✿EPA

Purchasing An Energy Star℠ Computer

energy
EPA POLLUTION PREVENTER

The EPA Energy Star Computers program is a partnership effort with the computer industry to promote the introduction of energy-efficient personal computers, monitors, and printers. Reducing energy consumption can help to combat smog, acid rain, and global warming by reducing emissions from electricity generation. By using more energy-efficient equipment in our homes, offices, and factories, we can both improve the environment *and* save money.

What is Energy Star Equipment?

"Energy Stars" are energy-efficient computers, monitors, and printers that save energy by powering down and going to "sleep" when not being used. An Energy Star computer has all the performance features of a regular computer—it simply has the additional ability to "power-down." These energy-efficient machines save money on electricity bills and reduce pollution, improving your bottom line and the earth's environment.

EPA has signed partnership agreements with industry-leading manufacturers who sell more than 75 percent of all desktop computers and 90 percent of all laser printers sold in the United States. These companies have introduced more than 2,000 desktop computers, monitors, and printers that have earned the right to bear the EPA Energy Star℠ logo, shown at the top of the page.

Computer equipment is the fastest growing electric load in the business world, and energy use by computers could double by the year 2000. Ironically, much of this energy is wasted: research shows that most of the time personal computers are on they are not actively in use—and 30 to 40 percent are left running at night and on weekends. By the year 2000, Energy Star equipment could save enough electricity to power Vermont, New Hampshire, and Maine for a year, cut electricity bills by \$2 billion, and reduce CO_2 pollution equal to the emissions from 5 million automobiles.

Real Savings

Energy Star computers are available at no additional cost, and a single Energy Star computer and monitor can save anywhere from \$7 to \$52 per year in electricity bills. If you notice computers and printers left on when leaving the office at night and on weekends, your savings will be toward the higher end of this range.

If you add an Energy Star printer to your system, you can increase your savings by an additional \$35 per year.

For an office environment where one-third of the computers are left on all the time, purchasing 100 Energy Star PCs and monitors instead of non-efficient equipment could save you \$2,400 per year. In addition, Energy Stars generate less heat, and upgrading your existing equipment to Energy Star as it naturally turns over can lead to cooling reductions of up to 25 percent.

100 New Computers and Monitors

Non-Energy Star	Energy Star
SAME PERFORMANCE	
\$0/year savings	\$2,400/year savings

How to Find Energy Star Products

Consumers can easily recognize the new, more efficient systems because they will be identified by the EPA Energy Star℠ logo. Since there are now more than 2,000 products available from all major manufacturers, EPA is encouraging companies and organizations to specify Energy Star compliance in all future purchases of computer equipment.

- If you are a business, ask your MIS or procurement official about purchasing Energy Star equipment, and look for the Energy Star℠ logo in advertisements and on specification sheets.

- If you work in the Federal Government, the General Services Administration has issued guidelines on the acquisition of Energy Star computers. Call (202) 519-4860 for a copy.

- If you need a computer for home, look for the Energy Star℠ logo on display models in local retail stores—if you do not see it, ask for it.

To help, EPA offers a database of available products which is updated monthly. Just call or write EPA to receive a copy.

User Advantages

Besides the cost savings, Energy Star equipment offers users several key advantages.

- Energy Star PCs can be **quieter** since some have no fans.

- Sleeping Energy Star monitors **emit fewer electromagnetic fields (EMF)** since they are not displaying any visual image when "asleep."

- Energy Star monitors can also **increase file security** since the "sleeping" screen is dark.

- All Energy Star equipment produces less heat, and thus contributes to a cooler and **more comfortable workspace**.

- Energy Star PCs tend to be a **less intrusive desktop** item since they are usually smaller than traditional PCs.

Increased Reliability

In addition, Energy Star equipment may actually last longer than conventional products because it will most likely spend a large portion of time in a low-power sleep mode. Non-Energy Star computer equipment left on at night and over weekends may last only 2 to 3 years, but Energy Star computers "sleeping" during the day *and* turned off at night could last almost **10 times as long** (see graph).
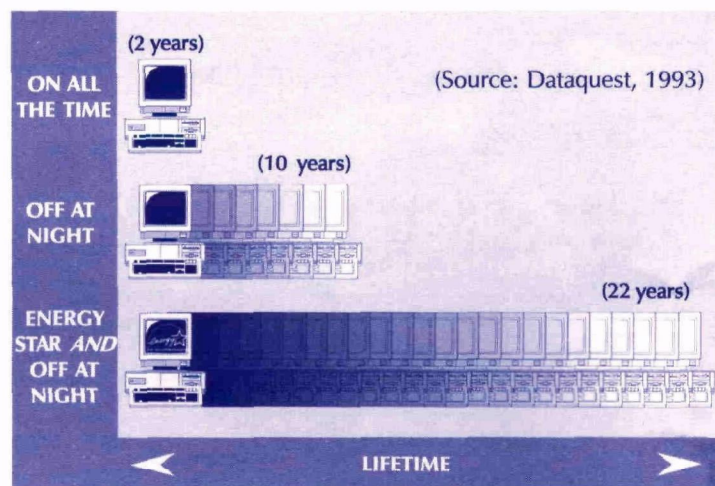
By spending time "sleeping," Energy Star equipment can reduce wear and tear, leading to extended life and increased reliability.

Which Energy Star Is Right for Me?

Committing to an "Energy Star purchasing strategy" for your organization is the first crucial step. The second step is figuring out *which* Energy Star products to buy. It is important to realize that not all Energy Star computers are the same, and your choice will depend on your needs and preferences.

