

May 2009

Low-Energy Office Equipment

By Jenna M. Aker

When you're tallying up energy costs and looking for places to make cuts, you might focus on HVAC and relamping, or consider a cool roof. In the grand scheme of things, the energy used by office equipment might seem like small potatoes, but did you know that, according to the American Council for an Energy Efficient Economy (ACEEE), office equipment is one of the fastest-growing electricity uses in commercial buildings?

Office equipment "directly consumes 7 percent of total commercial electric energy," according to the U.S. Department of Energy, and the figure jumps by 30 percent when you consider the energy used by HVAC systems to displace the waste heat generated by office equipment. Also, dealing with the "small" energy culprits will definitely be cheaper.

"While there are many great new innovations that can help cut energy costs, every building manager would do well to begin with the low-cost or no-cost measures that provide quick results and provide funds for more expensive projects," says Jacob Stevens, green programs manager at the WARM Training Center, Detroit. "Simple, low-cost solutions abound," he says, "such as turning off lighting displays on vending machines or changing power settings on computers."

Computers with power-management features use about 70-percent less electricity than those without, says the U.S. EPA. Laptops are the most efficient option, typically drawing only 15 to 25 watts during use, compared to 150 watts used by conventional PCs and monitors. Also, watch out for screensavers or computer games that not only draw power for the monitor, but also keep the computer from going to sleep.

If your computers, printers/copiers, and fax machines aren't ENERGY STAR® rated (or otherwise saving energy), have you thought about upgrading? Even changing out one piece of equipment for a low-energy model makes sense. Copiers, sitting on (but idle) for much of the day, are known to use more energy than any other piece of office equipment, so that might be a good place to start.

"Sometimes, [low-energy devices] are more expensive, but the payback makes this point irrelevant, in my opinion," says Ricky Cappe, founder of Santa Monica, CA-based Green Built Consultants Inc. Steven Birndorf, independent sustainability consultant in Berkeley, CA, agrees that the investment shouldn't dissuade the right decision. "With variables like tax savings, rebates, decreased maintenance, leasing options, and reduced energy usage, projects can often pay for themselves after only a few years and have ongoing savings," says Birndorf.

Cappe also suggests using low-energy appliances, such as refrigerators in lunchrooms and cafeterias – an upgrade "that will pay off many times over, especially if you have an old model that's very inefficient with respect to energy usage." In addition to replacing inefficient appliances with new models, Cappe offers these helpful tips:

- Turn off all electronics (computers, copiers, coffee machines, desk calculators, etc.) when not in use.
- Use power strips to make it easier to turn everything off.
- Turn off lights when natural light is sufficient. Think about installing motion sensors and dimmers.
- Turn off all lights at night.
- Use natural ventilation before mechanical HVAC.
- Keep up on proper maintenance of system components to improve efficiency and reduce energy consumption.

Turning off lights when you leave, and unplugging unused electrical devices, is (hopefully) common sense, but Stevens finds that changing mindsets is more complex than common sense. "Here's the trick that many managers fail to address: education and behavior," he says. "Changing occupant behavior is often the cheapest first step to big savings. The basic steps are getting employees to understand that their efforts to save energy can free up more funds for jobs and other building improvements; then, implementing policies to turn off lights, computers, copiers, etc. at the end of each day. This simple approach can save lots of money."

Cappe also encourages focusing on behavior before making any low-energy investments. "Before purchasing any new products, start by changing the ways people function in the building – getting people to change their habits is the first step, and will see significant savings," he says. He also suggests hiring an energy specialist to help identify areas in each building that can result in savings and efficiencies. With aware tenants, energy-saving equipment, and the knowledge of your building's energy strengths and weaknesses, you'll be properly armed to reduce consumption, one step at a time.

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