

Free PC widgets save energy

September 23 2009, By Pete Carey

I shaved 0.86 pounds of emissions from my carbon footprint and saved 0.646 kilowatt hours yesterday, and if the little widget on my PC can be believed, more than 22,000 people in 128 countries did roughly the same.

We're using a little software gadget developed by Hewlett-Packard as part of a campaign called Power to Change that the Palo Alto, Calif., computer maker hopes will increase awareness of its environmental program.

The energy widget is the latest of several ideas from HP, [Google](#), Microsoft and others for cutting down on unnecessary power consumption by the nation's PC users.

Google got the ball rolling a year and a half ago with a widget that sets a PC's power profile to maximum energy savings. It shuts down monitors and turns off idle computers after a user-selected interval, using features of the Windows [operating system](#).

On a system that consumes less than 200 watts, the savings could be substantial over a year, according to Erik Teezel, Google's energy program manager, "simply by letting the computer take advantage of its capability of putting itself to sleep when it is not receiving any input signals."

Google hasn't promoted its widget, which was built by two Google employees as a demonstration to get other companies involved. As of

last week, only 855 people were actively using it.

But other companies have followed Google's lead and created free downloadable energy widgets.

Since June, HP has offered free downloads of its widget from its Web site at www.HP.com/powertochange. The small program runs on a desktop and a pop-up encourages users to turn off their computers when the computers are idle for long stretches of time. It also tells them how much energy they've saved collectively, as reported by users in regular updates.

The program "was designed to show the power of individuals coming together," said John Frey, HP sustainability manager. There's no reason to leave your computer on all the time, he said, because "the many reasons people didn't turn off their PCs have been addressed by better operating systems and hardware."

HP looks for four-hour blocks when a computer is turned off, and assumes the average hourly energy consumption of a desktop and laptop computer are 67.3 watt hours and 28.1 watt hours, respectively. The company uses a complex formula to estimate that people using the widget have saved 54,231 kilowatt hours, the energy equivalent of taking 2,169 cars off the road, although Greenpeace says more reliable metrics are needed before these energy savings can be confirmed.

"The widget by HP is a good start," Greenpeace spokesman Daniel Kessler said in an e-mail. "If used, it should generate energy savings. The challenge is to show that it is actually being used."

No problem in my case. I have four widgets running on my desktop at work. HP's pops up before quitting time to tell me to turn off the computer before I leave the office. Google's has reset my computer to

peak [energy savings](#) profile. Verdiem's free Edison widget gives me a range of choices for turning off my screen and shutting down my computer -- including an automatic shutdown at 8 p.m. after I've gone home, in case I forget to turn off my desktop PC. SNAP.com's CO2 Saver combines a Google-type widget with a Google search box.

All these widgets are free, which may obscure the fact that devising ways to cut down on the IT industry's power consumption has become a big industry. Verdiem makes energy-management software for corporations and government. It says it can cut PC energy bills 30 percent to 60 percent; its proprietary software is running on more than 1 million computers.

PCs account for 31 percent of all energy used by information technology, said Verdiem's spokesman Jay Wampold. "Most people think it's the servers. Few people realize that in business, it's PCs that account for the largest share."

Shutting down the planet's 1 billion PCs when they aren't in use would save about 200 billion kilowatt hours, or enough electricity to power 16.7 million single-family homes for a year, according to Verdiem's calculations.

A consortium called Climate Savers Computing Initiative got started a couple of years ago with a goal of making that fact better known to industry. The consortium has grown to more than 500 members, including Intel, Google, Flextronics, Symantec, Yahoo, eBay and Microsoft. Members agree to deploy power management in the IT systems, and when they replace infrastructure to comply with the organization's energy efficiency criteria.

"Every PC comes enabled with power management, but a lot of people don't use it," according to Pat Tiernan, the consortium's executive

director. "Maybe 10 to 15 percent of businesses do." When the group started, there was just a handful of products with energy efficiencies in the 80 percent range, he said. Now we have thousands, and you can spec them into your procurement."

Apple also ships its Macs with power management enabled, and for the past year has provided estimates of greenhouse gas emissions generated by each new product sold. The company says that making and using a 13-inch MacBook Pro for four years results in 420 kilograms of carbon-dioxide emissions, or about the same amount the average car emits in a month.

Microsoft has built 30 new power-saving features into its new Windows 7 software. "Probably the most important thing we did is we made power management 'On' by default," explained Francois Ajenstat, Microsoft's director of environmental sustainability. Vista is also shipped that way. Ajenstat said Continental Airlines estimates its cost savings from using Vista's power management at \$1.5 million to \$2 million.

Windows XP, which is still widely used, is shipped with power management set to "Off."

There are studies predicting that power requirements to perform a task on a computer will continue dropping, even as demand for power increases.

Mike Tan, a "distinguished researcher" at HP Labs, is working on lowering the cost of photonic devices that would replace copper wire with light. "As data rates go higher and higher, at some point you'll have to give up and switch to light," which would consume far less power, Tan said.

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WHERE YOU CAN DOWNLOAD ENERGY-SAVING WIDGETS

Power to Change: h30470.www3.hp.com/

Edison: www.verdiem.com/edison.aspx

CO2 Saver: co2saver.snap.com/

Google gadget: [www.google.com/corporate/green ... tools-for-users.html](http://www.google.com/corporate/green...tools-for-users.html)

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