If you operate on a Local Area Network (LAN), make sure that your Energy Star computer is compatible with that network system. Most Energy Stars are now being network tested, but specify your particular environment—whether its Novell Netware, Banyan Vines, Windows NT, Lan Manager, or others, to ensure that it is compatible (see sample procurement language on page 4).

You also may want to specify certain "user-friendly" features, such as an Energy Star or power management "icon", which is easily accessible and gives the user a quick and simple way to change the "sleep" settings. Some users may want to set their computer to go to sleep after 15 minutes of inactivity, while others may choose 30 minutes. Having a user friendly power management feature to customize an Energy Star computer to your own schedule contributes to productivity and increases energy savings.

What If No Energy Star Is Available?

If you need an expert computer system or an extremely high speed printer, there might not yet be an Energy Star model available. Because high-end equipment was designed to give you maximum performance, it also tends to use more power. Until the designers of this higher end equipment develop Energy Star models, you will have to buy non-Energy Star. The goal of the Energy Star program is to save energy with no sacrifice in performance or cost. If you need a high-end system to do your job, and there is not an Energy Star available, then buy what you need.

However, if you are considering the purchase of a computer with certain specifications and have the choice between an Energy Star and a non-Energy Star machine, buy the Energy Star. If both machines have the exact same performance and are similar in cost, purchasing the Energy Star system will give you the additional benefits of saving on your electric bill and helping to prevent pollution.

President Clinton's Executive Order

In April 1993, President Clinton signed Executive Order 12845 requiring all federal agencies to purchase Energy Star computers, monitors, and printers where commercially available. This order, which took effect on October 18, 1993, reads in part:

Agencies shall specify that microcomputers, including personal computers, monitors, and printers, acquired by the agency, shall meet the EPA Energy Star specifications. This feature shall be activated when the equipment is delivered to the customer and shall be capable of entering and recovering from the low-power state unless the equipment meets Energy Star efficiency levels at all times.

Should I Still Turn My Energy Star Off at Night?

Yes. Power-managed Energy Stars will go to sleep by themselves, but remember that the sleep mode does not mean "off." Sleeping Energy Stars use less power than when fully activated, but they still draw some power when in the sleep mode. To save additional energy and increase the lifetime of the equipment, be sure to turn your system completely off at the end of each day. It is a common myth that turning computer equipment off and on is bad for it; in fact, the exact opposite is true. **Turning off your computer at night may actually *increase* its life** because it will reduce susceptibility to heat and mechanical stress, the two leading causes of personal computer failure. *The recommended approach: set your Energy Star to sleep when you are away during the day, and turn off the system when you leave at night.*

What Can I Do for My Existing Equipment?

Again, turning off your existing equipment at night is the easiest and most cost-effective strategy for reducing the energy consumption of non-Energy Star equipment. However, if you are unable to turn off existing equipment or wish to make additional savings, consider retrofitting your equipment with an Energy Star-compliant controlling device. These devices are fairly easy to install and can completely shut off the power to your PC, monitor, or printer after a period of inactivity or at a specified time of the day.

What to Specify When Ordering Energy Star Equipment

✓ **Energy Star Compliant**

"Provide computer products that meet the EPA Energy Star requirements for energy efficiency in the requested configuration." This means that PCs, monitors, and printers shall be able to enter and recover from a low-power standby mode when not in use. For PCs and monitors, the low-power mode is defined as 30 watts or less (30 watts for the PC and 30 watts for the monitor). For printers with speeds of less than 15 pages per minute, the requirement is 30 watts; and for printers with speeds of 15 or more pages per minute, the requirement is 45 watts. All high-end color printers must not exceed 45 watts in low-power mode.

✓ **Shipped Activated**

"Ship all products with the Energy Star low-power feature activated or enabled." This eliminates the need for users to configure the power management feature after delivery and helps to ensure that the energy-saving feature is used.

✓ **Network Compatibility**

"If equipment will be used on a local area network, the PC must be fully compatible with the specified network environment; PCs resting in a low-power state should not be disconnected from the network." Many manufacturers are now testing their Energy Star equipment on networks and can report, for example, that they are compatible on Novell Netware, Banyan Vines, Windows NT, Lan Manager, and other network systems.

✓ **Monitor Control**

"Ensure monitors are capable of entering a low-power mode when connected to the accompanying PC." Most monitors cannot power down by themselves, and must rely on some external input to trigger their low-power state. This is typically accomplished via one of the following: (1) VESA Display Power Management Signalling (DPMS), a signalling protocol that allows a PC equipped with DPMS to control a DPMS compatible monitor (both the computer and monitor must be DPMS compatible), (2) the actual shut off of power to the monitor via a special plug from the PC (this does not require an Energy Star monitor), or (3) the use of a proprietary software utility shipped with the monitor. Organizations may wish to specify one approach or the other. DPMS compatible PCs and monitors will provide seamless power management and immediate recovery from the low-power state, but only when used with each other. PCs that include the power switch approach can shut off power to any monitor, not just an Energy Star monitor.

✓ **Software Compatibility**

System must be able to run commercial off-the-shelf software both before and after recovery from a low-power state, including retention of files opened before the power management feature was activated.

What Products are Available?

More than 2,000 products are now available that meet the Energy Star guidelines.

To receive an abbreviated list of qualified products, call the Energy Star fax-back line. Dial 202 233-9659 and enter #4601 for PCs, #4603 for monitors, and #4602 for printers.

To receive the detailed list of qualified products by mail, call the Energy Star hotline at 202 775-6650.

To fax yourself general program information, call the Energy Star fax-back line at 202 233-9659, or call or write us:

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