

## **Cooking-Up a New Approach for Commercial Program Design**

*Afroz Khan, Ted Jones, and Susan Loucks, Consortium for Energy Efficiency*

*Rick Cartwright, Hobart Corporation*

*Susan Andrews, New York State Energy Research and Development Authority*

*Mark Bramfitt, Pacific Gas and Electric Company*

*Al Dietemann, Seattle Public Utilities*

*Melisa Marks, Southern California Gas Company*

*Kate Lewis, U.S. Environmental Protection Agency*

### **ABSTRACT**

Foodservice facilities are among the most energy-intensive commercial buildings, consuming roughly 2.5 times more energy per square foot than other commercial buildings. In addition, the foodservice sector can also be a big consumer of water and a large generator of wastewater and solid waste. In the past, a majority of energy efficiency programs have addressed this sector by promoting a single product conversion to capture energy savings. Program success has been limited under this approach mostly due to the complex decision-making barriers unique to this sector that affects procurement procedures and actions.

This paper discusses a recent national effort to better address these decision-making barriers through a new program design strategy. By adding industry perspectives as well as consumer thinking into program strategies and design, efficiency programs are likely to have greater, longer-term impacts in the market. The effort is unique in that it simultaneously addresses multiple efficiency opportunities within the foodservice sector through a “bundled” program approach that cuts across equipment types. The effort initially focuses on a particular segment within the foodservice sector, restaurants, which have significant savings potential, a high degree of efficiency program relevance, and a large customer base.

In this paper, the authors—which include representatives of the foodservice industry as well as water agencies and energy efficiency program managers—will describe the methodology by which the program design strategy was developed including the program theory and logic.

### **Introduction**

The food service market is broken down into commercial and non-commercial categories. In commercial foodservice, the business is organized around food sales, while non-commercial foodservice provides food to supplement another primary organizational function. Non-commercial foodservice includes institutional foodservice (e.g. military, educational, and health care) as well as industrial foodservice (e.g. food prepared for airlines or trains). Seventy four percent of the food service market falls under the commercial category. Within this category, there are several sectors including restaurant and hospitality.

The National Restaurants Association recently released the 2006 Industry Forecast report where it was noted that 50 percent of operators have purchased “energy efficient equipment” and 40 percent of operators have purchased water-saving fixtures. In addition, the North American Association of Food Equipment Manufacturer (NAFEM) published in their *2004 Size and Shape of the Industry Study* that the top three concerns of primary equipment operators were identified

as Personnel (67%), Profitability (42%) and Energy Costs (32%). With this growing awareness by equipment operators on the benefit of applying energy and water saving equipment, the opportunity is ripe for delivering unified and consistent messages to end users through targeted program approaches.

While promoting energy and water efficiency in commercial kitchens has been a challenge for administrators of efficiency programs due to the size and complexity of the food service market, the savings potential is substantial. Total energy consumption in a typical food service facility is typically 30% for cooking, 19% for refrigeration and 10% for sanitation. These three end uses combined represent roughly 60% of the energy consumed in a typical foodservice facility. In 1999, the Commercial Building Energy Consumption Survey (CBECS) reported that the total energy consumed by food service buildings was roughly 447 trillion Btu/year. Depending upon the technologies installed the total savings potential from a more efficient commercial kitchen can vary from 10-30%.

A national effort was launched by the Consortium for Energy Efficiency (CEE) in January 2005 that brought together energy and water efficiency program administrators as well as staff from ENERGY STAR to identify an approach that can target energy and water savings within the food service sector more effectively. This effort was initiated due to lessons learned by program administrators when leading programs came together through CEE in 2001 to address energy efficiency commercial refrigeration equipment. Due to the minimal results observed and a lack of traction in the market, observations were made that led to redefining the program approach to a broader suite of equipment with a targeted market strategy.

As part of this newly defined program strategy, energy efficiency program administrators embraced a plan to focus on a particular market sector, with multiple measures, including water efficiency, and to work in close cooperation with water efficiency programs, the food service industry and ENERGY STAR. The immediate strategy of our effort is to nationally align consistent definitions around efficient products relevant to a specific segment within food service, initially restaurants. The restaurants sector was selected for initial investigation from a program strategy perspective. This decision was primarily made due to the relative size of this category compared to other categories in commercial foodservice and the resulting potential for impact. Restaurants are also experiencing strong growth within the commercial foodservice sector, doubling in the US to 858,000 between 1974 and 2004. Because of complicated decision-making pathways, the quick- and the full service restaurant markets have been difficult to reach. In addition, outreach factors can greatly vary, based upon whether the restaurant is a new construction or an existing building.

