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Utilities®**

KEY POINTS

- **Operational changes and low-cost retrofits can mean significant energy-cost savings in the kitchen.**
- **Dishwashing is the most significant use of hot water in a typical restaurant setting.**
- **HVAC accounts for nearly 28 percent of a typical restaurant's energy expenses.**

Find out what incentives are available for your home or business.
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Food Service Gas Saving Tips

A recent survey found that 98% of professional in a typical restaurant, food preparation is responsible for more than 50 percent of all natural gas consumption. While using energyefficient equipment is a great way to save energy, there are a number of operational changes and low-cost retrofits that can reduce energy use, as well.



Source: morguefile.com

- Do not preheat steam tables, grills or broilers. For preheating ovens, 15 minutes is generally adequate, depending on the appliance and desired temperature.
- Keep equipment clean. Carbon and grease build-up makes your cooking equipment work harder and uses more energy.
- Avoid using the range top whenever possible. Steamers and ovens use less energy and add less heat to the kitchen.
- Cover all pots to reduce heat loss and cook food faster.
- Schedule cooking times to utilize ovens fully and shorten daily operating times. Moreover, do not use two ovens when one will do, and do not use large ovens when cooking small amounts of food.
- Do not operate fryers at temperatures higher than 350°F; higher temperatures are less efficient.
- Precook foods, such as potatoes and chicken, in a steamer before frying; steamers are much more energy efficient.
- Integrate controls with sensors to turn down the heat input when food is not present; empty equipment that is left idling wastes energy.
- Use microwave ovens where appropriate. Microwave ovens use less energy than other cooking equipment for thawing, partially cooking and reheating food.
- Separate your cooling equipment from your cooking equipment so your refrigerators do not have to work as hard. Group hot appliances, like broilers, steamers and open burners, under the same vent.
- Consider upgrading to high-efficiency ENERGY STAR®-rated equipment. Other potential energy-saving updates include combination ovens and demand ventilation.



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- may fund a portion of the cost of an energy audit study
- provides incentives on energy savings improvements
- may require pre-approval of the audit and incentives

Water Heating

With cooking, cleaning and dishwashing, food service facilities use a significant amount of hot water. Dishwashing is the most significant use of hot water in a typical restaurant setting. Energy-saving tips follow:

- Only operate the dishwasher with full loads. During slack periods, use a cold water rinse, and stack dishes and pots until you have enough for a full load.
- Keep dishwasher temperatures at the proper level. Standard temperatures are 140°F wash, 160°F power rinse and 180°F final rinse.
- Avoid heating water when it isn't needed. Turn off booster heaters and dishwasher water heaters when the dishwasher is not in use and at closing.
- Check the power rinse to make sure it is turning off automatically when the tray has gone through the machine.
- Clean the dishwasher and empty scrap trays regularly. Check wash and rinse jets for lime build-up after each use. To avoid clogging, use a de-lime solution regularly.
- Invest in low-flow, pre-rinse spray valves (0.64-1.6 gallons per minute). According to The Food Service Technology Center, lowflow, pre-rinse spray valves can save from \$200 to \$600 a month for one- to three-hour per day usage.
- Install aerated faucets to reduce the amount of water used during hand washing.
- Turn down water heaters when the restaurant is closed. An even better option is to install timers to control water heaters based on occupancy.
- Ensure hot water pipes and tanks are insulated properly and maintained regularly. A hot water leak can cost an additional \$1,300 in energy.

Space Heating/Cooling

In general, heating, ventilation and air conditioning (HVAC) accounts for about 28 percent of a restaurant's energy expenses. Follow these simple, energy-saving steps:

- Install smart thermostat controls to operate the heating and cooling system according to occupancy schedules and nighttime temperature setbacks.
- Change filters regularly, and make sure the system is cleaned and inspected on an annual basis.
- Only use kitchen exhaust fans when needed and at speeds no higher than necessary. Energy is wasted when large amounts of heated air are exhausted outside.
- Hire a qualified professional to inspect ductwork and repair leaks; make sure ductwork is tightly connected from the heater to the diffuser.

For long-term energy savings, consider energy-efficient retrofits, such as more efficient burners, temperature- and pressure-reset controls, boiler economizers, refrigerator strip curtains, high-efficiency evaporative fan motors and variable-speed hood fans.

The Energy Solutions Center and the Gas Foodservice Equipment Network offer an [energy resource guide](#) on natural gas for food service facilities.



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