A Technology Focused Strategy for Saving Energy in the Commercial Kitchen

Presented by

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Representing EPA for ENERGY STAR

EPA

Learn more at energystar.gov

Overview

- Restaurant Industry and Energy Use
- Greening the Restaurant Industry
- What is ENERGY STAR?
- ENERGY STAR Commercial Food Service Equipment
- Questions?

Everyone Likes to Dine Out

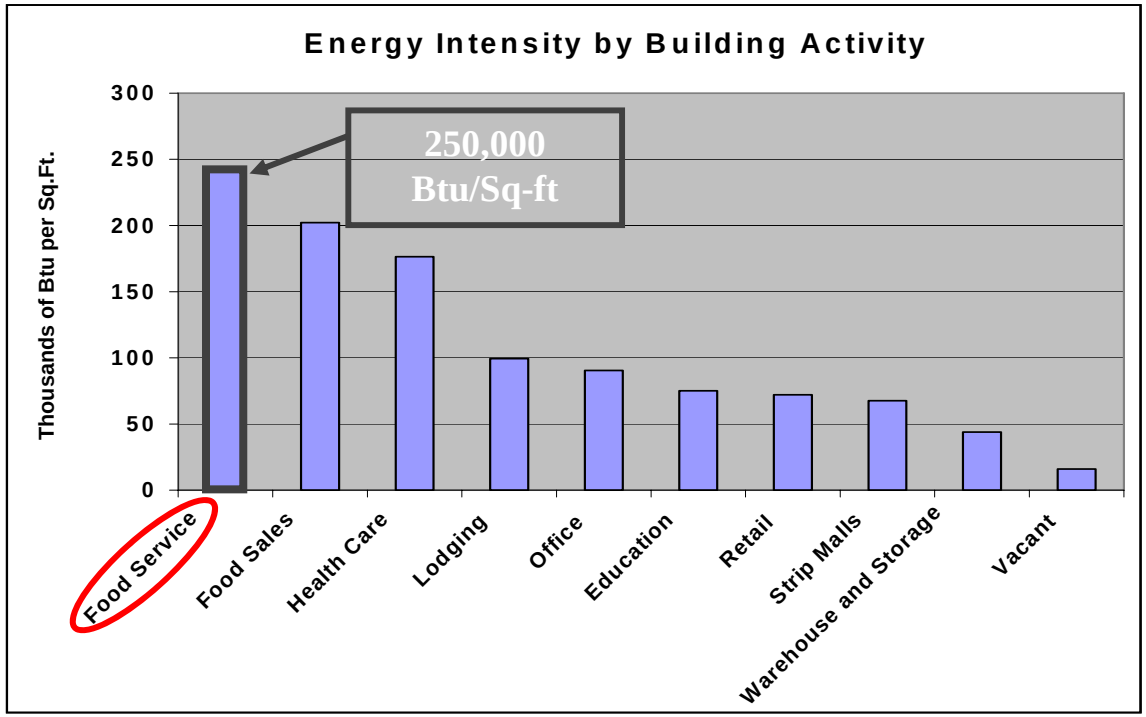
- The restaurant industry is a significant economic engine in the U.S.*
  - Projected 2008 industry sales: $558 billion
  - Employs: 13.1 million people
  - Locations: 945,000

- But there is a problem…

** Source: National Restaurant Association 2008 Restaurant Industry Forecast*

Restaurants Consume A Lot of Energy

Restaurants use approximately **2.5 times** more energy per square foot than other commercial buildings




The New York Times

Shaping Restaurants to Be Models of Efficiency

By LAURA NOVAK
May 17, 2006

"**If restaurants were automobiles, they would be Hummers.** That's because the restaurant business wastes more energy any other industry in America. Experts say that **80 percent of the $10 billion** annual energy bill for commercial food service is squandered by the use of inefficient equipment."

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Those Delicious French Fries Come at a High Energy Cost

An Energy Perspective

- $10 billion per year for energy in commercial food service
- 10,000,000 commercial kitchen appliances operating in USA
- A single appliance can consume more than a home.

