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CES: Picowatt does smart grid without smart meter

by [Martin LaMonica](#)

LAS VEGAS--Tenrehte Technologies has a grassroots vision for the smart grid.

Instead of relying on a utility-installed smart meter to help consumers ratchet down their electricity bills, the Rochester, N.Y.-based start-up is building Wi-Fi-enabled smart plugs.

A few strategically placed smart plugs, called a Picowatt, will provide many of the benefits promised to consumers by the smart grid, including a real-time read-out of electricity usage and the ability to control appliances from a central point. By having data on electricity usage and the ability to take advantage of off-peak rates, people can make a significant reduction to consumption, studies have shown.

There are a number of companies preparing in-home energy displays that are designed to poll data from smart meters to show, for example, how much electricity different appliances consume. Millions of smart meters are being installed over the next three years, but utilities are being slow with sharing consumption data inside the home over a wireless network, in part because of security concerns.



A prototype Picowatt smart plug for killing vampires and controlling home energy. When released in April, the company expects it to be about as big as an Apple Airport (behind). (Credit: Martin LaMonica/CNET)

By contrast, the Picowatt lets individuals set up a home energy monitoring themselves. The smart plugs, which fit over existing outlets, are essentially mini Wi-Fi routers running Linux, each capable of gathering data and controlling devices. People can view data, such as historical energy usage, from a Wi-Fi-enabled PC or through a Facebook application that can be operated from a smart phone.

Tenrehte Technologies executives said they are establishing partnerships with utilities to make rate information available. That would allow a person to schedule an energy-intensive job, such as washing the dishes, to take advantage of off-peak rates.

Another nice feature of the Picowatt is that it will eliminate stand-by power, where electronics such as TVs consume juice even when not in use.

At CES, the company had prototype models available but said that it expects that a smaller smart plug, about the size of an Apple AirPort, will be available in April of this year for \$79, sold direct to consumers.



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