

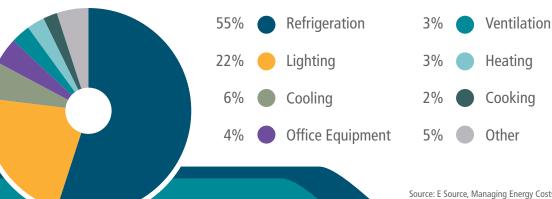
Convenience stores have higher energy use per square foot than virtually any other retail market segment, including larger grocery stores. Energy-saving measures can help your business improve efficiency, reduce operating costs, and save energy.

Most energy efficiency upgrades also improve:

- Customer and employee comfort
- Visual appeal
- Safety
- Indoor air quality
- Equipment life



Electricity Use in U.S. Convenience **Stores**



Source: E Source, Managing Energy Costs in Convenience Store

REFRIGERATION

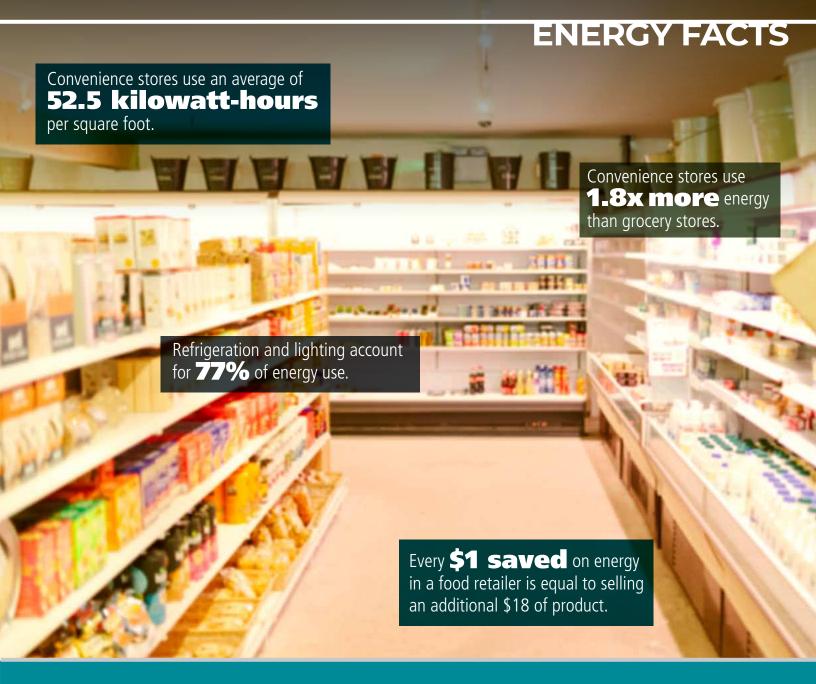
- Check temperature settings. If the settings are too low, you may be wasting energy. Recommended settings are between -14 degrees Fahrenheit (°F) and -8 °F for freezers and between 35 °F and 38 °F for refrigerators.
- Keep evaporator coils clean and free of buildup. Dirt and ice buildup can prevent heat transfer and make the refrigeration system work harder to maintain the same temperature.
- Seal refrigerator and freezer doors. Air gaps let warm air enter the refrigerator or freezer and make the system work harder to maintain the same temperature. If you can slide a dollar bill between the door and the case, it is time to reseal the refrigerator or freezer.
- Invest in energy-efficient refrigerators and freezers. A variety of ENERGY STAR® certified options are available, including reach-in, walk-in, and a multitude of food/drink storage and display cases.
- Install anti-sweat heater controls on display cases to sense humidity conditions, and turn the heaters off when not needed.

- Replace shaded-pole motors with electronically commutated motors in refrigerated cases and walkin coolers, which can reduce energy use by 50%.
- Add advanced refrigeration controllers (ARC) to walk-in coolers and freezers. These controllers reduce the energy used by the refrigeration system through precise control of superheat, fan cycling, reducing compressor run time, and implementing demand defrosts.
- Add night covers to open display cases to trap refrigerated air and keep food cold.
- Add glass doors to open refrigerated display cases to improve efficiency by 50%.
- Install strip curtains in the doorways of walk-in boxes to reduce air infiltration by 75%.
- Install auto-closers on reach-in case doors and cooler freezers.
- The floating-head pressure approach reduces the work required by the compressor and saves energy by allowing the refrigerant pressure to float down with reduced ambient temperatures. Check that expansion valves can operate at these lower pressures and the pressure is high enough to avoid unwanted vaporization of refrigerant.

LIGHTING

- If you have a gas station, upgrade your canopy lighting to more efficient technology.
- Disconnect or remove lamps in multiple-lamp fixtures and use task lighting where possible.
- Upgrade the store and refrigeration case lighting to LEDs to save lighting and refrigeration energy.
- Install occupancy sensors in rooms with low traffic (break rooms, restrooms, storage areas).
- Turn off promotional lighting/neon signs when the store is closed.
- Use timers to dim the lights or shut them off at night when the store is closed.





HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

- Install a building automation system (BAS) to control HVAC systems. According to the Department of Energy, a BAS' can save 5 to 15% of the building's energy use with a cost of \$2 to \$4 per square foot.
- Raise the temperature slightly during the summer and lower it during the winter.
 A one-degree change can reduce your energy use by about 1%.
- Have a licensed professional check, clean, calibrate, and lubricate your economizers about once a year. Consider installing economizers on units that don't currently have them.

- Tune your HVAC equipment annually. This should include cleaning the condenser coils, a thorough check of proper controls operation, and general system inspection.
- High efficiency HVAC units can reduce cooling energy by 10% or more. If equipment is over 10 years old, consider replacing it with more efficient equipment.
- Change your air filters at least every three months. A dirty filter creates a higher pressure drop for the fan to work against, which wastes energy.
- Seal and insulate ductwork to improve the efficiency of your HVAC system by as much as 20%.



ADDITIONAL RESOURCES

- Contact your local area energy advisor for support at idahopower.com/energyadvisor.
- Register for My Account at idahopower.com/myaccount to pay your bill, get account information, understand your use, and find more ways to save.
- Idaho Power has programs available to help customers just like you save energy and money.
 To learn more, visit idahopower.com/business.

