



COMMERCIAL ENERGY SAVINGS GUIDE



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Cooperatives

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USING ENERGY MORE EFFICIENTLY IMPROVES YOUR BOTTOM LINE.

Cooperatives and their commercial members share a common goal: using energy as efficiently as possible. And when it comes to commercial energy, the savings add up quickly.

So think of your local co-op as your business partner. Your co-op can improve your bottom line by providing details on how to save energy, including information on incentives and rebate programs.

Touchstone Energy's Business Energy Advisor - www.TouchstoneEnergy.com/BEA - also offers advice on how to make your business more energy efficient.

Whether you lease or own your facility, these ten tips can help you save energy and money.

TIP #1 - DO THE SIMPLE THINGS FIRST

There are numerous no-cost and low-cost ways to save energy. Here are just a few:

- Turn off lights and office equipment at night and when not in use.
- Keep windows and doors closed to prevent air loss.
- Check for proper insulation throughout the building.
- Clean and replace light fixtures.
- Regularly clean or replace the filters in your heating and cooling system.
- Adjust HVAC temperature settings. Changing one degree can reduce heating and cooling costs by 2- to 4-percent.



TIP #2 - CHECK YOUR RATE

- Review your usage pattern. Adjustments in operation can result in savings on your utility bill.
- Contact your local Touchstone Energy cooperative for information on available rates.



TIP #3 - REVIEW INDOOR LIGHTING USE

- Turn off display case and other lighting when not in use.
- Switch from incandescent to compact fluorescent lamps in canisters or recessed fixtures.
- Replace fixtures using T-12 fluorescent lamps with new ones using T-8 lamps and electronic ballasts.
- Replace metal halide lamps with T-8 or T-5 fluorescent lamps.
- New LED lighting offers higher efficiency and longer life than incandescent and fluorescent. Consider switching. Your co-op can keep you informed on new lighting systems coming to market.
- Use T-8s and LEDs to light display cases.
- Use LEDs for exit lighting.
- Install motion-activated light switches.



TIP #4 - REVIEW OUTDOOR LIGHTING USE

- Ensure lighting timers are set only for hours needed.
- Use sun trackers or photocells in conjunction with electronic timers.
- Replace incandescent lighting with more efficient HID or LED lighting.

TIP #5 - ASSESS PLUG LOADS

- Use power strips to control electronic equipment (including computers) to reduce phantom load.
- Set timers to turn off equipment - such as coffee makers and water coolers - when not needed.
- Utilize computer power management settings.
- Consolidate multiple servers into a single machine.
- Install occupancy sensors or timers on vending machines.
- Use portable heaters or fans wisely: turn them off when you leave the room.
- If replacing equipment - such as a refrigerator or computer - purchase an ENERGY STAR® - qualified model.



TIP #6 - MAINTAIN THE HVAC SYSTEM

- Keep indoor/outdoor coils clean and change filters regularly.
- Ensure that the HVAC system's airflow is correct.
- Check electrical connections and drive belts.
- Lubricate motors and blower assemblies.
- Maintain correct refrigerant charge.
- Correct duct leakage.
- Minimize HVAC runtime when facility is closed.



TIP #7 - VENTILATE PROPERLY

- Meet OSHA standards for occupancy numbers.
- Meet ASHRAE Standard 62 for indoor air quality and safety.
- Kitchens should have adequate air circulation.
- Control make-up air with exhaust.
- Bathroom ventilators should be off when facility is closed, if local codes permit.
- Ensure make-up air is drawn from an appropriate location, e.g., don't pull air from dumpster area.
- Check damper positioning and the building envelope's air tightness; stuck dampers and a leaky building can result in over-ventilation, which wastes energy.

TIP #8 - MAINTAIN REFRIGERATION EQUIPMENT

- Clean refrigeration coils regularly.
- Keep doors and seals on walk-in units in good repair.
- Ensure that units are properly charged with refrigerant.
- Check for ice buildup, which can occur because of air leakage.
- Ensure that units are defrosting properly.
- Check temperature settings of refrigerators.
- Install low-temperature occupancy sensors or timed switches in walk-in coolers and freezers.



TIP #9 - CHECK WATER HEATING EQUIPMENT

- Insulate water heaters.
- Set water heater supply temperature to minimum local requirements.
- Control water heaters based on periods of need during the day.
- Ensure that water heaters are located to maximize efficient hot water delivery.
- Explore opportunities for heat recovery.
- Ensure re-circulating hot water system is operating properly. Shut off when not needed.





TIP #10 - CHECK MOTOR OPERATION

(FOR MOTORS OPERATING MORE THAN 2,000 HOURS/ YEAR)

- Ensure proper lubrication and operating temperature to maximize motor life and avoid bearing failure.
- Rather than rewinding motors of less than 25 hp, replace them with energy-efficient motors.
- Size motors for the load.
- Ensure that no contamination or water is getting into motors.
- Use an adjustable speed drive for motor-driven equipment.