## **Program Design Approach**

The restaurant market is complex, involving a number of key stakeholders within different systems. Some stakeholders are especially important as decision-makers within restaurants, and others play a more critical role as commercial kitchen equipment is brought to market. By using a market segmentation approach to address commercial kitchens in restaurants initially, programs can (1) identify a group of customers who are primed for an energy efficiency message, (2) speak to specific motivations of each group to increase the value of efficiency to the customer, and (3) provide specialized technical assistance with more detailed knowledge of energy end uses.

Our model program design approach incorporates two principal strategies; a technology assessment coupled with a market strategy. A matrix of commercial kitchen technologies with potential savings (water, electric and gas) was created and then cross-referenced against a relevant food service market segment, in this case restaurants. By using this tactic, a combination of technologies was created that would result in the greatest water and energy savings. As technologies were selected for restaurants, market strategy outreach activities were also identified.

## **Major Stakeholders**

To appropriately define an effective program design approach it is important to understand the stakeholders involved in the restaurants market. Primary internal and external stakeholder groups, their roles, and their interests are briefly detailed below.

**Chain owners.** Owners of franchise groups own the product concept, and pass along decisions that enforce, support or modify that concept to franchisee owners. They can specify lists of equipment needed at start-up, as well as menu options (which also have equipment ramifications). They also make strategic decisions, such as how to promote the success of the business concept, how to compete and differentiate their brand, and how to stimulate growth.

**Independent owners and franchisee owners.** Franchisees and independent owners share many concerns, although independent owners generally have more latitude and less support in building their business. Top concerns for independent and franchise owners include recruiting, training and retaining labor. Other concerns for owners include safety, quality, competition, and general profitability. Profitability is closely tied to labor and material costs, which eat up the highest percentage of an owner's income. The primary association for this stakeholder group is the National Restaurant Association (NRA).

**Specifiers.** Specifiers/designers are employed, usually as a consultant, by independent owners, chain owners, and occasionally by franchisees. They design kitchens or make recommendations on the types of equipment necessary for particular applications. This group's success is based largely on the number of new construction and renovation projects, although they also succeed based on the quality and quantity of information they can provide to their employers. Specifiers typically belong to the Foodservice Consultants Society International (FCSI)

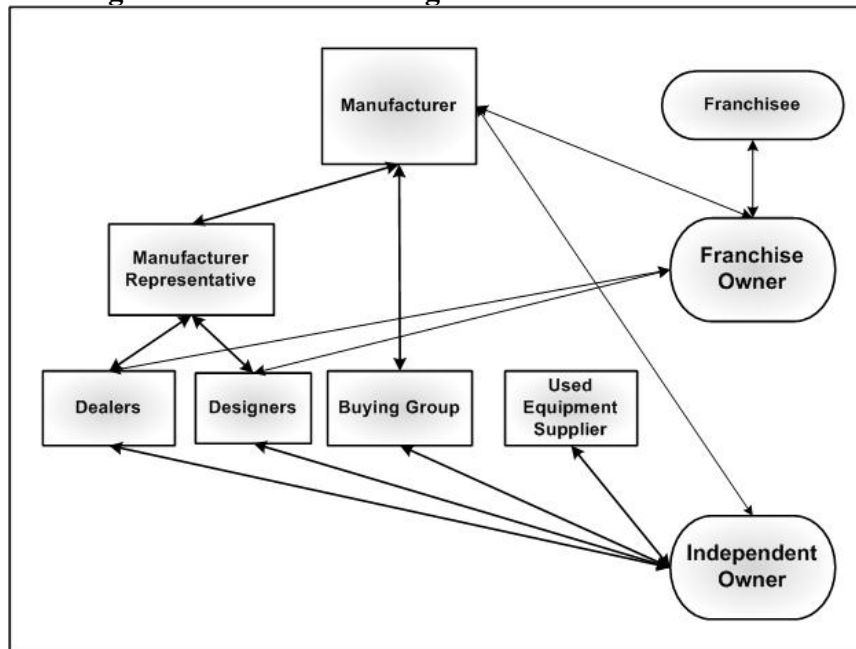
**Manufacturers.** Foodservice manufacturers design and create the equipment that will eventually find a home in commercial restaurants. This group must maintain competitiveness and profitability in an atmosphere of increasing costs, including hikes in expenses for transportation, insurance, and materials. Manufacturers design and build their equipment to match food safety and energy guidelines provided by federal and state legislation. Manufacturers are served by several professional associations. NAFEM (North American Association of Food Equipment Manufacturers) members represent 85% of all foodservice equipment and supplies sold in the U.S. This association also provides educational and industry research information to members and have various committees dedicated to specific tasks and technical matters.

