





RUNNING A *Sustainable* KITCHEN:

ENERGY STAR® Certified Commercial Cooking Equipment

By Meghan Peiffer

No matter the size of the foodservice operation on your campus, greater efficiency leads to greater profits. This is especially true in the kitchen, where utilizing energy-efficient equipment is the most effective way to manage monthly bills. But running a sustainable kitchen is not just about reducing energy, water and waste expenses. The impact is much broader – these choices have the power to reduce greenhouse gas emissions and protect our climate.

Fortunately, cooking with energy efficient equipment doesn't mean sacrificing on features, quality or performance. In fact, ENERGY STAR® certified cooking equipment helps operators save money and protect the environment.

In order to earn the ENERGY STAR label, products must meet the energy efficiency requirements set forth by the Environmental Protection Agency (EPA).

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There are currently eight commercial foodservice (CFS) product categories:

Commercial Refrigerators and Freezers: to qualify, refrigerators and freezers must be 40% more energy efficient than standard models. Certified products are designed with components that result in more uniform cabinet temperatures and reduced heat output from more efficient compressor systems. There are a variety of eligible products in this category including reach-in, roll-in, pass-through, undercounter, milk coolers and more. A certified commercial freezer may save an operator \$200-\$430/year in estimated energy costs while a certified commercial refrigerator may save an operator \$100/year.

Commercial Dishwashers: to qualify, dishwashers must be 40% more energy efficient and 40% more water efficient than standard models. Many certified dishwashers offer features such as dish load sensors, low power mode during long periods of idle and improved nozzle and rinse arm design. Both stationary and conveyor machines are eligible. Certified dishwashers have a huge impact on an operator's bottom line. Flight-type dishmachines may save an operator \$5,500/year in estimated energy costs. Other eligible dishmachines may save an operator \$1,300/year.

Commercial Ice Makers: to qualify, ice makers must be 12% more energy efficient and 23% more water efficient than standard models. Both batch-type machines and continuous-type machines are eligible

and new models offer technical improvements over older models such as improved evaporator insulation and high efficiency compressors, fan motors and water pumps. Batch-type machines may save an operator \$125/year in estimated energy costs while continuous-type machines may save \$185.

Commercial Fryers: to qualify, fryers must be 30% more energy efficient than standard models. Gas and electric open vat fryers – both countertop and floor type – are eligible, as long as the frypot is greater than 12 inches and less than 24 inches. Advanced technologies such as new heat exchanger designs and more accurate thermostats lead to higher production, quicker recovery and an overall extended product lifetime. Depending upon size of the tank, gas fryers have the potential to save operators \$460-\$520/year in estimated energy costs while electric fryers may save operators \$120-\$185.

Commercial Griddles: to qualify, griddles must be 10% more energy efficient than standard models. Operators who switch to gas or electric certified models will enjoy improved cooking performance, higher productivity and improved temperature uniformity across the plate. Within the industry, highly conductive plate materials as well as improved thermostatic controls are readily available. A gas griddle may save an operator \$100/year in estimated energy costs while an electric griddle may save operators \$130/year.

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The annual savings on energy costs will be enjoyed for each year of the product's lifetime; therefore, it is critical to consider the total cost of ownership over the lifetime of the equipment.

Steam Cookers: to qualify, steamers must be 60% more energy efficient than standard models. Gas or electric countertop, wall-mounted and floor-models with at least 3-pans are eligible. In recent years, manufacturers have introduced connectionless designs which result in 90% reduction in water consumption. Certified gas or electric steam cookers may save operators \$1,200/year.

Ovens: to qualify, convection ovens must be 20% more energy efficient than standard models and combination ovens must be 30% more energy efficient than standard models. At this time, only food-grade commercial convection and combination ovens are eligible – including half-size, full-size and both gas and electric. Certified ovens can lead to higher production capacity and a faster and more uniform cooking process through infrared burners and improved insulation. Gas ovens might save an operator \$165-\$250/year in estimated energy costs while electric models may save \$70-\$740.

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Hot Food Holding Cabinets: to qualify, heated holding cabinets must be 70% more energy efficient than standard models. Cook-and-hold or proofing units are typically ineligible in this category. Products should be fully enclosed compartments with one or more doors. Through the addition of insulation and more precise controls, certified models lead to better temperature uniformity and an overall cooler kitchen. Operators may save up to \$310/year on estimated energy costs.

The annual savings on energy costs will be enjoyed for each year of the product's lifetime; therefore, it is critical to consider the total cost of ownership over the lifetime of the equipment. While energy efficient equipment may have a larger price tag than other models at the time of purchase, it will be offset by each year of use of the more efficient equipment. Additionally, some utility providers offer a rebate for purchasing more efficient equipment. Be sure to check with your local provider.

It is estimated that outfitting an entire kitchen with a suite of ENERGY STAR certified equipment could save an operator about 360 MBtu/year – or the equivalent of \$5,000 per year. When this is considered in context of the number of kitchens on a campus, it is truly staggering. And what's more, full ENERGY STAR certified equipment would prevent about 42,000 pounds of greenhouse gas emissions annually.

Learn more about ENERGY STAR by visiting www.energystar.gov.



ABOUT THE AUTHOR: Meghan Peiffer is a Marketing Manager with Vulcan, a division of ITW Food Equipment Group. Vulcan is a leading manufacturer of cooking equipment in the U.S. with a broad line of products including ranges, convection and combi ovens, fryers, griddles, charbroilers, steamers, braising pans, kettles and heated holding cabinets. She can be reached at meghan.peiffer@itwce.com.

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