

Energy Snippets



Quick and Easy Energy Use Reduction Tips

TOP TEN CHEAP THINGS YOU CAN DO TO REDUCE ENERGY COSTS

- 1. TURN OFF YOUR COMPUTER WHEN YOU LEAVE:** It only takes a few seconds to turn off your computer. Did you know that electricity for a 156-watt PC costs more than \$93 a year if it's left on all the time?(assuming an electricity rate is 7¢ per kilowatt-hour) If the computer is only on 40 hours a week, electricity only costs \$22. If your office has 60 computers, that's a \$4,260 savings in a year if everybody turns their computers off at night, on weekends, and when they're on vacation. It doesn't shorten the life of a computer built after 1995 to be turned off each night and on each morning - it actually extends the computer's life. You can save even more if you set your computer to go into standby or hibernate mode when you're away from your desk for an extended time. Look on the control panel for "power options" or a similar feature, and set it to match your habits. For more detailed set-up instructions, go to http://www.acns.colostate.edu/aspx/www.acns/bulls/energy_saving.html.
- 2. TURN THE THERMOSTAT DOWN (or UP!):** Adjusting the temperature just one degree (higher for cooling and lower for heating) can reduce heating and cooling costs one percent. You can save even more by replacing your thermostats with programmable models. Programmable thermostats can be set to reduce the heating and air conditioning when not needed - like at night and on weekends or other times when a building is unoccupied. You can get thermostats with override switches so that employees working outside standard hours can have full heating and cooling while they are in the building. These inexpensive devices (\$50 to \$150 depending on features, plus installation costs) can pay for themselves in as little as one month in reduced heating and cooling costs.
- 3. TURN DOWN THE TEMPERATURE ON THE WATER HEATER:** Water heating energy savings can be from 3% to 5% for every 10 degrees that the temperature is lowered. Water heater temperature can be adjusted by turning the control on the water heater's thermostat. Most thermostats are on the front of the tank, but some are behind an access plate. If your water heater doesn't feel cold when you touch it, you can save even more by adding an insulating blanket around your water heater. Choose one with an insulating value of at least R-8. Pre-cut water heater insulation costs around \$10 to \$20 and will pay for itself in about a year. Some utilities offer rebates or install insulation at low or no cost. Be careful not to cover the controls. Keep combustible insulation at least 8 inches from gas water heater flues. If you have an electric hot water heater add a timer, which will turn off the water heater at times when it is not needed.
- 4. SEAL YOUR GAPS:** Sealing around doors, windows, and electrical boxes in outside walls reduces the amount of air leaking into a building, reducing heating and cooling costs and making the indoors more comfortable. Add a bead of caulk where the window frame meets the wall or trim. If there is wood trim around the window, it can be worthwhile to carefully remove the trim and add expanding foam between the wall framing and the window. Use foam that remains somewhat flexible when cured, or the window glass could crack. Unscrew electrical plates in outside walls and add foam around them, too. Add weather seals around any

doors that don't already have them. Generally, seals that are designed to compress when the door closes work better than other types.

- 5. ADD A VENDING MISER:** These clever devices, which are approved for use by both Coke and Pepsi, reduce the amount of electricity used in refrigerated vending machines by cutting power to the machine when no customers are around. Automatic sensors re-power the machine as necessary to keep drinks cold. A VendingMiser costs \$143.20 for the indoor model and \$151.20 for the outdoor model through GSA. VendingMiser has a payback period of less than 1½ years at 7¢ per kilowatt-hour. Similar products are available for snack machines and other plug loads that can be periodically shut down based on occupancy. Some utility companies, states, and municipalities offer rebates from \$45 to \$120 for installing miser products. More information about VendingMiser is available at http://www.usatech.com/energy_management/index.php.
- 6. GO FLOURESCENT:** Replace your incandescent light bulbs with compact fluorescents. Incandescent lamps use 3 to 4 times more energy than CFLs, generate lots of heat, and burn out quicker. Compact fluorescent bulbs are more expensive to buy, but their longer life and lower energy use makes the total cost several times less than using incandescent bulbs. Be careful when purchasing compact fluorescent bulbs. Check the label for the rated life of the bulb and for a color rendering index (CRI) of 82 or higher. Also, be cautious about replacing incandescent bulbs with compact fluorescents in outside fixtures in cold climates, because some fluorescent ballasts don't work in cold temperatures.
- 7. CHANGE YOUR SWITCHES** to occupancy sensors in rooms that don't have people in them all the time. Occupancy sensor switches turn lights off after a certain amount of time with nobody in the room, and turn the lights back on again as soon as somebody enters the room. Occupancy sensor switches that simply replace regular light switches are available for about \$50 from GSA. They can pay for themselves in energy savings in about 3 years. Private offices, restrooms, janitor closets, storage or supply rooms, duplication and printer rooms, and meeting rooms are good places to install occupancy sensor switches.
- 8. RETROFIT YOUR** Exit lights stay on 24 hours a day, so they can use lots of energy. If you have old exit lights that use incandescent light bulbs, either replace them with light emitting diode (LED) exit signs or replace the bulbs with LEDs that screw into incandescent light bulb sockets. Replacement bulbs are available for around \$30 and might be a good choice if your incandescent exit signs are in good condition. Exit signs cost as little as \$70 through GSA (\$100 with battery back-up). LED signs or bulbs use 50 times less energy than incandescents and will pay for themselves in energy savings in as little as a year. If you have exit lights that use fluorescent tubes, it may not be cost effective to change the fixtures until they quit working, because LEDs only use 10 times less energy than fluorescents.
- 9. HAVE YOUR EQUIPMENT CLEANED AND SERVICED REGULARLY:** Keeping equipment motors, filters, coils, and other items clean and well-lubricated helps units run more efficiently and last longer. Yearly equipment checks, servicing, and adjustment are necessary to assure equipment and systems are working properly. This is NOT the place to skimp on the operations budget — you'll pay more later if you do. Check your O&M manual and manufacturer's guidelines to find out what's recommended. There's also good information at the Federal Energy Management Program's *Operations and Maintenance Best Practices* website (www.eere.energy.gov/femp/operations_maintenance/om_best_practices_guidebook.cfm).
- 10. ADD INSULATION:** Adding insulation to older buildings that don't meet current energy codes is almost always an investment with a short payback time for buildings with significant heating and/or cooling costs. Adding blown-in or batt insulation to attic spaces and Styrofoam insulation to crawl space walls is usually inexpensive and immediately increases employee or resident comfort and reduces heating and cooling bills. When adding attic insulation, be sure to block out space to allow air to flow from roof eaves to ridge or gable vents so that you don't create a condensation problem.

WANT TO LEARN MORE WAYS TO SAVE? Read *Incrementally Greener—Improving Sustainability Over Time Through Operations and Maintenance* at <http://www.fs.fed.us/t-d/pubs/htmlpubs/htm06732843/index.htm> (username t-d, password t-d).

Also go to <http://fswb.mtdc.wo.fs.fed.us/toolbox/sus/index.htm> and <http://fswb.mtdc.wo.fs.fed.us/pubs/htmlpubs/htm06732843/index.htm> for further info.