**Manufacturer representatives.** Manufacturers hire representatives who can promote their products and work with dealers to bring them to the marketplace. Manufacturer representatives also work directly with specifiers and designers without using dealers as intermediaries. They are represented by the Manufacturers' Agents Association for the Foodservice Industry (MAAFI). This organization includes 600 companies in the US and Canada representing 2,000 sales and marketing professionals, manufacturing executives and others.

**Distributors/Dealers.** Distributors and dealers are the link between manufacturers and the end user. The majority of restaurant and chain owners use dealer and distributor networks (56% in 2004) but longer-term trends may point to an increasing use of other non-traditional equipment distribution options (including end-user buying groups). In addition to these newcomers, dealers are challenged by rising costs from manufacturers and by consumer expectations for convenience and speed. Distributors and dealers are also served by several professional organizations including the Foodservice Equipment Distributors Association (FEDA), the Commercial Food Equipment Service Association (CFESA) and the Supply and Equipment Food Service Alliance (SEFA).

Figure 1 illustrates how the decision making is structured based upon the type of restaurant.

**Figure 1. Decision Making Channels for Restaurants**



## Technology Assessment

While lighting and HVAC are typically the dominant energy consuming components in commercial buildings, food service facilities have a unique end use profile that allow for innovative technologies that address cooking, sanitation and refrigeration. Our model approach is focusing on these three areas while understanding that efficient lighting and HVAC technologies/practices can be incorporated through long standing efficiency programs already in existence.

As a first step in defining our approach, a matrix of equipment relevant to the foodservice market was created, Table 1. Equipment technologies were sorted based upon a list of criteria that included:

- Relevance to the restaurants market sector under evaluation
- Savings potential in electric, gas and water use
- Level of effort required to develop a significant performance specification
- Consideration of the existence of national, state, and local codes and standards
- Relevance of technology to other foodservice sectors

**Table 1. Example of Some Technologies Assessed for Commercial Kitchens Equipment**

Equipment	Life (yrs)	Inc. Cost (\$)	Annual Consumption			Savings Potential (%)		
			Water (10 <sup>3</sup> Gal)	Gas (Mbtu)	Electric (MWh)	Water	Gas	Electric
Broilers	7-15	Varies		160-200	18-22		25-35%	25-35%
Dishwashers	10-12	Varies	350-1100	170-200	50-70	30-50%	30-50%	30-50%
Solid Door Reach-In Freezers	9-10	\$100-500			8-10			10-30%
Glass Door Reach-In Refrigerators	9-10	\$100-500			16-20			10-30%
Fryers	8	\$500-1000		100-150	10-12		25-35%	5-10%
Insulated Hot Food Holding Cabinets	15	~\$500			5-6			55-65%
Ice Makers	5-10	\$100-200	150-200		4-8	20-40%		15-30%
Solid Door Reach-In Refrigerators	9-10	\$100-500			3-4			25-55%
Pre-Rinse Spray Valves	5-7	\$5-20	270-400	180-230	40-60	30-60%	30-60%	30-60%
Connectionless Steamers	10	Varies	140-160	150-300	25-50	90%	30-40%	30-50%

Once technologies were identified for initial investigation, contacts were established with equipment manufacturers and consultants to help identify critical issues in determining appropriate performance specifications. Technical staff from the Pacific Gas & Electric Food Service Technology Center (FSTC) was consulted on the various technologies initially assessed. The FSTC has provided nationally-recognized energy efficiency consulting services to the commercial food service industry for 20 years. Restaurant owners and operators, institutional food service providers, cooking equipment manufacturers and kitchen designers rely on the FSTC to provide unbiased, comprehensive information about energy use and efficiency ([www.fishnick.com](http://www.fishnick.com)). As a result of these services, standard performance and energy efficiency test methods for over 30 types of food service equipment have been developed.

