



Tips for Restaurant & Commercial Kitchen Operators



This presentation section outlines strategic ways for commercial kitchen managers and operators to identify low and no-cost savings opportunities and curtail overall energy consumption.

What Is ENERGY STAR?



- Voluntary climate protection partnership with the U.S. Environmental Protection Agency (EPA)
- Strategic approach to energy management, promoting energy efficient products and practices
- Tools and resources to help save money and protect the environment
- Influential brand recognized by over 80 percent of Americans



ENERGY STAR is a voluntary partnership between EPA and industry organizations. EPA started ENERGY STAR in 1992 to reduce greenhouse gas emissions through greater energy efficiency.

Today, EPA works with over 17,000 organizations and the ENERGY STAR label can be found on over 60 different types of products, as well as new homes and commercial and industrial buildings.

Eligible ENERGY STAR Qualified CFS Equipment



Refrigerators and Freezers



Hot Food Holding Cabinets



Dishwashers



Ovens



Griddles



Fryers



Steam Cookers



Ice Machines



The ENERGY STAR program covers 8 commercial food service (CFS) product categories and continues to expand to cover wider scope of eligible products as EPA works to make energy efficiency in commercial kitchens a priority.

Strategically Save Energy



- Benchmark and then work to improve your energy performance using a staged approach



O & M



Occupants' Behavior



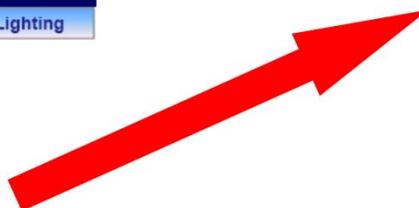
Lighting



Controls



Equipment



Go to: www.energystar.gov/benchmark

To strategically save energy, EPA recommends restaurants first benchmark energy to determine the impacts of their efficiency projects. Restaurants can use EPA's free online tool, Portfolio Manager, to benchmark energy and water use and greenhouse gas emissions. Visit www.energystar.gov/benchmark.

Operations & Maintenance



- O&M = “low-hanging fruit” for energy savings
- Perform regular maintenance on:
 - Walk-in refrigerators: clean coils, add refrigerant, fix gaskets
 - Heating, cooling, and ventilation (HVAC): regular tune ups by professionals and schedule filter changes
 - Cooking and sanitation equipment: have a professional tune up and recalibrate the equipment
 - Fix water leaks immediately
- Consider an energy audit
 - Often available for free from utilities



Source: PG&E Food Service Technology Center

After benchmarking energy use, EPA recommends restaurants prioritize efficiency efforts and start with the easiest measures to implement. One of the easiest ways for a restaurant to save energy is to implement a routine operations and maintenance schedule.

Employee Behavior



- Create a “start-up/shut-down schedule”
 - Most equipment only needs 15 min. to preheat
 - Turn off lights and burners when not in use!
 - Cut idle time for support equipment
 - Toasters
 - Warming drawers
 - Holding cabinets
 - Coffee Warmers
 - Plate warmers
 - Steam tables
- Walk-in refrigeration: do not prop open doors, use strip curtains



Source: PG&E Food Service Technology Center

Changing employee behavior is a low-cost way to save energy in a commercial kitchen, but does require time, patience and consistent reinforcement. Using smart controls on appliances, including products that have not earned the ENERGY STAR, can drastically reduce energy consumption.

Lighting



- Installing ENERGY STAR qualified lighting can save operators money
 - LED and CFL lighting use about 75% less energy than incandescent lighting and produces less heat → saving money on HVAC expenses
 - ENERGY STAR qualified lighting lasts longer and can also improve the visual experience



The ENERGY STAR program covers light fixtures and light bulbs, and includes LED and fluorescent options for both. While energy use in full-service restaurants is dominated by food preparation and HVAC, lighting is a significant energy user — averaging 13 percent of the total energy breakdown.

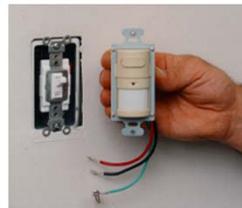
Traditional lighting consumes 75% more energy and also wastes that extra energy as heat. Upgrading to ENERGY STAR qualified lighting systems, improves the visual environment and may reduce the sizing needs of HVAC systems too.

Replacing lighting both in the front of the house and back of the house with ENERGY STAR qualified lighting is a great way to kick-off upgrades which lead to a more energy-efficient restaurant or commercial kitchen.

Vacancy Sensors & Lighting Controls



- Use occupancy sensors to turn off lights when they are not needed
- Cost: \$25 to \$80 (ultrasonic or infrared)
- Place in restaurant bathrooms, storerooms, and walk-in refrigerators
 - Restrooms: save 30 to 75%
 - Storage areas: 45 to 65%
 - Offices (private): 25 to 50%



Source: ENERGY STAR Small Business Guide:
Putting Energy Into Profits

Install switch plate occupancy sensors in proper locations to automatically turn lighting off when no one is present, and back on when people return.

Installing bi-level switching so you can control lighting in a large room will help save energy because you can turn off a set of lights if you do not need lighting in the entire room. Installing dimmers also allows users to control the amount of light in a room and save energy. If your kitchen or dining area has large windows, dim or turn off the lights when sunny. Also, dim the lights in the dining area in the evening to create ambience.

Engage with ENERGY STAR



- Review ENERGY STAR tools & resources to:
 - Locate utility incentives and rebates
 - Download or order a copy of the ENERGY STAR Guide for Restaurants
 - Sign up for the ENERGY STAR CFS newsletter
 - Read success stories via insightful case studies
 - Join ENERGY STAR as a partner
 - Measure and track energy performance with Portfolio Manager
 - Much more...
- Questions? Contact us!
 - Reach out with any questions by contacting the ENERGY STAR Marketing Team at commercialfoodservice@energystar.gov



The ENERGY STAR CFS team continues to welcome engagement by restaurateur stakeholders across the CFS program. Restaurant operators that currently make energy efficiency a priority (or wish to do so) are encouraged to speak with ENERGY STAR program representatives about opportunities to leverage ENERGY STAR tools and resources. EPA is open to additional opportunities to collaborate.

While all ENERGY STAR resources are free and most are available to all stakeholders, consider joining the program as a partner to publicly show commitment to energy efficiency and to get additional support from ENERGY STAR representatives.

Restaurant operators can join the ENERGY STAR Small Business Network or as an ENERGY STAR Buildings Partner. Operators should also encourage their dealer representatives to join ENERGY STAR as a retail partner.

Additional Tips



- Benchmark your restaurant
- Install ENERGY STAR qualified light bulbs and fixtures
- Install a high-efficiency pre-rinse spray valve
- Fix water leaks immediately
- Perform walk-in refrigerator maintenance
- Replace worn-out equipment with ENERGY STAR or other efficient equipment
- Ask your dealer/designer/manufacture rep about ENERGY STAR and other energy efficient models



Remember, to begin making your kitchen more energy efficient, start with a few easy steps to implement measures like the ones listed on this slide. Also, remember to ask your dealer for equipment demonstrations and request that they stock ENERGY STAR equipment.



Program Questions?

E-mail: commercialfoodservice@energystar.gov



Learn more at energystar.gov