ENERGY-SAVINGS TIPS RESTAURANTS

Energy efficiency can cook up big savings!

Most energy efficiency upgrades also improve:

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



Electricity Use in U.S. Restaurants



Source: Energy Information Administration 2024 Commercial Buildings Energy Consumption Survey

REFRIGERATION

- Maintain quality of products by installing demand-based defrost systems on walk-in coolers/ freezers. Demand-based defrost systems can sense the optimal time to start and end defrost cycles. These systems can save 10 to 30% on energy use.
- Use controllers on walk-in coolers and freezers to slow down or cycle off fans when they are not needed. Forced circulation evaporators in walk-in coolers and freezers often run all the time, even though full airflow is only necessary half of the time.
- Install variable-speed drives (VFD) on air handlers, recirculation fans, evaporator fans, condenser fans, and refrigeration compressors. They reduce motor speed based on load requirements and reduce energy use.

- Set temperature in walk-in freezers between -14 and -8 degrees and set the temperature in walk-in coolers between 35 and 38 degrees.
- Keep evaporator coils clean it's an inexpensive way to decrease energy use. Dirt and ice build-up can make the refrigeration system work harder (up to 10% more power) to maintain the same temperature.
- Ensure proper sealing on refrigerator and freezer doors. Air gaps let warm air enter the refrigerator or freezer and make the system work harder.
- Invest in energy-efficient refrigerators, freezers, and other appliances. A variety of ENERGY STAR[®] certified options are available.

KITCHEN EQUIPMENT AND OPERATIONS

- Save energy with little cost by fixing leaky gaskets, clogged burners, loose oven door hinges, missing knobs, and water leaks.
- ENERGY STAR certified appliances help you save money on your utility bill while meeting energy use standards. They often require less upkeep than other equipment, helping to lower total life-cycle cost.
- Use a low-temperature dishwasher to save energy by reducing your heating load. Additionally, high-efficiency dishwashers typically use less water than standard systems, reducing water-related costs.
- Use low-flow, pre-rinse spray nozzles to remove food from dishes before washing. This reduces the amount of water needed, saving water and water-heating energy.

- Buy appliances that match your needs.
 Oversized appliances cost more in capital and operating costs.
- Implement a startup/shutdown plan to ensure you use equipment only when you need it. Leaving equipment on standby costs money.
- Examine your cooking methods, equipment, and menu to find ways to operate efficiently. Ovens tend to be more efficient than rotisseries, and griddles tend to be more efficient than broilers. Induction stovetops don't make excess ambient heat like gas stoves do; they save on energy costs because the area needs less air conditioning.

ENERGY FACTS

Utility expenses make up **9%** of the operating expense for a restaurant.

Food service facilities use nearly **3X** more energy than other commercial <u>buildings</u>.

Nearly **2.5**× of all energy use in restaurants comes from the kitchen.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

- Install a Building Automation System (BAS) to control HVAC systems. This allows for greater zone control by monitoring and adjusting lighting and HVAC equipment based on occupancy, environment, and weather. 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 during summer and lower it in the winter when the facility is unoccupied. You can also try small temperature changes during working hours.
- Have a licensed professional check, clean, calibrate, and lubricate your economizers once a year. Consider installing economizers on units that don't currently have them.

- Consider replacing equipment over 10 years old with more efficient equipment. New highefficiency HVAC units can reduce cooling energy use by 10% or more.
- Heat-recovery technology captures heat that would otherwise be lost and helps heat incoming water or air that would use electricity to heat. This technology shows good return on investment and reduces air conditioning load.
- Use variable air-volume hoods to reduce makeup and exhaust air while maintaining adequate airflows.

LIGHTING

- Turn lights off or down and look for opportunities to upgrade to more efficient lights. Lighting retrofits can save 25 to 90% on lighting costs and easily fit into routine maintenance. Interior lighting retrofits help reduce cooling costs during the summer.
- Replace fluorescent and high-intensity discharge lamp (HID) lighting with LED products, which have a longer life and better light quality. Better light enhances food appearance and adds to the customer experience.
- Install occupancy sensors in rooms that are often unoccupied, like bathrooms and storage areas.
- Install automatic photosensor controls that sense daylight to help ensure electric lighting is reduced when enough daylight is available (i.e., daylighting). Daylighting takes advantage of natural ambient light and reduces the amount of electric lighting needed. However, without lighting controls, daylighting may not save energy.
- Remember to upgrade exterior lighting, such as parking lots, signage, and building exteriors.



Other Opportunities

- Consider commissioning your building (evaluating and optimizing the building's operating systems). Kitchen equipment performance changes over time. Thermostats and control systems can fail, fall out of calibration, or readjust. Commissioning helps ensure your building is functioning as intended and can save 5 to 15% of your energy with little to no cost.
- Find out if your restaurant is using unnecessary energy during off-hours. Idaho Power can provide hourly energy use information so you can investigate ways to reduce your use.
- Encourage employees to turn kitchen equipment off when not in use. Develop simple energy management procedures with schedules and checklists.
- Consider participating in the Flex Peak demand response program.
 Visit idahopower.com/flexpeak to learn more.

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 incentive programs available with many energy savings opportunities to help restaurant customers just like you save energy and money. To learn more, visit **idahopower.com/business**.



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