

Monitor Power Management

UTILITY SAVINGS INITIATIVE (USI) – FACT SHEET

Save Money and Energy Using “Sleep” Modes on Computer Monitors

Significantly reducing your energy bill can be as simple as enabling monitor power management on your computers. Power management allows monitors to enter a low-power mode during periods of inactivity. In a typical office setting, a computer monitor costs \$34 annually to operate. A monitor with power management enabled, that is also turned off at night and on weekends, can cost as little as \$7 in annual operating costs¹.

Activating “Sleep” Mode

USING EXISTING PC SETTING

On most personal computers using MS Windows, the monitor’s power management can be set through the *control panel* in the Start menu. Go to *Display, Screen Saver* and *Power* to set the time to ‘power-down’ mode for the monitor.

USING ENERGY STAR WIZARDS

ENERGY STAR® offers two free downloads to help you achieve those savings: EZ Wizard, which enables power management on individual workstations, and EZ Save, which allows system administrators to enable power management on all the monitors on a network from one central location. These programs function by using existing power settings on Windows 95, 98, ME, 2000 and XP.

EZ Wizard for individual workstations:

http://energystar.gov/index.cfm?c=power_mgt.pr_pm_wizard

EZ Save for Networks:

http://energystar.gov/index.cfm?c=power_mgt.pr_pm_easy_save

Successes in Power Management

ECU Issues Campus Policy

In 2002, Information Technology and Computing Services (ITCS) at East Carolina University issued a campus policy recommending that users completely shut down university computer systems, including monitors and peripherals, every night and enable the “power management” features on university computers while in use. Although it is difficult to measure specific cost savings from such efforts, the university estimates that turning off computers every night and utilizing “power management” features should result in estimated savings of \$156,000 in annual electricity expense (excluding air conditioning costs). For more information, view ECU’s Facility Services web, http://www.ecu.edu/facility_serv/energy/energytips.htm

PM is UNC-CH’s Standard Business

Ninety to 94 percent of new students purchase their required laptops through the university. UNC’s Information Technologies Service (ITS) makes sure these systems are configured to have the monitor enter sleep mode after five minutes. Hard drive and processors are also set to power down. “This is just the way it should be done,” states Linwood Futrelle, director of planning for Information Technology Services. More than 500 public computer lab stations were enabled to utilize strict power management options for monitors and hard drives. “Not a word of negative feedback was received,” notes Futrelle. For more information, contact Linwood Futrelle, UNC-CH ITS, at (919) 962-5265 or linwood@email.unc.edu

FOR WINDOWS NT USERS:

Windows NT 4.0 Workstation operating systems do not support power management. As Microsoft no longer supports Windows NT, many offices are transitioning to Windows 2000 or XP. It’s simple to enable your office computers for

Calculate Your Potential Savings

Typical Savings from Activating Monitor Power Management*:

$$\text{_____} \# \text{ monitors} \times \$21 = \$ \text{_____} / \text{ year}$$

Potential Power Management Saving per 100 Monitors

% Computers turned off at night and weekends	0	35	55*	75	100
Current Costs (\$/year)	4,800	3,500	2,800	2,100	1,300
Cost Savings (\$/year)	4,100	2,800	2,100	1,400	600
Future Costs (\$/year)	700	700	700	700	700
Energy Savings (kWh/year)	63,700	43,600	32,700	22,200	9,400

*Assumes 55 percent of computers are shut off on nights and weekends. Studies show that only 55 percent of monitors are shut off at night and weekends at facilities without targeted programs. Assumes \$0.064/kWh as NC's average commercial electrical rate.

power management during the transition; a guide to this process can be found online at: http://www.computerpowersaver.com/PM_Win2k_Whitepaper.pdf.

However, if your office is planning to keep Windows NT for a year or more, there exist simple hardware solutions that save money and energy by automatically turning off computer monitors during periods of inactivity. These products are easy to install, require no new software, and are compatible with IBM PCs, Apple Macintoshes and Sun SPARCstations².

Energy Star Products & LCD Flat Panel Displays

ENERGY STAR[®] qualified monitors automatically enter two successive low-power modes of 15 watts or less and eight watts after a period of inactivity. Energy Star[®] rated products should be a procurement standard.

Flat panel LCD monitors can use one-half to two-thirds less energy than standard cathode ray tube (CRT) monitors. Other benefits of LCD monitors include: smaller volume size, less eyestrain, less heat generation, negligible emission of harmful radiation, and less toxic waste at end-of-life.

Dispelling the Myths

Screen savers were not meant to conserve energy and have only minimal effect on reducing electrical costs. Screen saver programs can be used in conjunction with power management.

Power management controls do not reduce the life of monitors.

References & Resources:

1. EPA Energy Star site for EZ Wizard, EZ Save and energy saving calculator:
http://energystar.gov/index.cfm?c=power_mgt.pr_power_management

2. Bayview Technology Group LLC
http://www.bayviewtech.com/html/monitormiser_plus_overview.html

Statistics on Savings with EZ Wizard and EZ Save from Tulane University
http://energystar.gov/ia/products/power_mgt/pm_tulane_university.doc

Watt Watchers:
<http://p2.utep.edu/watts/projects/power.cfm>

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