COMMERCIAL KITCHEN EFFICIENCY PROGRAM
Creating Energy- and Water-Efficient Restaurants with ENERGY STAR®

National Grid (USA) is an electric and gas utility company that provides retail distribution in Massachusetts, New Hampshire, New York, and Rhode Island. In 2006, the company created an innovative initiative to reduce restaurant energy and water use.

National Grid’s Commercial Kitchen Efficiency Program helps restaurant operators overcome barriers to installing energy-efficient kitchen equipment and improve the energy and water efficiency of their restaurants by offering:

• Financial incentives
• Educational materials
• Tips to identify highly efficient equipment
• Energy assessments to show estimated energy and dollar savings associated with the program
• Free high-efficiency pre-rinse spray valves (PRSVs) to encourage initial participation

The initiative leverages ENERGY STAR qualified equipment. Outfitting an entire kitchen with a suite of ENERGY STAR qualified CFS equipment could save operators about 350 MBtu, or the equivalent of approximately $3,600, and could prevent 19 tons of greenhouse gas emissions. In addition, some ENERGY STAR qualified CFS equipment saves water (see Table 1).

When developing their program, National Grid looked at both restaurant energy use and the program holistically. In addition to providing incentives for kitchen equipment, which is where restaurants use most of their energy (see Chart 1), the program offers incentives for both food service and heating equipment. By offering energy assessments, the program helps restaurateurs identify opportunities for efficiency throughout the entire building. Some of the ways the initiative met its goals are as follows:

• Offering comprehensive incentives. Measures eligible for incentives include ENERGY STAR qualified CFS equipment, space heating, water heating, heat recovery, and new technologies.
• Maintaining flexibility. The initial ENERGY STAR qualified fryer incentive was established at $300 for each equipment purchase. A low response rate led to raising incentives to $1,000, resulting in a 1,500% increase in customer participation.
• Giving customers an additional reason to participate. The program offers free high-efficiency PRSVs to all new members of the Massachusetts Restaurant Association and to customers participating in restaurant energy assessments. This has been a successful recruiting tactic.

Potential Annual Energy and Water Savings

<table>
<thead>
<tr>
<th>ENERGY STAR Equipment Type</th>
<th>ELECTRICITY (kWh)</th>
<th>NATURAL GAS (MBtu)</th>
<th>WATER (gallons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Fryers</td>
<td>1,100</td>
<td>50</td>
<td>—</td>
</tr>
<tr>
<td>Convection Ovens</td>
<td>1,870</td>
<td>30</td>
<td>—</td>
</tr>
<tr>
<td>Commercial Steamers</td>
<td>4,930</td>
<td>33</td>
<td>170,000</td>
</tr>
</tbody>
</table>

Average Energy Use in Restaurants (Btu)

- Food Prep: 35%
- HVAC: 28%
- Lighting: 13%
- Sanitation: 18%
- Refrigeration: 6%
- Commercial kitchens use 59% of a restaurant's total energy consumption for sanitation, refrigeration, and food preparation.

Chart 1

Table 1

Average Energy Use in Restaurants

EPA United States Environmental Protection Agency
NATIONAL GRID’S INNOVATIVE OUTREACH THROUGH PARTNERSHIPS

Another key reason for National Grid’s success is that they implemented an industry-wide program approach. National Grid partnered with various organizations that work within the CFS market to educate restaurateurs and promote the program. Their partners include a local gas consortium (GasNetworks), the Massachusetts Restaurant Association (MRA), manufacturers of commercial kitchen equipment, the Consortium for Energy Efficiency (CEE), and local equipment distributors. Based on these strong partnerships, National Grid developed three marketing approaches to promote their incentives:

- **Webinars** for industry professionals, CFS equipment manufacturers, dealers, and CEE. Through these webinars and by working with equipment manufacturers and local distributors, National Grid gave retailers and distributors the tools and information needed to promote energy-efficient purchases in the dealer showroom; as a result, National Grid was able to reach customers at the critical time of product selection.

- **Direct Mailings** to MRA’s 1,500 current members and to new members when they join the association. MRA is a critical communication link and provides an effective channel for ongoing outreach to restaurants. Additionally, National Grid continues to offer direct mailings through equipment manufacturers and their distributors.

- **The “Traveling Road Show”** is training that highlights restaurant success stories such as the Taranta Restaurant and Mezza Luna (see below), which show how easy it is to take advantage of the program. National Grid hosts these shows quarterly.

SUCCESS STORIES

The Mezza Luna Restaurant took a holistic approach for completing renovations in April 2009, according to E.J. Cubellis, chef and owner. With support from National Grid, Mezza Luna improved their energy performance by installing four ENERGY STAR qualified ovens. In addition, they installed energy-efficient fryers, PRSVs, HVAC equipment, occupancy sensors, insulation, and windows.

The National Grid Commercial Kitchen Efficiency Program also engages large restaurant chains to help them reduce energy and water consumption. National Grid works with Papa Gino’s, D’Angelo’s, Pizzeria Uno, Chili’s, Burger King, and the 99 Restaurant to identify opportunities to purchase energy-efficient equipment. National Grid encourages the chains to adopt equipment purchasing guidelines that encourage procurement of equipment that has earned the ENERGY STAR as well as other high-efficiency equipment.

Taranta Restaurant has shown leadership under chef and owner Jose Duarte (pictured right) by installing ENERGY STAR qualified programmable thermostats, tankless water heaters, PRSVs, and energy-efficient lighting with support from National Grid.

RESOURCES

Other utilities can benefit from National Grid’s experience when designing their own CFS incentive programs. Details about the National Grid program are available at www.powerofaction.com. The Environmental Protection Agency provides information about CFS equipment incentive programs in a best practices document, entitled *CFS Program Administrator Guide for Utilities*. This guide is located under “Guidebooks” at www.energystar.gov/cfs. Another useful resource is the *ENERGY STAR Guide for Restaurants*, also located under “Guidebooks,” which outlines how restaurant managers and owners can reduce energy and water consumption and help protect the environment.

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1www.energystar.gov/cfs
2Individual product pages accessible from www.energystar.gov/cfs
3Cooking Appliance Performance Report. PG&E Food Service Technology Center.
4Use ZIP code 02451 and select either Small or Large Business from the drop down box.