Energy Saving Guidelines for Personal Computers

Personal Computers consume significant amounts of energy at Polytechnic University. In cooperation with the University's Energy Conservation Strategy, the Information Services Department is publishing these guidelines to assist the faculty, staff and students in configuring their computing equipment to reduce energy consumption and thereby produce a cost savings and conservation of resources.

In summary, the following is a list of suggestions that you can act upon to reduce the energy usage of your personal computer.

Configure your monitor to turn off after 20 minutes of inactivity, your hard drive to turn off after 30 minutes of inactivity, and your desktop computer or laptop to go into a standby or sleep mode after 90 minutes of inactivity.

If your computer does not have a standby or sleep mode, for example older Windows NT systems, turn off your monitor when it is not in use.

Do not use screensavers as energy savers as they continue to use the monitor at full power and do not conserve energy.

Do not turn on your computer, monitor, or printer in the morning until you actually need them.

A misconception is the belief that computers and monitors purchased with the Energy Star logo are already energy efficient. In reality they have built in energy conservation features but your computer cannot take full advantage of these built in energy saving mechanisms until the power management features are enabled and configured. To elaborate on the list above, the subsequent sections of this document provide greater detail on how you can configure your personal computing equipment to minimize its energy consumption.

Your PC can regulate its own energy consumption with your guidance

Operating Systems, such as Microsoft Windows and the Macintosh OS, have built-in energy management features that can be accessed via the Control Panels that enable them to be configured to turn off the monitor, the hard disks and the system. For windows based PCs select the Start Menu, then Settings, then Control Panel and finally Power Options. This should bring up a Power Options Properties dialog box that allows you to

set the time to elapse until separate components power down. This is the same dialog box that can be accessed through the Display Control Panel under the screen saver tab.

The table below gives some suggestions for turning off components after a specified amount of time has passed without any activity. However, these suggestions should be adjusted according to individual preference and computer usage.

Suggestions for turning off computer components after a period of inactivity:

Component	Time period
Monitor	20 minutes
Hard disks	30 minutes
System standby or hibernation	90 minutes

Some highly specialized applications such as Adobe Photoshop or other desktop publishing, video editing, or sound editing applications may require longer time settings before hard disks power down and the system enters into a standby mode in order operate at optimal levels.

Does it harm the PC to turn it off?
Older computers suffered shorter lifetimes under successive power cycling; however, computer components manufactured in the last couple of years are designed to enter into a lower power state or turn off under the control of the operating system. Therefore using the power management options or turning off newer computers does not appreciably shorten their lifetime. In the near future however; Information Services will be rolling out a variety of services including automated patch management, antivirus updates, and asset control. To reduce the imposition on the user community these features will be scheduled to run during off hours. As a result, we will be requesting that systems not be turned off at the end of the day. We will request that monitors and local peripherals such as printers be turned off every evening or when not in use.

Waking up a "sleeping" PC
Components that are in a low power mode must be "reawakened" when needed. The time lapse for re-powering components varies. Individual components, such as the monitor or hard drive, usually become active in a matter of seconds; however reawakening the entire system from a system standby or hibernation mode can take more than a minute. You might consider reawakening the computer immediately upon entering your office by moving the mouse or pressing a key on the keyboard, and then getting settled into the office, so that the computer is fully operational when you sit down.

What about group printers and servers?

Group printers should not be turned off unless no one will be using them for an extended period of time such as overnight or over a weekend. Most group printers also have a power save mode that can be configured according to the needs of the group that it serves. For group printers Information Services recommends setting the standby time to 30 minutes.

Servers should not be turned off; however, the monitor on the server is rarely needed and can be turned off when not in use to conserve energy.

Additional information

For additional information about power management, please visit the Energy Star site at **www.energystar.gov/** or for assistance in configuring your personal computers energy management features, please call Information Services at x3123 or by email at help@poly.edu.

In summary, configuring computer components to automatically save energy is the best thing that can be done to conserve energy without impacting your ability to get your job done. It saves energy and money, and is beneficial to the environment. These settings are a matter of personal preference. Select the settings that balance your computer usage with energy savings.