Despite the large savings potential for the technologies identified in Table 1, standard procurement practices usually entail obtaining bids and then selecting the one with lowest purchase price. While this leads to products or services with low first-cost, in the case of energy/water-using equipment this can also mean lower efficiency, making the equipment more expensive to own and operate over the life of the product.

A key solution is to base purchase decisions on total life-cycle costs (LCC) which incorporates operating costs along with the acquisition costs. Paul Barringer, an engineering consultant, wrote that the “purpose of the LCC analysis is to choose the most cost effective approach from a series of alternatives so that the least long-term cost of ownership is achieved”. Since operation cost can easily dwarf the initial investment on large equipment it is critical to understand this impact to demonstrate the payback that is available for energy efficient equipment. The challenge however is in attaining real-world data to appropriately address these operating costs.

NAFEM responded to this challenge by organizing a “steering committee” in early 2005, comprised of members representing various industry interests. This includes manufactures, dealers, foodservice consultants, and foodservice operators. The objective is to develop and integrate a universal template for industry to utilize when forecasting and/or evaluating the life cycle cost of equipment. This coordinated effort will make a substantial impact on the decision making behind water and energy efficient equipment. The progress of this effort will be integrated into the program design strategy as technical resources and tools are made available.

## Market Strategy

To effectively reach the restaurants segment, it is important to understand the decision making structure as well as motivators behind purchasing decisions. For this effort, the restaurants segment was categorized into two main groups; Independent-Owned/Franchisee-Owned Facilities and Corporate Chain-Owned Facilities. Table 2 compares the relative importance of different types of information between corporate chain-owners and franchisee owners. In situations where franchisees are responsible for equipment decisions, dealers and designers will deal with them directly. Franchisees rely heavily on past experience and company staff to gather information for their purchases. Corporate chains will rely more on manufacturers, trade shows and trade journals. In both situations, electric utilities are not a major source for equipment decision making.

**Table 2. Decision Making Sources for Chain-owned vs. Franchisee-Owned**

Information Source for Decision Making	Chain-owned branch	Franchisee-owned branch
Manufacturer Representatives	52%	13%
Trade Shows	46%	3%
Past Experiences	45%	27%
Trade Journals	21%	4%
Company Staff	21%	23%
Electric Utilities	10%	1%
Distributors, Dealers and Suppliers	4%	12%

While it can be difficult to gain the attention of large corporate decision-making structures, the rewards can be significant. If a top-level decision-maker is convinced that a particular strategy is worthwhile, it can be incorporated into the guidelines for many franchisee units, leading to large savings in energy and water use. To effectively outreach to corporate chains, marketing strategies should be:

- Directed appropriately: Equipment buyer groups, specifiers and owners are appropriate contacts in a smaller chain. In large chains, the message needs to be targeted to the most relevant department.
- Clear and coordinated: Chain owners hear from many stakeholder groups with a variety of messages. The energy and water efficiency message needs to be authoritative and coordinated. This communication must address the company's business model while addressing that decreasing energy costs improves their bottom line.
- Trusted: Chain owners are aware that many groups want to promote their own bottom line and sell an approach or equipment. For maximum impact, a new message should be supported by an informational channel that the owner has already used and appreciated, e.g. trade and industry associations including ENERGY STAR.

Franchisee/Independent owners present different market barriers that may be lessened by providing easy access to reliable equipment performance data and/or custom incentives for attractive technologies. A bundled approach that includes promoting efficient lighting as well as other cooking or refrigeration technologies can complement program offerings.

A key component in addressing either of these groups is to know that owners have several concerns that include labor, safety, and atmosphere. These additional concerns can be used as an opening for a message that ties the importance of water and energy efficient equipment with the potential for improved indoor air quality, noise reduction and increased overall performance. In addition, by working with ENERGY STAR through a joint-marketing campaign, the value of the brand can be leveraged for program effectiveness.

