



## Restaurant Energy Saving Tips

Use the following tips to help reduce your restaurant's demand for energy. Some of these tips require capital investment, while others require only changes in operation and maintenance. Most of these tips are based on two principles:

Turn it off if it does not need to run. For example, by eliminating one hour per day of broiler idle, you can save \$200 annually.

When it is time to purchase new equipment, choose the most efficient equipment that you can. Look for the **ENERGY STAR** label on appliances and lighting.

### Lighting

- ◆ Switch to fluorescent lighting. Fluorescent lights use 1/4 to 1/3 of the energy that standard incandescent lights use, saving up to \$34 per year per lamp on your lighting bill. And, because fluorescent lights do not generate heat like incandescent lights, for every watt saved in lighting, you can also save a watt on air conditioning. If kitchen areas have old four-foot, T-12 technology fluorescent lamps and magnetic ballasts, they should be replaced with more efficient electronic ballasts and T-8 lamp technology. Your local utility may have incentives to assist with this.
- ◆ Use compact fluorescent lighting (CFL). If you use dimmable swag lamps at the tables, consider replacing them with dimmable CFLs. Dimmable CFL lighting costs more initially, but will last as much as ten times longer than incandescent lighting and is available in a variety of color temperatures to enhance the look of the table service.
- ◆ Convert exit lighting to LED (light emitting diode) technology. Replacing your old incandescent exit lighting with a low energy LED retrofit kit can save \$22 per year per sign, a savings of up to 88 percent.
- ◆ Install lower wattage lamps. In areas where it is impractical to use fluorescent lighting, consider relamping fixtures with high efficiency halogen lamps that use lower wattage. Switch to high-pressure sodium or low-wattage metal halide lamps for outdoor lighting.
- ◆ Install occupancy sensors, timers and photo sensors. One of the best ways to lower your energy costs is to turn things off when not in use. Install occupancy sensors in non-essential areas such as walk-in coolers and storerooms, photo cells on parking lot lighting and timers on other outdoor lighting.

### Water Heating

- ◆ Fully load the dishwasher. It takes as much heated water to wash a partially full dishwasher as it does a fully loaded one. Install low-flow pre-rinse spray nozzles.
- ◆ Set the water heater thermostat no higher than it needs to be: 140°F for dishwashers, but only 110°F for hand washing. Consider using chemical sterilizers instead of higher water temperatures in dishwashers.

*Most restaurants are energy-intensive facilities where significant energy-saving opportunities exist through wise operation and equipment selection.*

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- ◆ Consider gray water heat recovery. If your dishwasher is a continuous fill and drain, consider installing a gray water heat recovery system. This system will recover some of the heat from the drain water and use it to reheat the supply water to the appliance.

## Kitchen Ventilation

- ◆ Retrofit exhaust hoods with a two-speed blower. When the entire grill/fryer is not being used, you may be able to lower the ventilation rate over the appliance and reduce both make-up air and the energy needed to condition it.
- ◆ Locate exhaust hoods on walls. Wall-mounted exhaust canopies require lower air velocities to do the same job. Lower air velocities mean smaller fan motors and less make-up air to heat or cool.
- ◆ Install “smart” exhaust hood controls. Most kitchens operate at less than 25 percent capacity during the day, but the exhaust hood runs at 100 percent capacity. These controls sense when the exhaust hood needs to be on, based on exhaust air temperature and smoke load using a temperature and an optical sensor.

## Heating and Cooling

- ◆ Use the thermostat factory setpoints. Leave the thermostat settings at 76°F for cooling and 68°F for heating. Each degree of heating or cooling can cost an additional four to five percent in energy costs. Leaving the thermostat at the factory setpoints will maintain comfort without breaking the bank.
- ◆ Use the “night setback” feature of the thermostat. Set the thermostat to bring your restaurant to temperature no earlier than needed.

## Maintenance

- ◆ Clean air conditioning and refrigeration condenser/evaporator coils every three months.
- ◆ Check the refrigerant charge and fix leaks if necessary.
- ◆ Regularly clean or replace air filters on ventilation and heating/air conditioning equipment. Clean grease traps on ventilation equipment.
- ◆ Check freezer and walk-in seals for cracks and warping. Replace if necessary.

The EnergyIdeas Clearinghouse provides information on a broad range of energy technologies for customers of Pacific Northwest utilities. EIC provides a searchable website and has a team of energy specialists ready to respond to technical information requests by phone or email. Funded by the Northwest Energy Efficiency Alliance.

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