

SURE ENERGY SAVERS

It's easy to get started improving the energy efficiency of your facility with little expertise or money. There are many reliable, low-risk, high-return actions that you can do, and are relatively simple! If resources permit, undertaking a comprehensive energy efficiency program, with the assistance of a professional if needed, would yield even greater savings. However, while you are considering a comprehensive program at least implement as many of the actions from the following list that you can start saving now! Further information on these topics can be found in the [Larger Opportunities](#) section of this guide.

Don't let this discourage you, or delay your taking simpler actions for sure savings. There are many reliable, low-risk, high-return upgrades that you can implement with limited or no technical support. So, if you don't do anything else, at least implement as many actions from the following list as you can. More detailed information on these topics can be found elsewhere in this guide.

Lighting



- ▶ Turn off lights (and other equipment) when not in use. High utility costs often include paying for energy that is completely wasted by equipment left "on" for long periods while not in use.
- ▶ Replace incandescent light bulbs with [ENERGY STAR qualified compact fluorescent lamps \(CFLs\)](#), wherever appropriate. CFLs cost about 75% less to operate, and last about 10 times longer. Their prices are dramatically lower now than when first introduced.
- ▶ Install switch plate occupancy sensors in proper locations to automatically turn lighting off when no one is present, and back on when people return. Even good equipment can be installed wrong, so don't install the sensor behind a coat rack, door, bookcase, etc. It must be able to "see" an approaching person's motion to turn on the light before, or as they enter an unlit area.
- ▶ Adjust lighting to your actual needs; use free "daylighting."
- ▶ To prevent glare, eyestrain, and headaches, do not "over-light." Too much light can be as bad for visual quality as too little light – and it costs a lot more.
- ▶ Install [ENERGY STAR qualified exit signs](#). These exit signs can dramatically reduce maintenance by eliminating lamp replacement and can save \$10 dollars per sign annually in electricity costs while preventing greenhouse gas emissions.
- ▶ Consider upgrading from older T12 (1.5" diameter) tubes with magnetic ballasts to more efficient T8 (1" diameter) fluorescent lamp tubes with solid-state electronic ballasts.



Heating and Air Conditioning



- ▶ "Tune-up" your heating, ventilating and air-conditioning (HVAC) system with an annual maintenance contract. Even better, have your HVAC serviced prior to both heating and cooling seasons. Even a new [ENERGY STAR qualified HVAC system](#), like a new car, will decline in performance without regular maintenance. A contract automatically ensures that your HVAC contractor will provide "pre-season" tune-ups before each cooling and heating season. You save energy and money, and your system may last years longer with reasonably priced yearly maintenance fees. Your chances of an emergency HVAC break-down also become very remote with regular maintenance.
- ▶ Regularly change (or clean if reusable) HVAC filters every month during peak cooling or heating season. New filters usually only cost a few dollars. Dirty filters cost more to use, overwork the equipment, and result in lower indoor air quality.
- ▶ Install an [ENERGY STAR qualified programmable thermostat](#) to automate your HVAC system. This solid-state, electronic device optimizes HVAC operation "24/7" based on your schedule, and can be "overridden"

as needed for unscheduled events. So consumers and staff always enter a comfortable facility, this “smart thermostat” can turn on the HVAC one hour before arrival instead of heating or cooling unoccupied space.

- ▶ Control direct sun through windows depending on the season and local climate. During cooling season, block direct heat gain from the sun shining through glass on the east and especially west sides of the facility. Depending on your facility, options such as “solar screens,” “solar films,” awnings, and vegetation can help. Over time, trees can attractively shade the facility, and help clean the air. Interior curtains or drapes can help, but it’s best to prevent the summer heat from getting past the glass and inside. During heating season, with the sun low in the South, unobstructed southern windows can contribute solar heat gain during the day.
- ▶ Keep exterior doors closed while running your HVAC. It sounds simple but it will help to avoid wasteful loss of heated or cooled air.
- ▶ Use fans. Comfort is a function of temperature, humidity, and air movement. Moving air can make a somewhat higher temperature and/or humidity feel comfortable. Fans can help delay or reduce the need for air conditioning, and a temperature setting of as much as 3 to 5 degrees higher can feel just as comfortable with fans, and each degree of higher temperature can save about 3% on cooling costs. When the temperature outside is more comfortable than inside, a “box fan” in the window, or large “whole facility” fan in the attic, can push air out of the facility and pull in comfortable outside air. Fans can improve comfort and save energy year round.
- ▶ Plug leaks with weather stripping and caulking. This will help prevent the escape of heated or cooled air from your facility. Caulking and weather stripping also let you manage your ventilation, which is the deliberate controlled exchange of stuffy inside air for fresher outdoor air. To learn more about indoor air quality in your facility visit [EPA’s “Indoor Air Quality” Web page](#).

Office Equipment

- ▶ Always buy [ENERGY STAR qualified products](#) for your business. The ENERGY STAR mark indicates the most efficient computers, printers, copiers, televisions, windows, thermostats, ceiling fans, and other appliances and equipment.



Water – Hot and Cold



- ▶ Fix leaks. Small leaks add up to many gallons of water and dollars wasted each month. Water conservation saves energy and money, especially when it is hot water.
- ▶ Use water-saving [faucets](#), **(EXIT>)** [showerheads](#), **(EXIT>)**, [toilets and urinals](#) **(EXIT>)** to save water.
- ▶ Install an insulation blanket on water heaters seven years of age or older, and insulate the first 3 feet of the heated water “out” pipe on both old and new units.
- ▶ If buying a new water heater, always buy the most efficient model possible. In areas of infrequent water use, consider “tankless” water heaters to reduce “standby” storage costs and waste.
- ▶ Set water temperature only as hot as needed (110-120 degrees) to prevent scalds and save energy (check local codes for specific temperatures for your business type).
- ▶ When landscaping, practice [green landscaping](#) (greenscaping or xeriscaping) to preserve natural resources and prevent waste and pollution by using plants native to your climate that require minimal watering and possess better pest resistance. If local code allows, consider diverting “[gray water](#)” **(PDF)** for irrigation rather than using fresh water.



Kitchen and Food Service Equipment

- ▶ Purchase [ENERGY STAR qualified kitchen and commercial food service equipment](#). For example, qualified refrigerators and freezers can save over 45% of the energy used by conventional models, which equals as much as \$140 annually for refrigerators and \$100 for freezers; deep fryers can save between \$60 and \$180 per year; hot food holding cabinets can save up to \$280 per year; and steam cookers can save between \$450 and \$820 per year depending on fuel.



- ▶ For existing refrigerators, clean refrigerator coils twice a year and replace door gaskets if a dollar bill easily slips out when closed between the door's seals.
- ▶ Have large and walk-in refrigeration systems serviced at least annually. This includes cleaning, refrigerant top off, lubrication of moving parts, and adjustment of belts. This will help ensure efficient operation and longer equipment life.
- ▶ Consider retrofitting existing refrigerators and display cases with anti-sweat door heater controls, and variable speed evaporator fan motors and controls.

Funding

- ▶ Check the various government entities in your area for tax incentives they may apply to energy-efficiency upgrades you perform in your facility.
- ▶ Contact your local utilities to inquire about rebate programs they have that may apply to energy-efficiency upgrades to your facility.