

Appendix M

Esource Restaurants Sector Snapshot

Fast Facts

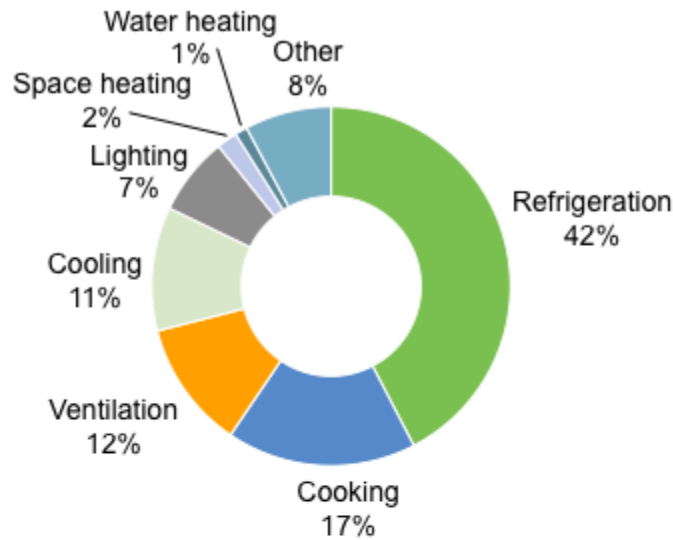
- Food service facilities are nearly three times more energy-intensive than other types of commercial buildings.¹
- Green building design and operation are catching on. A number of independent, full-service restaurants and facilities owned by national chains have been awarded the Leadership in Energy and Environmental Design (LEED) certification.
- Less than half of restaurant sector respondents in the E Source Business Customer Insights Center said managing energy costs was “significantly more important” than other business expenses.²
- Fast-food restaurants—with electric energy intensity of 55 kilowatt-hours (kWh) per square foot—require more electricity than large restaurants (43 kWh per square foot).³
- In restaurants, cooking is the largest end use for natural gas, and refrigeration is the largest end use for electricity.⁴
- Ninety percent of restaurants have fewer than 50 employees.⁵
- The restaurant industry’s greatest challenges include employee recruitment and retention, moderate sales growth, technology challenges, and the “American foodie 2.0”—younger generations that expect restaurants to adopt sustainable practices.⁶
- The average profit margin for restaurants is 3 to 5 percent in the US and 4 to 6 percent in Canada. Utility expenditures account for 9 percent of operating expenses in US restaurants.⁷

General Overview

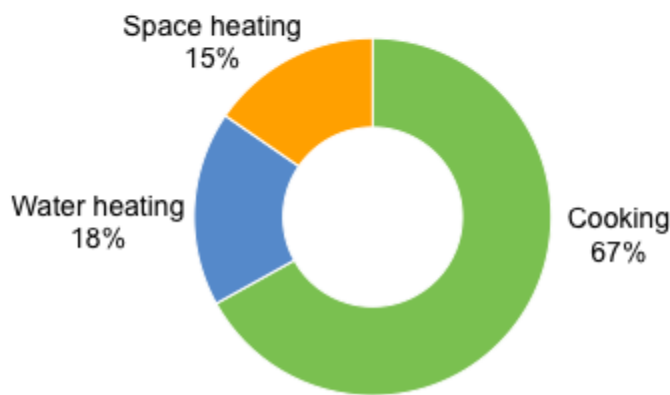
The food service industry includes large and small commercial restaurants.

The US\$783 billion and C\$72 billion restaurant industry plays a vital part in the economy and daily lives in North America.⁸ The average US household spends 51 percent of its total food dollars on restaurant and take-out meals, while Canadian households spend 27 percent.⁹ **Figure 1** shows how these businesses are distributed throughout the US and

A. Restaurant electricity consumption, by end use



B. Restaurant natural gas consumption, by end use



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Best Bets: Energy Technologies and Strategies

Opportunities for improved energy management in this sector are found in refrigeration, cooking, lighting, and HVAC.