## **Summary of Current Activities**

With the increasing awareness of potential energy and water savings in commercial kitchens, more efficiency program efforts are underway to better capture these opportunities. Thirty five efficiency programs across the country were evaluated from the perspective of how they were addressing commercial kitchens. The most common program component seen in 2005 was using a prescriptive approach to increase the penetration of efficient equipment in the marketplace through financial incentives and rebates. This method helps meet short-term business objectives, while yielding long-term energy savings for end-users. Table 3 provides a sample listing of efficiency prescriptive programs and the equipment being promoted. The main trend in prescriptive programs across the nation is the leveraging of national labels or a voluntary specification level in determining what equipment to promote. Program administrators are utilizing ENERGY STAR as a resource for information on qualified equipment types including customized savings information, training tools/resources on lifecycle cost accounting, and for peer-to-peer matchmaking.

To illustrate the diversity of these programs, we present two program efforts in more detail from Southern California Gas Company, and Wisconsin Focus on Energy. In addition, a

new pilot effort will be presented from the New York State Energy Research and Development Agency (NYSERDA).

### **Southern California Gas Company**

The Southern California Gas Company (SoCal Gas) has been working with the foodservice sector over the past 35 years. Foodservice is the largest segment in Southern California with numbers in 2003, indicating 26,000 active meters with a total annual throughput of roughly 132 million therms. SoCal Gas recognized that restaurant owners were concerned with cooking performance, equipment reliability and durability, equipment maintenance and warranty, cost and energy efficiency. To meet these concerns, they structured a program that includes rebates and incentives on qualifying energy-efficient natural gas equipment, online/onsite energy efficiency analysis and audits of a facility's energy usage as well as various energy-efficiency training courses and seminars

An example of SoCal Gas's program impacts can be seen in their efforts with the fast food franchise, Del Taco. By working with the owners at the franchises in the SoCal Gas territory, Del Taco replaced fryers with energy-efficient models and installed more efficient food heating units at almost 50 Southern California locations; the new fryers alone reduced energy use 10-20% per restaurant.

In defining their program for 2006-2008, SoCal Gas are moving forward with the other California Investor-Owned Utilities (Pacific Gas & Electric, San Diego Gas & Electric and Southern California Edison) and ENERGY STAR to work together jointly in the promotion and marketing of the most efficient equipment on the market.

### **Wisconsin Focus on Energy – Commercial Sector Program**

In 2004, Focus on Energy's Commercial Sector Program created three teams targeting energy-intensive markets – healthcare, grocery, and hospitality (lodging and restaurants). The program provides project support, training and incentives. These program offerings are promoted through trade associations, trade allies, and direct to customers. A pre-rinse sprayer campaign has incorporated instant incentives through distributors and a direct installation effort.

In early 2006, prescriptive incentives were developed for qualified food service equipment. Prescriptive incentives offer the benefit of "easy-to-identify" efficiency measure for customers, a known incentive amount up-front as well as lending credibility to the purchase of high efficiency equipment – factors that assist the customer during purchase decision-making. A bonus for purchase of multiple types of qualifying equipment was added to encourage a more comprehensive approach to energy efficiency in kitchens. Through surveys, distributors are providing feedback on awareness of energy programs, energy's role in purchase decision-making and market share of efficient equipment in Wisconsin.

Custom incentives are available for variable control of kitchen exhaust hoods and other energy saving measures. The program has utilized a Memorandum of Understanding (MOU) approach to lessen the risk to the customer and prove the benefits of technologies to chain customers. With the MOU approach, the program will heavily support (technically and financially) an initial installation in exchange for the customer installing four to eight more projects based on measured energy savings.



Overall, the Hospitality Team has achieved savings of 1.7 MW, 11,000 MWh and 630,000 therms in lodging and restaurant markets since 2004. Wisconsin Focus on Energy plans to continue its promotion of energy efficient food service technologies in order to help meet its increasing program goals.

### **NYSERDA – Commercial Kitchens Pilot Effort**

The commercial kitchen sector in upstate New York is characterized by a significant number of small, privately owned businesses that are difficult to reach, have limited cash flow, and are generally resistant towards the adoption of new technologies. To serve this sector more effectively, NYSERDA has developed a pilot project through two concurrent channels: prescriptive/retrofit opportunities for existing businesses and a new construction channel for new restaurants still in the planning phase.

