

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. They also may offer hourly kWh use information. Hourly use data can be very helpful in evaluating rate options and investment in controls.

Touchstone Energy's Biz Network - 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

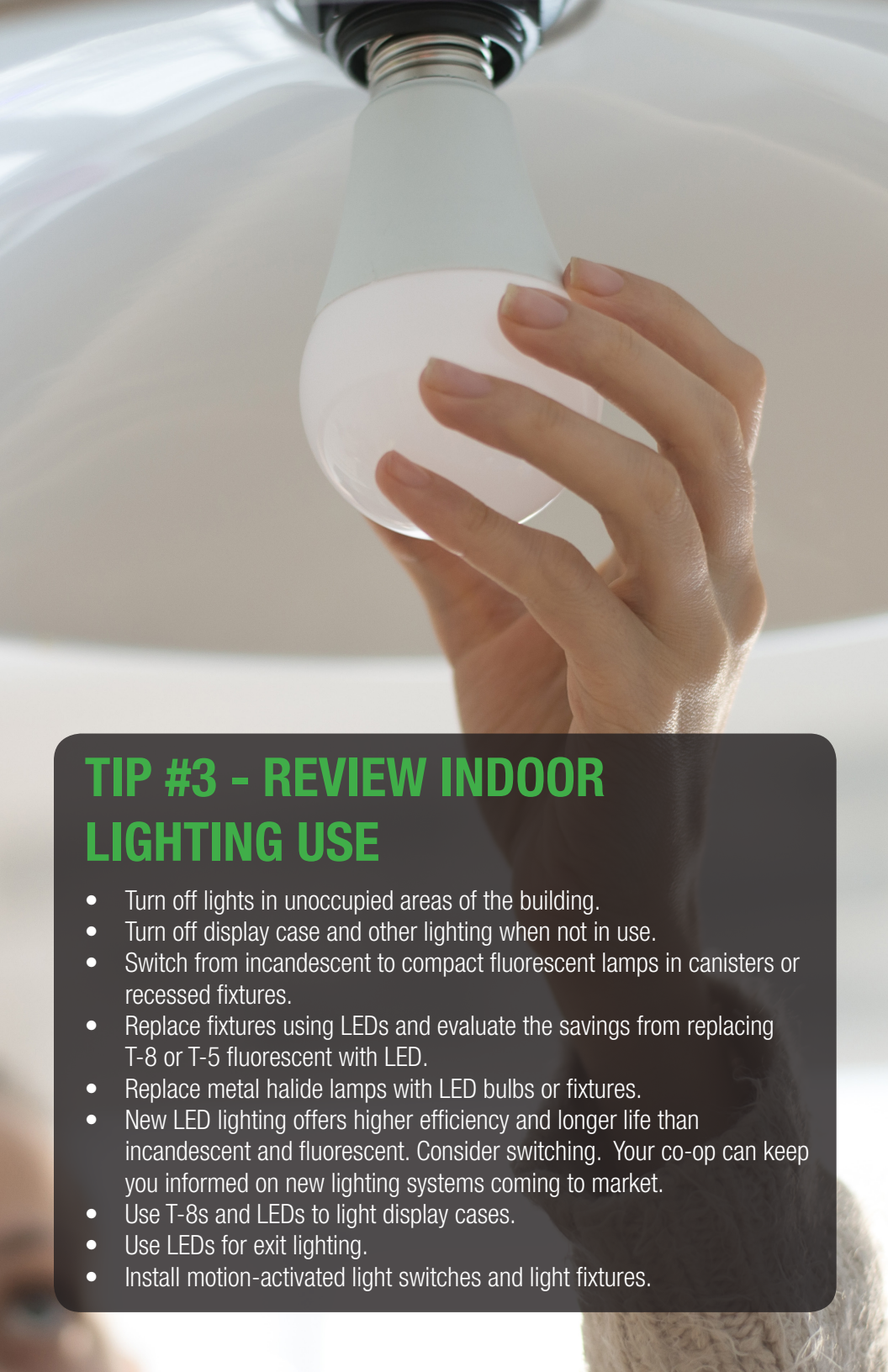
There are numerous no-cost and low-cost ways to save energy. Here are just a few:

- 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 with LEDs.
- 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. Consider Wi-Fi smart thermostats for greater control.



TIP #2 - CHECK YOUR RATE

- Review your usage pattern. Adjustments in operation can result in savings on your utility bill. The time of day you use power can affect your bill.
- Contact your local Touchstone Energy cooperative for information on available rates.



TIP #3 - REVIEW INDOOR LIGHTING USE

- Turn off lights in unoccupied areas of the building.
- 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 LEDs and evaluate the savings from replacing T-8 or T-5 fluorescent with LED.
- Replace metal halide lamps with LED bulbs or fixtures.
- 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 and light fixtures.

TIP #4 - REVIEW OUTDOOR LIGHTING USE

- Consider where Wi-Fi is available at app-based light controls with sunset and hours of operation reprogrammed remotely.
- 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 smart 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.
- Consider variable speed heat pumps and mini-splits for savings and improved comfort.

