



## Benefits

- Reduces energy costs
- Reduces ambient noise
- Extends equipment life
- Lowers air-conditioning loads
- Minimizes electromagnetic field emissions
- Reduces greenhouse gas emissions

## Quick Fact

*Phantom load*  
*Vampire power*  
*Idle current*  
*Wall wart*

*These are all euphemisms for the way devices use and waste electricity. The items that are always plugged in—computers, printers, copiers, coffee makers, cell phone chargers, DVD players, televisions, or anything with a remote—are always ready to be on, consuming power and increasing electricity bills.*

## Overview

Office equipment accounts for 10% of all commercial sector power consumption in the United States, making it the fastest-growing use of electricity in commercial buildings. The American Council for an Energy-Efficient Economy estimates that businesses and home owners spend close to \$5 billion each year to run office equipment. Given the proliferation of electronic devices, desktop computers and printers, office equipment energy use is eclipsing lighting energy costs in some cases and the operating cost of office equipment will exceed its purchase price over time. The energy used by standard office equipment is surprising. For instance, a large copier, if left on all day, will cost \$224 a year and each 15 inch monitor will cost \$54 a year. Power is continuously drawn by office equipment, even when it is ostensibly “off” but still plugged in.

## Strategies

Look for the Energy Star label when purchasing new office equipment, such as computers, monitors, copiers, fax machines, digital duplicators, external power adapters, printers, scanners, notebook computers, integrated computer systems, and desktop derived servers. Energy Star labeled office equipment costs the same as competing equipment, performs as effectively and can reduce energy consumption by 40–60% (saving \$25–75 per computer per year), primarily through power management.

Power management triggers a low power or “sleep” mode when office equipment is not being used. Once the user resumes use, the equipment powers back up again. Consider the following:

**Computers and Monitors** use the most energy of all office equipment. Energy Star computers and monitors will power down to roughly 15% of their maximum power usage. Ensure that screen savers are compatible with the power-down mode.

**Printers** will also power down after a pre-determined level of inactivity. Duplexing printers that produce doubled-sided prints are more energy efficient and can cut paper use in half.

**Fax Machines** can power down to 15–45 watts or less when not in use and will still be able to receive faxes.

**Copiers** need to keep warm to enable the toner to fuse to the paper but Energy Star copiers go into a low-power mode after 15 minutes of inactivity and to an off-mode of 5–20 watts after two hours of inactivity.



## LEED®-CI v2.0: Commercial Interiors

*By implementing various energy efficient office equipment strategies, your project may be eligible for the following:*

### Energy & Atmosphere

EA Credit 1.4: Optimize Energy Performance, Equipment & Appliances

### CASE STUDY

## SUNY at Buffalo

In 2004, the State University of New York at Buffalo worked with Pepsi to switch 132 vending machines to units with the Energy Star rating. The result: a savings of over 250,000 kWh of electricity, or \$20,000 per year.



The installation of a vending machine controller could reduce operating costs by up to 50%. This technology incorporates sensors to monitor occupancy, temperature, and electric current. This can reduce the amount of time the machines operate while maintaining desired temperatures. Vending machine controllers can typically be installed without tools or additional wiring. Puget Sound Energy (PSE) provides a rebate of \$80 for each controller you install in facilities where PSE provides electric service. Download a rebate application or call a PSE Energy Advisor at 1-800-562-1482 for complete details.

### Hidden Costs

Standard Vending Machine

**\$311**

Energy Star Vending Machine

**\$158**

Energy Star Vending Machine with Energy Controller

**\$98**

#### Annual Energy Cost

*based on electric rate of \$0.09/kWh*

## Checklist

### Create a Plan for Phasing-out Old Equipment

- Donate equipment still in working order. For a list of charitable organizations looking for equipment, visit [www.takeitbacknetwork.org](http://www.takeitbacknetwork.org).
- Recycle devices which have reached their end-of-life.
- Schedule retirement for existing equipment.
- Until you purchase Energy Star office equipment, employ computer power management techniques found at [www.tufts.edu/tie/tci/pcpowermanagement/FAQ.html](http://www.tufts.edu/tie/tci/pcpowermanagement/FAQ.html).

### Purchase Energy Star-certified Equipment

*Discounts are available for bulk purchases of Energy Star equipment. See [www.quantityquotes.com](http://www.quantityquotes.com).*

- Computers—*estimated annual energy savings per computer & monitor: \$40*
- Copiers and Faxes
- Notebook Computers and Tablet PCs
- Mailing Machines
- Monitors—*LCD monitors use half to two-thirds the energy of CRTs*
- Printers and Scanners—*estimated annual energy savings per printer: \$40*
- Water Coolers
- Vending Machines

### Provide Employees with Guidelines for Energy Efficiency

- Set office computers, monitors and printers into “sleep” mode when not in use.
- If an overnight network connection is not required, use power strips with surge protectors to shutdown computers, printers and related devices when staff leave for the day.
- Unplug cell phones and other chargers when not in use.

### Specify Energy Star Appliances

- Commercial kitchen equipment
- Dishwashers
- Refrigerators

## Resources

[www.energystar.gov](http://www.energystar.gov) Search for energy efficient office equipment, appliances, and commercial food service equipment and find rebate offerings.

[www.seattle.gov/light](http://www.seattle.gov/light) Search for rebates and incentives from Seattle City Light.

[www.pse.com](http://www.pse.com) Look under “For Your Business” for rebates and incentives from Puget Sound Energy.

[www.energy.gov](http://www.energy.gov) Find energy saving tips, rebates and incentives.