

## U.S. Department of Energy - Energy Efficiency and Renewable Energy

### A Consumer's Guide to Energy Efficiency and Renewable Energy

### When to Turn Off Personal Computers

If you're wondering when you should turn off your personal computer for energy savings, here are some general guidelines to help you make that decision.

Though there is a small surge in energy when a computer starts up, this small amount of energy is still less than the energy used when a computer is running for long periods of time. For energy savings and convenience, consider turning off

- the monitor if you aren't going to use your PC for more than 20 minutes
- both the CPU and monitor if you're not going to use your PC for more than 2 hours.

Make sure your monitors, printers, and other accessories are on a power strip/surge protector. When this equipment is not in use for extended periods, turn off the switch on the power strip to prevent them from drawing power even when shut off. If you don't use a power strip, unplug extra equipment when it's not in use.

Most PCs reach the end of their "useful" life due to advances in technology long before the effects of being switched on and off multiple times have a negative impact on their service life. The less time a PC is on, the longer it will "last." PCs also produce heat, so turning them off reduces building cooling loads.

For cost effectiveness, you also need to consider how much your time is worth. If it takes a long time to shut down the computer and then restart it later, the value of your time will probably be much greater than the value of the amount of electricity you will save by turning off the computer.

### Power-Down or Sleep Mode Features

Many PCs available today come with a power-down or *sleep mode* feature for the CPU and monitor. ENERGY STAR® computers power down to a sleep mode that consume 15 Watts or less power, which is around 70% less electricity than a computer without power management features. ENERGY STAR monitors have the capability to power down into two successive "sleep" modes. In the first, the monitor energy consumption is less than or equal to 15 Watts, and in the second, power consumption reduces to 8 Watts, which is less than 10% of its operating power consumption.

Make sure you have the power-down feature set up on your PC through your operating system software. This has to be done by you, otherwise the PC will not power down. If your PC and monitor do not have power-down features, and even if they do, follow the guidelines above about when to turn the CPU and monitor off.

Note: Screen savers are not energy savers. Using a screen saver may in fact use more energy than not using one, and the power-down feature may not work if you have a screen saver activated. In fact, modern LCD color monitors do not need screen savers at all.