Typically uses **18,196 kWh** annually

Conventional fryer

=

House typically uses **11,965 kWh** annually

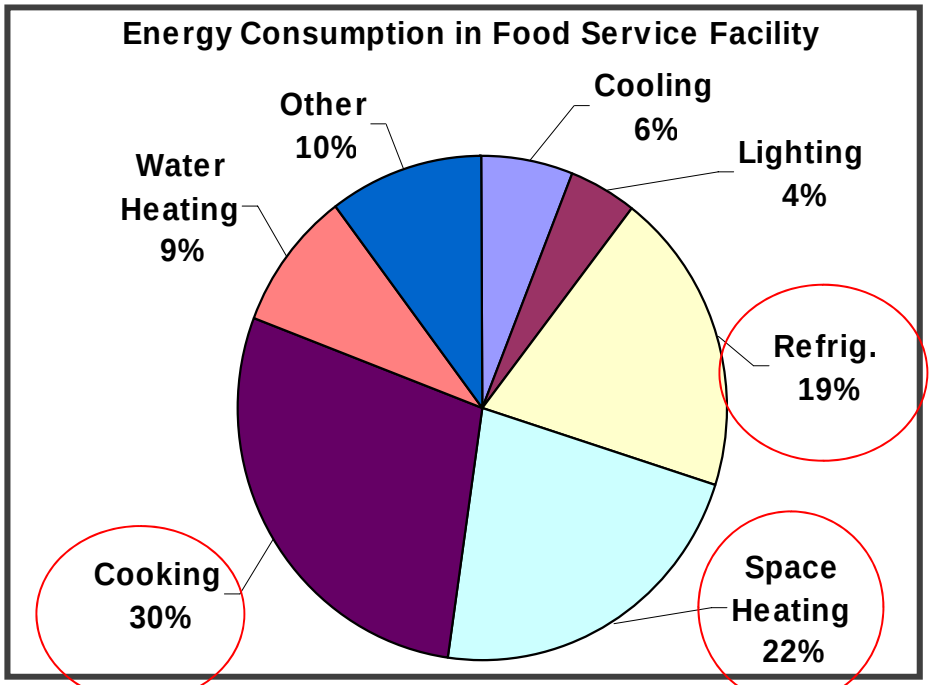
Source: PG&E's Food Service Technology Center

There Is Good News…

The Green Restaurant Movement Is Gaining Momentum

So Where Does a Restaurant Owner Start?

- The commercial kitchen has high potential for energy savings.
- Cooking and refrigeration together dominate restaurant energy use.
- Utilities and ENERGY STAR interested in energy efficient equipment because of the energy savings potential



Which Model of Kitchen Equipment Is Efficient?

The Model That is…

ENERGY STAR qualified!

www.energystar.gov/cfs

Listed for rebates with the PG&E Food Service Technology Center

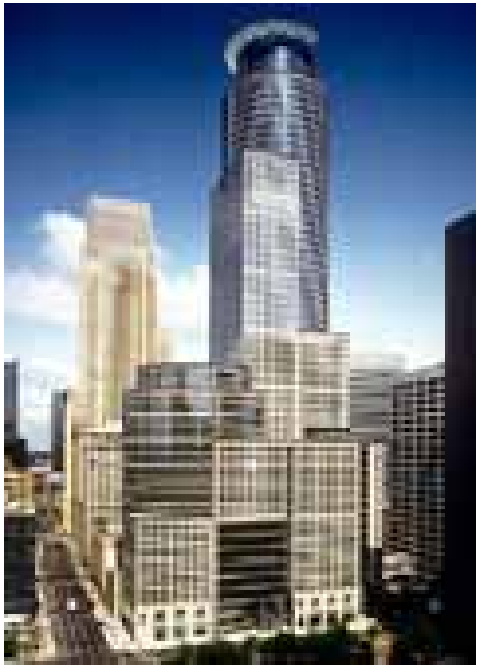
www.fishnick.com

Meets Consortium for Energy Efficiency tiers

www.cee1.org

What is ENERGY STAR?