The pilot is being implemented in Glens Falls, Albany, Schenectady, and Troy areas, which account for the highest per capita restaurant sales in New York State. The specific goals of this pilot program include (1) installation of 100 pre-rinse spray valves, (2) 50 “mini-audits” of commercial kitchens delivered, (3) 30 NYSERDA Small Commercial Energy Audits performed, (4) 5 restaurant suppliers partnered with, and participating in, the pilot program and (5) one restaurant chain agreeing to participate by installing a high efficiency kitchen ventilation system, along with subsequent monitoring and verification as well as one restaurant chain brought into the New Construction program (one or more sites).

NYSERDA plans to promote energy efficient measures that have cost savings impacts on electricity, water, and electric demand for independent restaurant owners, as well as regional and national chains. The intent of the pilot is to jump start market transformation toward more efficient kitchen equipment. NYSERDA will simultaneously engage suppliers, distributors and trade associations in an effort to bring energy efficient kitchen equipment into New York State and to develop awareness of the multiple benefits from the purchase and installation of such equipment. Developing positive relationships and partnerships are critical to the success of the pilot program. Other NYSERDA programs and services will be leveraged, furthering NYSERDA’s goal of channeling and cross-marketing its varied programs by sector.

### **ENERGY STAR Commercial Food Service Efforts**

A critical aspect of this newly launched national effort is in the coordination with the ENERGY STAR program. This program is widely recognized for its more than 40 appliances and products that meet energy-saving specifications. The recent 2004 ENERGY STAR household survey indicated that recognition of the ENERGY STAR label among U.S. households jumped to 64 percent, an increase of 8 percentage points since 2003, and of 23 percentage points since the survey was first fielded in 2000. In addition, public awareness of the ENERGY STAR program is even higher in many major markets where local utilities and other organizations use ENERGY STAR to promote energy efficiency to their customers. In these areas awareness averages 74 percent. While it has not had a long history of working with the commercial foodservice industry, this effort provides a mechanism for both water and energy efficiency program administrators to collaborate with and provide direct feedback on the ENERGY STAR program.

The ENERGY STAR label for foodservice related equipment was first established for reach-in solid door refrigerators and freezers in 2001. Since then, three additional products: steam cookers, hot food holding cabinets and fryers may now earn and display the ENERGY STAR label. Based on total annual sales of the equipment, and ENERGY STAR qualified unit shipments voluntarily provided by manufacturer partners, the program estimates that the current market penetration of ENERGY STAR qualified foodservice products ranges from 5% (fryers) – 25% (commercial refrigerators/freezers). ENERGY STAR is in contact with manufacturer partners, maintains a list of all qualifying models and model numbers on the program's website ([www.energystar.gov](http://www.energystar.gov)), and is working actively to increase the development of and the demand for qualified products.

Linking directly to the ENERGY STAR Web site can help educate market actors about qualified foodservice products and provide the industry with valuable tools like qualified product lists. In addition, ENERGY STAR will soon be offering an on-line commercial foodservice (CFS) equipment rebate finder. This tool will allow end-users to easily search for qualified equipment rebates by zip code or by product type. It will include information on rebates/incentives offered around the country and will be updated on a regular basis.

