

DO YOU NEED TO TURN OFF YOUR PC AT NIGHT?

**Beginners' Kaffee Klatch
Presented by Bill Wilkinson
June 23, 2007**

Should you shut your computer down at night or leave it running? Officials at Energy Star, a product-labeling program sponsored by the U.S. Environmental Protection Agency, have stated that "if you are done for the day, turn it off."

Some experts are now convinced, however, that you can leave your computer on at night and still conserve as much energy.

If you're a Windows XP user, just set up your PC to "hibernate" overnight. (See the definition of hibernate near the end of this document.) "Hibernate" powers down a CRT monitor to about 5 watts of energy and your PC to 2.3 watts -- virtually the same as turning your PC off. Either way, you save as much as \$90 a year in power costs compared to a PC left on with a screen saver running.

A computer user asked the question to tech guru Kim Komando: "Should I shut my computer down at night? Or is it better to leave it running?" he asked. Komando's response, in a nutshell: "It really doesn't matter."

If you use the "hibernate" feature of Windows XP, or even the "sleep" feature of most new Dell and other PC models, it really doesn't matter much. Even the folks at Energy Star agree you save almost as much energy by using "hibernate" as you do by turning off your computer for the night. And you won't have to endure a lengthy "re-booting" process the next morning; your computer should "wake up" in 30 seconds or less.

On the other hand, you may like the security of having it off and like the ability to shake the cobwebs from your system on a daily basis that comes with shutting down your system completely. You will also not have to worry about any issues that may result from a power outage. But, with every minute you spend booting up in the morning, you can see why someone would rather leave his machine on.

Those at Energy Star (www.energystar.gov) still prefer that you turn your computer off at night for maximum energy savings. "We are all about energy savings, and when you shut off your computer at night, you save the most energy," says their program manager for office equipment and consumer electronics. "Every little bit helps. It all adds up."

But Energy Star supports the practice of putting computers in "hibernate" or "sleep" mode -- most newer Dell desktop PCs, among other models, contain "sleep state" power-management programs that work similarly as "hibernate."

As many as 50% of U.S. users are enabling their PCs to "hibernate/sleep" at night, a percentage Energy Star hopes will continue to climb — even if the users are doing it for the wrong reasons. Many users simply don't like the several minutes it takes to re-boot a shut-off computer; they're more concerned about the re-boot time than saving energy. For that reason, and because the power-management features in Windows continue to be improved, the trend is for fewer people to be shutting off their computers at night.

However, here are some consumer "myths" that are worth addressing:

- Turning your PC off uses more energy than leaving it on. Not true. The small surge of power you use when turning it on -- which varies per PC make and model -- is still much smaller than the amount you use in keeping it on for lengthy periods.
- Turning your PC on and off wears it out. A decade ago, there was something to this, but not today. It used to be that PC hard disks did not automatically park their heads when shut off, and that frequent on/off cycling could damage the hard disks. Today's PCs are designed to handle 40,000 on/off cycles before a failure, and that's a number you likely won't reach during the computer's five-to-seven-year life span.
- Screen savers save energy. Not true. Screen savers, at a minimum, can use 42 watts; those with 3D graphics can use as much as 114.5 watts, according to a Dell product marketing manager who does power measurement studies for the PC manufacturer. It's absolutely wrong thinking that a screen saver will save energy.
- Your computer uses zero energy when "off." That's true only if it is unplugged. Otherwise, the PC utilizes "flea power," or about 2.3 watts, to maintain local-area network connectivity, among other things. In "hibernate" mode, your PC uses the same 2.3 watts; in "sleep" mode, your PC uses about 3.1 watts. Monitors do use zero energy when turned off.

Flat-panel LCD monitors use less energy (22 watts when left on, 3.3 watts in "sleep" mode) than regular monitors (75 watts when left on, 5 watts in "sleep" mode).

"Sleep" mode is available on most newer Dell PCs, among other models, while "hibernate" is available to any user with Windows XP and previous versions from

Windows 98 Second Edition on. (The feature was greatly improved for Windows XP, which wakes faster from "hibernate" than any previous version).

To enable "hibernate," simply go to your Control Panel, click on "power options," and set your PC to "hibernate" after a specified time (most recommend 30 minutes).

If you are away from your PC a lot during the day, you may want to set it to "hibernate" after 45 minutes to an hour, and set it to "standby" to 15 minutes. Under "standby," you'll be conserving power but you won't be saving your computer memory onto your hard disk, as you will with "hibernate." "Standby" is meant for shorter absences.

*When you put your computer into **hibernation**, everything in computer memory is saved on your hard disk, and your computer is switched off. When you turn the computer back on, all programs and documents that were open when you turned the computer off are restored on the desktop.*

*While the computer is on **standby**, information in computer memory is not saved to your hard disk. If there is an interruption in power, information in memory is lost.*

Caveat: To put your computer into hibernation, you must have a computer that is set up by the manufacturer to support this option.

Using Power Options in Control Panel, you can adjust any power management option that your computer's unique hardware configuration supports. Because these options may vary widely from computer to computer, the options described may differ from what you see. Power Options automatically detects what is available on your computer and shows you only the options that you can control.