TIP #7 - VENTILATE PROPERLY

- Meet OSHA standards for occupancy numbers.
- Meet ASHRAE Standard 62.1 2016 for indoor air quality and safety.
- Kitchens should have adequate air circulation.
- Evaluate the savings from variable speed vent exhaust hoods.
- 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.
- Properly balance make-up air with exhausted air.
- 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

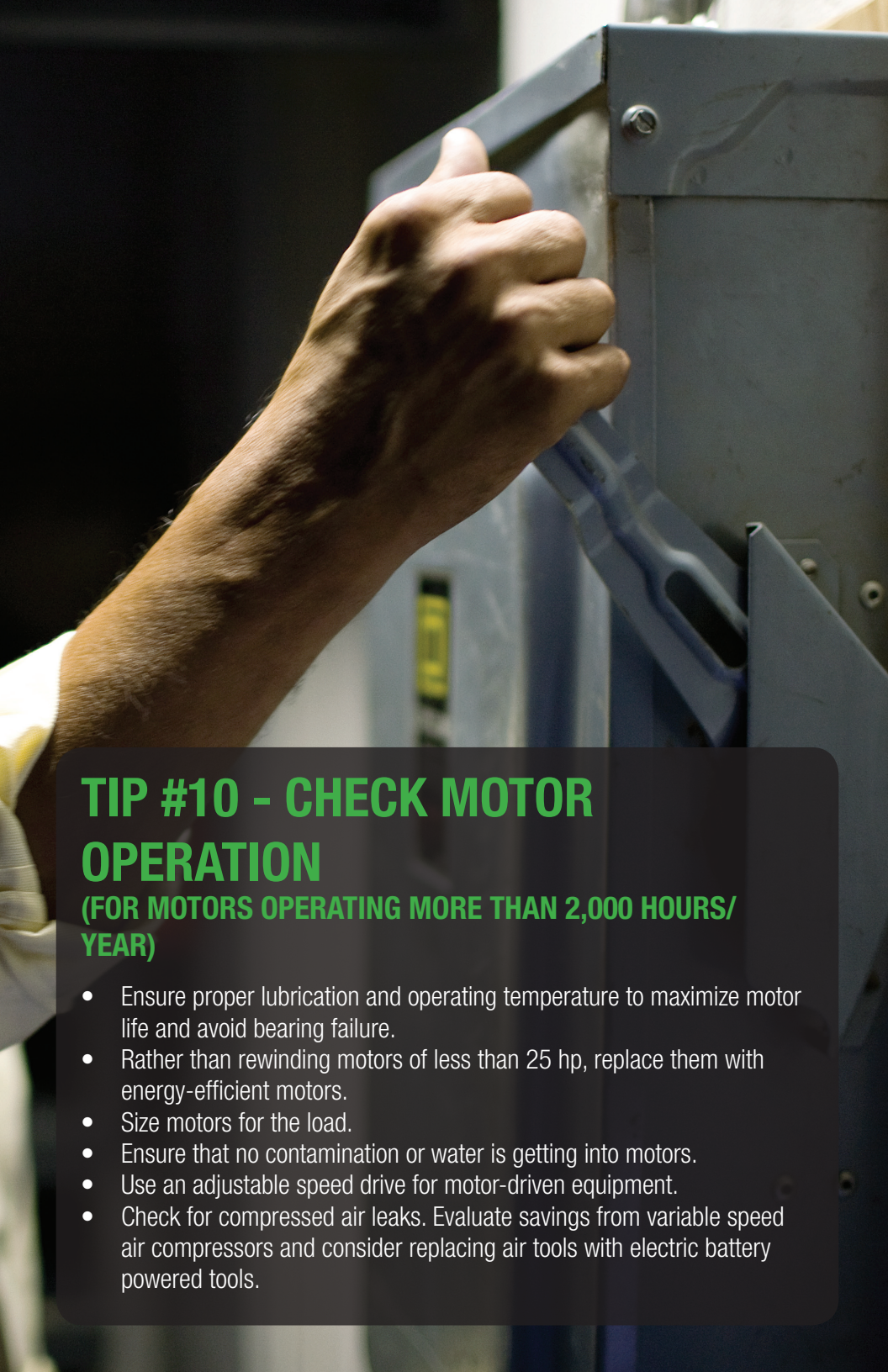
- Clean refrigeration coils regularly.
- Keep doors and seals on walk-in units in good repair.
- Ensure that units are properly charged with refrigerant.
- Check for ice buildup, which can occur because of air leakage.
- Ensure that units are defrosting properly.
- Check temperature settings of refrigerators.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



A close-up, side-profile shot of a male technician wearing a dark blue baseball cap and a blue button-down shirt. He is focused on adjusting a black circular control knob on a white water heater. His right hand is on the knob, and his left hand is holding a blue-handled screwdriver. The background is a plain, light-colored wall.

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.
- Consider heat pump water heaters for spot cooling and lower operating costs.



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.
- Check for compressed air leaks. Evaluate savings from variable speed air compressors and consider replacing air tools with electric battery powered tools.

Finally, many electric cooperatives offer energy assessments (audits) that can identify opportunities for using energy more efficiently. Remember, your local co-op can be your best resource to help your business save energy and money.

**To locate your local Touchstone Energy cooperative visit
www.TouchstoneEnergy.com.**

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For more information visit www.TOUCHSTONEENERGY.com