**Table 3. Sample of 2006 Prescriptive Efficiency Programs Promoting Commercial Kitchens Equipment**

PROGRAM SPONSOR	PRESCRIPTIVE PROGRAM NAME	EFFICIENCY LEVELS PROMOTED	REBATED EQUIPMENT AND CONTROLS												
			Exhaust Hood Controls	Broilers	Dishwashers	Freezers	Fryers	Griddles	Holding Cabinets	Ice Machines	Ovens	Range Tops	Refrigerators	Spray Valves	Steamers
Efficiency Vermont	Small Commercial Refrigeration	CEE ENERGY STAR	--	--	--	●	--	--	--	●	--	--	●	--	--
Energy Trust of Oregon	Foodservice Equipment	CEE ENERGY STAR	--	--	--	●	●	--	--	--	●	--	●	●	●
KeySpan Energy Delivery	Business Programs	ENERGY STAR	--	--	--	--	●	--	--	--	--	--	--	●	--
NSTAR	Food Service Equipment Program	ENERGY STAR	●	--	--	--	●	--	--	--	--	--	--	--	--
NYSERDA	Smart Equipment Choices Program	CEE ENERGY STAR	--	--	--	●	--	--	--	●	--	--	●	--	--
	Prescriptive Program <i>(ConEd Gas Customers)</i>	CEE ENERGY STAR	--	--	--	--	●	●	--	--	●	--	--	●	●
Pacific Gas & Electric	Express Efficiency	CEE ENERGY STAR	●	--	--	●	●	●	●	●	●	--	●	--	●
Puget Sound Energy	Cool Rebates	CEE	--	--	--	--	●	--	--	--	--	--	●	●	--
San Diego Gas & Electric	Express Efficiency	CEE ENERGY STAR	●	--	--	●	●	●	●	●	●	--	●	--	●
Seattle City Light	Cool Rebates	CEE	--	--	--	●	--	--	--	--	--	--	●	--	--
Southern California Edison	Express Efficiency	CEE ENERGY STAR	●	--	--	●	●	●	●	●	●	--	●	--	●
Southern California Gas Company	Non-Res Financial Incentive Program	ENERGY STAR	--	●	--	--	●	●	--	--	●	--	--	●	●
Wisconsin Focus on Energy	Business Program	ENERGY STAR	--	--	--	--	●	--	●	--	--	--	●	●	●

## Results and Next Steps

Based upon the results of the first year for this effort, the following suite of technologies, Table 4, were defined and approved in December 2005 as voluntary performance specifications and guidelines for ease of incorporation into efficiency programs for incentives/rebates and education. The specifications and guidelines were created with industry feedback and coordination. In 2006, additional technologies will be added to the suite of offerings.

**Table 4. Technologies Initially Addressed through National Coordinated Approach**

Category	Technology	Specification or Application Guide	Savings Potential (%)		
			Water	Gas	Electric
Cooking	Fryers	Tier 1 - ENERGY STAR	---	25-35%	5-10%
Refrigerat ion	Ice Machines	Tier 1, 2 and 3	20-40%	---	15-30%
	Solid Door Reach In Refrigerators	Tier 1 – ENERGY STAR and 2	---	---	25-55%
	Solid Door Reach In Freezers	Tier 1 – ENERGY STAR and 2	---	---	30-50%
	Glass Door Reach In Freezers	Tier 1 and 2	---	---	10-30%
Sanitation	Pre-Rinse Spray Valves	Application Guide.	30-60%	30-60%	30-60%

To address the market strategy aspect of this model program, a white paper was developed as well in 2005 that researched the market details of the restaurants market segment. The results of this research are being used to develop a series of templates and FAQs. As a next step, we will be developing case studies that demonstrate the savings potential as well as opportunity for assistance from efficiency programs that can better sell the concept of looking at the bottom line through improvements.

Overall, the results of the one year exploration yielded several positive actions for moving forward. These include:

- Improved program delivery between water and energy entities through national consistency in defining technologies for program offerings.
- Trusted industry relationships through coordination in specification and guidelines development.
- Coordination with the ENERGY STAR program through efforts that complement efficiency program offerings and needs for both water and energy program administrators.

## Conclusions and Recommendations

While this national coordinated effort is still in its infancy, several activities as described in this paper are underway that will start the process in meeting some of the

obstacles and challenges. Efficiency program administrators have an opportunity to develop market-focused programs that can help the foodservice industry reduce its energy use, lower energy costs, and achieve a number of non-energy benefits by encouraging the use of qualified commercial foodservice products.

There remains more to do to tip the market towards the awareness, preference and purchase of energy and water efficient foodservice equipment. End-users, whether restaurants or entities like schools, hospitals, and/or hotels, realize that choosing products based on their energy performance is a sound idea. There is a basic understanding of the benefits of factoring in life cycle costing to the purchase of this equipment. What often lacks is time, an organizational structure/process and the commitment to applying this knowledge to reinvent a process. Some entities, depending on how they're owned, are better positioned to absorb the cost premium of some high efficient equipment. Understanding the structure of this fragmented industry -- equipment dealers, distributors, buying groups, manufacturers/manufacturers representatives, design consultants and equipment specifiers -- is a time consuming effort but essential to facilitating multiple purchase transactions.

Successfully transforming the equipment market in the foodservice industry necessitates that government, nonprofit groups and utilities and other program sponsors understand each foodservice market actor's value proposition and their motivations for adopting specific equipment and practices.

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