Uses technology to reduce energy consumption in buildings, products, and homes



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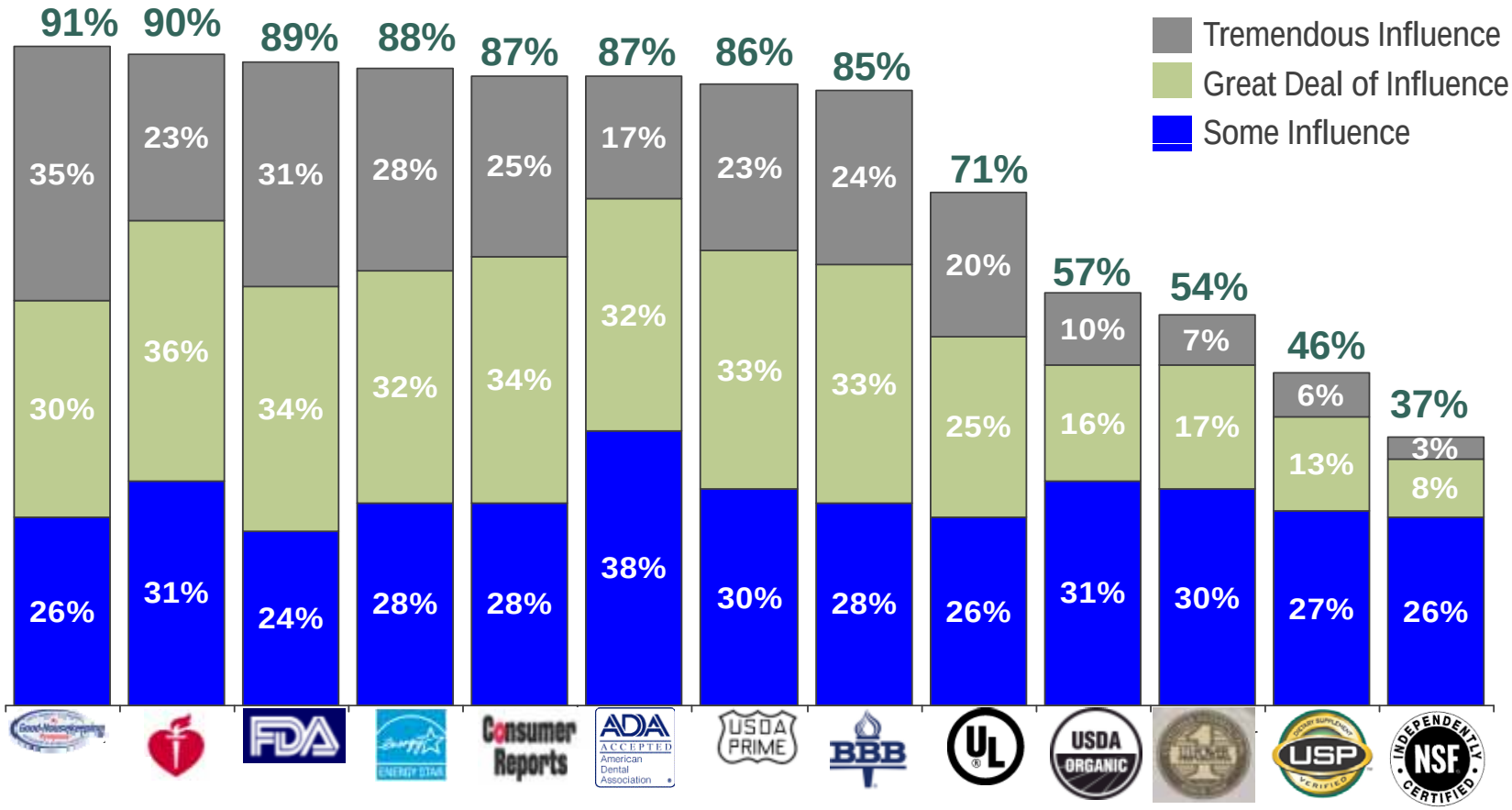
Consumers Trust ENERGY STAR

The ENERGY STAR mark ranks among the highest level of influence on product purchase among all consumer emblems, similar in ranking to the Good Housekeeping Seal and Consumer Reports.



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Source: Fairfield Research 2003 survey of 4211 respondents, sponsored by Good Housekeeping

ENERGY STAR Develops Effective, Voluntary Energy Efficiency Specifications

1. Performs energy and environmental analysis

2. Looks at market research and design analysis

3. Develops specifications with significant stakeholder involvement

ENERGY STAR Specification Development Cycle

Product Qualification Process

- ENERGY STAR specifications leverage testing standards already set in the marketplace (e.g., NSF, ASTM, ASHRAE)
- Products may be tested by the manufacturer or by a third-party
- Manufacturers self-certify that products meet the ENERGY STAR eligibility criteria by completing and submitting a Qualified Product Information (QPI) form
- EPA polices the use of the ENERGY STAR mark at trade shows, industry trade publications, reviewing Web sites, and by following-up on information on possible logo violations from industry

