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Start-up Tendril pursues 'TiVo of thermostats'

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Martin LaMonica, CNET's Green Tech blog

NEW YORK--Even with dozens of smart-grid trials starting this year, it's still an open question how engaged consumers will be in managing their home energy consumption.

Start-up Tendril Networks next week plans to unveil an in-home display system that's geared at consumers who aren't particularly tech-savvy or willing to spend a lot of effort on home efficiency. It's an attempt to give people simple tools for cutting energy consumption by 5 percent to 10 percent.

The primary unit is a touch-screen display called the Vision which was designed with design consultancy Ideo. Rather than provide a graph that shows real-time electricity consumption, the interface is built around a clock, explained Tendril CEO Adrian Tuck, who gave a presentation at the Jefferies Clean Tech Conference here on Wednesday.

Tendril's Vision is a home energy management system designed for ease of use.

People can program a thermostat using the clock and choose to participate in utility demand-response programs where electricity consumption is curbed during peak times. In the center of the clock's hands is a colored circle that grows to represent how much energy a home is using, he said.

"It's very, very simple and intuitive and designed to be nonthreatening for the 9 out of 10 people threatened by IT," Tuck said.

He said that many people don't program thermostats today but there's a "TiVo moment" coming in the industry where more people will actually use them--and save on their utility bills--once they are easier to use.

The device assumes that utilities offer time-of-day pricing, which is not the case in most of the U.S. People who do have time-of-day pricing could cut electricity use by about 10 percent using the system, Tuck said.

The Vision connects to a wireless thermostat and other Zigbee-enabled devices, such as smart plugs and appliances once they are available. The main console can communicate with a smart meter through Zigbee, although it can work without a smart meter through a dedicated communications gateway, Tuck said.

Tendril plans to show off a pre-production prototype of the Vision running its software next week at the DistribuTech utility conference. It hopes to start manufacturing the system later this year for installations next summer, Tuck said.

Avoiding backlash

There are dozens of companies developing home energy management systems, many of which are tied to utility smart-grid programs. But there's concern that this area of the smart grid is a bubble and that some companies will fail.

In addition, the business models for rolling out home energy management systems are still in their infancy. Tendril, for example, sells software to utilities to provide data to consumers on energy use and for demand-response programs. The projected savings from home efficiency justify the investments.

Tendril projects that it will be cash-flow positive in two years, although the timing of smart-grid roll-outs can greatly affect the company's progress, Tuck said.

In a limited sample of early tests, Tendril customers have been able to cut consumption by 5 percent to 10 percent overall. Tuck said when they use the system to automatically control heating and cooling, reductions can be as much as 20 percent to 25 percent during peak times specifically, which are typically during the middle of the day and early evening.

As consumers adopt smart thermostats and networked appliances, there's the potential to cut energy use overall by 10 percent to 15 percent, he added.

Easy-to-use products are not only important to the business case for home energy management systems, but they also can help improve the image of the smart grid, which as suffered a backlash from consumers in California and Texas.

Utilities typically get the benefit of automated meter reading with two-way meters, but consumers don't immediately see benefits, Tuck said. "It's like a wireless company saying you have this great 4G technology. But we want you to start paying now and give you the handset in three years. That's exactly what utilities are asking right now," he said.

Tendril to Launch Digital Clock Inspired Home Energy Gadget

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Katie Fehrenbacher, earth2tech.com

Make it familiar and compelling — that's the idea behind the design of energy management startup Tendril's new gadget dubbed the Vision, which the company plans to unveil next week. The dashboard, designed by design firm IDEO, and based on the form of a digital clock, is intended to help consumers really engage with managing their energy consumption by using captivating design elements. Because, let's face it, managing home energy consumption isn't exactly the sexiest activity. (Read our interview with IDEO's CEO Tim Brown, subscription required).

Tendril's Scott Ballantyne, Vice President of Marketing, told me that IDEO and Tendril spent eight months studying and researching human behavior in order to create the Vision. They found that by adding design elements like the familiarity of the clock design, they could keep users engaged enough to reduce their energy consumption by an average of 10-15 percent. The Vision is also able to provide real time data for pricing fluctuations (energy rates go up during peak demand times) if a utility is providing that to the customer, which helps a customer manage energy consumption.

Ballantyne said the Vision will cost under $200 and will start shipping widely in 2011, around the time that utilities plan to start their home energy management trials. Tendril's dominant distribution channel is selling its devices and services through utilities, and that will be consistent with the Vision. Tendril also sells a more standard energy dashboard display.

While the Vision will be able to provide data for real-time pricing and demand response events, how "real-time" that information will be totally depends on the utility. As we've been reporting this week most utilities won't be able to provide anything close to real-time pricing information to its customers for quite some time. Despite the fact that Google (a Tendril partner) is pushing for real-time energy pricing and usage data, the big utilities in California (which are some of the most progressive in the U.S.) are pushing back.

I can't vouch for how engaging the Vision is, but I applaud any company trying to bring innovation into the energy management space — it sorely needs it. And I have been seeing increased attention from companies looking to open up an ecosystem, and offering software developer kits and APIs, for home energy management (see The Developer's Guide to Home Energy Management Apps on GigaOM Pro, subscription required). Microsoft and Google have recently made moves to work with developers for their energy management tools, startup People Power launched its open source based platform earlier this week, and Tendril opened up its API last year.