Usage Comparison<sup>†</sup>



## Microsoft Hohm

**Price:** Free.

**Pros:** It cannot be directly compared with other hardware-based systems (Microsoft recommends Blueline Innovations' Power Cost Monitor hardware above), but once you have hardware, Hohm is a complete method of keeping track of energy usage. Most importantly, it will help you stay up-to-date, usage-wise, with similar style houses in your region.

**Cons:** Hohm is still officially in beta -- there's always a chance the company decides not to go head to head with Google. Also, this system, unless you add the hardware, is less visible and in-your-face.

**Extras:** Hohm's comparison data from other Hohm users is the whipped cream of this choice -- without comparing to other similar living spaces, it's hard to know whether your usage is good, or not so good.