ENERGY STAR CFS Equipment: *Sample Technologies*

- ECM motors and evaporators
- High-efficiency compressors
- Insulation

- Insulation
- Magnetic door gaskets
- Auto-door closures
- Dutch doors

- Insulation
- More efficient water delivery during the rinse cycle

- Advanced burners
- Advanced heat exchangers
- Insulation

- Insulation
- Better steam delivery

- Higher-efficiency components, e.g., evaporator
- More efficient ice harvesting

Manufacturers may meet ENERGY STAR specifications through different technology options.

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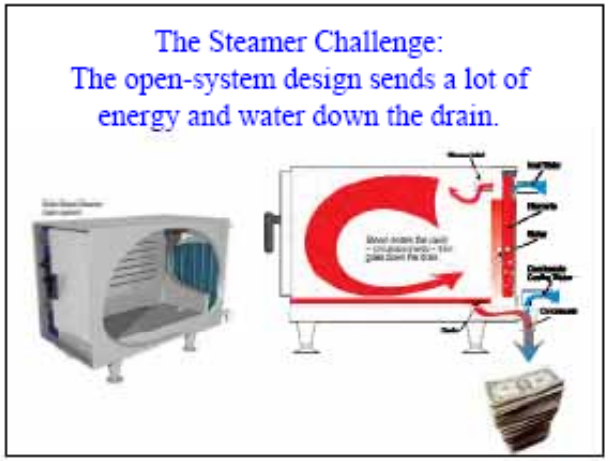
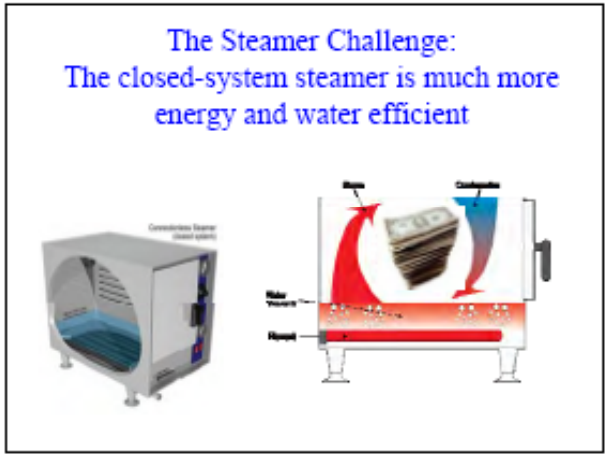
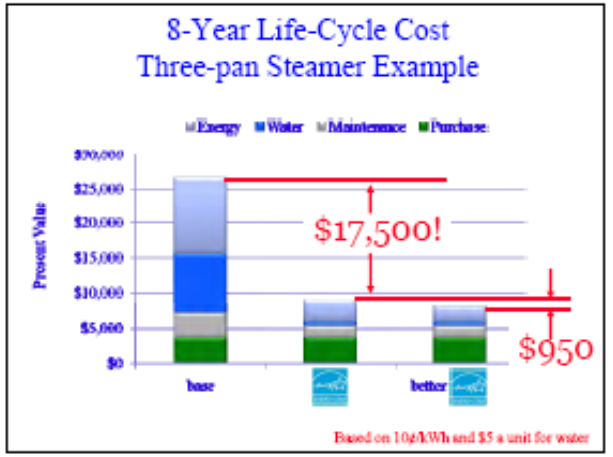
Example: ENERGY STAR Steam Cooker







Saves **$17,500** over life of the equipment

Source: PG&E's Food Service Technology Center

ENERGY STAR CFS Equipment: *Specification Development Activities*

Glass Door Refrigerators
Commercial Refrigeration Spec V2.0
Effective 2009

Griddles
Initiate Sept 2008

Ovens
Initiate Fall 2008

Flake and Nugget Ice Machines
Dependent on development of ARI certification program
Initiate 2009

Large Vat Fryers
Depending on Resources
2009-2010

Conclusion

- Restaurants using ENERGY STAR qualified equipment can:
  - Save money
  - Save energy
  - Help protect the environment
- ENERGY STAR is leading the way with industry Partners to move the commercial food service market toward sustainability.

Questions?

Contact Information

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