Energy-Saving Tips for Maintaining Food Service Equipment

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Good food is the lifeblood of a food service operation, but equipment is the beating heart. Whether it's the equipment that keeps the kitchen humming, the temperature stable, or the water running, that beating heart needs plenty of energy to keep it pumping. And in today's economy, energy costs can really eat —forgive the pun—into a restaurant, cafeteria, or catering operation's profits.

While all food service managers understand the value of keeping equipment in good working order, they are less clear on the energy benefits to be found from properly working equipment. In my experience, restaurants can significantly lower their gas, electric, and water bills by regularly following some basic energy-related equipment maintenance procedures.

Every month, managers should evaluate the condition of their equipment. From the walk-in compressor systems in the mechanical room to the rooftop units that cool and heat the house to all the cooking equipment, it's important to spot problems before they drive energy costs through the roof.

The Refrigeration System

- Regularly evaluate your refrigeration system. Have your refrigeration maintenance company check for high head pressures; compressors operate inefficiently when they run outside of their design conditions.
- Observe the refrigerant piping on the compressors. If there's enough ice on the pipe to make a snowball the size of a golf ball or larger, you may be losing energy and running up the bottom line.

The Air Handlers

- Get a good flashlight and your maintenance technician. Have him/her turn off the power to the unit and lock-out the circuit breaker into the off position. Then, once it's determined to be safe, open the access panels and look inside the air handler. If the coils are plugged with dirt deposits, have your maintenance technician arrange an appointment for a thorough cleaning. Left uncorrected, energy costs will continue to increase.
- Look at the outside air intake damper to if it's stuck open or closed. During extreme weather (hot and humid or cold), this damper should be almost entirely closed. If it's not, time to call for maintenance.

The Condensers

Every spring and fall the condenser fan units on the roof get clogged with pollen, insects, and other airborne contaminants. These organic materials are actually pulled into the coil section of the condenser units, often clogging the small air passages. The resultant loss of airflow to the coil decreases the cooling capacity of these devices while increasing the overall electrical consumption of the refrigeration and air conditioning systems.

What to do?

- Look under the condenser unit with a flashlight and visually inspect the coil section. If you notice any significant build-up of organic materials (greater than 10% of the coil section surface area), call in your maintenance folks
- Power-washing the coils and re-lubricating the condenser fan bearings generally alleviates this condition.

Cooking Equipment

Of course the ovens, grills, and burners are essential to your food service outlet. But by adopting a "just in time" philosophy to their operation—turning equipment on only when needed and not hours before— you can save plenty of energy and plenty of money.

Stoves

When stoves aren't in use between meal periods, turn off the exhaust hoods—they pull expensive conditioned air from the restaurant. Deactivating the exhaust hoods over idled equipment and during non-cooking periods can save between $4 and $10 per hour of operation.

Pizza Ovens

It takes only about 20-40 minutes to preheat a pizza oven to the proper pizza-baking temperature (no greater than 550°F.) Higher temperatures are wasteful and do not improve baking times enough to significantly offset the higher cost of operation.

Pasta Cookers

Many pasta cookers are designed to operate in a "ready-to-serve" mode to meet customers' requests for freshly made pasta. Adjust the heat setting on these devices accordingly to meet the peak periods; during off-peak periods, the heat setting should be adjusted lower to a simmer-boiling point.

Baking Ovens

Preheating these ovens is a relatively quick task; in most cases it takes 15-20 minutes to reach the proper cooking temperature. Using the "just-in-time inventory" philosophy on this equipment can produce savings ranging from $3-$4 a day per oven.

Energy conservation doesn't begin and end with your equipment. To have the greatest impact, food service managers should take a "holistic" approach, attacking energy waste throughout the facility, from the lights to the computers to the radios that play all day and all night in the kitchen. However, focusing first on your equipment is a good place to start. Get the entire staff involved in a culture of "waste busting," and you'll begin to drive down energy costs.

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