Saving energy in the restaurant industry, as elsewhere, begins with knowing where and how much energy is used. Tools and systems that monitor and control energy consumption give

heat exchangers. Utilizing waste heat in this way could displace 60 percent of the energy required to heat incoming water. Various manufacturers offer both integrated and add-on systems that operate at a high enough temperature that the system can clean effectively with fewer chemicals. While the technology isn't necessarily new, it is underutilized. A barrier to its widespread adoption is the service and chemical supply agreement that most restaurants enter into when purchasing a dishwasher. The chemical suppliers profit from selling sanitizers to their customers and don't have an interest in promoting a technology that would reduce those sales.²⁹

Solar preheat water heaters. Another way to save energy on heating water for dishwashers in restaurants is to preheat the water with an integrated collector-storage system. In appropriate climates, these systems pass water through pipes inside solar collector panels and heat it before it reaches the dishwasher. Until recently, the high initial cost of these systems prevented California restaurants from implementing them. Now, state incentives have made it easier for restaurant owners to take advantage of the energy savings of solar preheat systems.³⁰

Industry Hot Buttons and Trends

Social media, the Internet, and customers' tight purse strings make customer experience a priority for restaurant owners as the industry continues to strive for environmental sustainability.

Thanks to the increasing usage of online review sites and a study that shows consumers aren't spending as much money on eating out, delivering the best possible customer experience is the priority of many restaurant owners. As the population grows more aware of and concerned about climate change, one way to improve the customer experience is by strategically implementing energy-efficient and otherwise green practices.

Increasing Importance of Customer Experience

The increasingly sophisticated capabilities of social media and the Internet have a significant impact on how people select where they spend their money—including where

they buy food. Online review websites including Google reviews, [Facebook](#), [Yelp](#), and [Zomato](#) (specifically for restaurants) make it extremely convenient for any customer to instantly publicly post about their experience in a restaurant. Not only do customers have hundreds of reviews to influence their choice of restaurant, in 2016 they were spending less money on eating out compared to previous years.³¹ These two factors combine to make customer experience a priority for restaurant owners now more than ever.

While efforts such as “greening” facilities and using environmentally friendly practices can attract and retain customers, restaurant managers need to ensure that energy-efficient measures don’t damage the customer experience. Utility account managers can guide restaurant owners in effective retrofits and technology implementation in order to maintain, or improve, customer comfort. For example, the right LED lighting installation can save energy and provide the desired ambience for customers, but a poorly installed system could produce a cold, glare-filled environment.

Green Building Design and Operation

Green building design is catching on. Despite the fact that the portfolio of LEED rating systems does not include a checklist specifically for restaurants, a number of full-service restaurants have successfully earned LEED certification. Quick-service chains including KFC, Taco Bell, and Pizza Hut are also obtaining LEED certifications for some franchises.³²

LEED is not the only green certification system available to food service companies. Two other options are available that cost less than LEED. One is the Certified Green Restaurants list, governed by the [Green Restaurant Association](#). The certification criteria include recycling, phasing out polystyrene foam, and committing to complete “environmental steps,” which range from energy and water efficiency to purchasing sustainable food products.

How Utilities Can Reach and Serve the Food Sector

Understanding restaurant managers’ priorities, concerns, and preferences will help utilities connect them with the right energy-savings programs through the

reducing the need for maintenance or maintenance costs as the top reasons. Additionally, they listed “enhancing my customers’ experiences” more than twice as often as the all-sector average. This focus on the customer experience means utilities should educate restaurant owners about the non-energy benefits of energy-efficiency upgrades, like improved comfort and ambience.

Restaurants often do not have the resources to test and assess the efficiency and effectiveness of new equipment. But this information is necessary for decision-makers to calculate the economics of upgrades and retrofits. Thankfully, there are resources available. The [Food Service Technology Center](#), sponsored by PG&E and managed by Fishnick Inc., offers a wealth of information on performance test results of commercial kitchen equipment as well as a useful [life-cycle cost calculator](#). The Commercial Kitchens Initiative from the [Consortium for Energy Efficiency](#) (CEE) also provides analysis on energy and water savings for primarily Energy Star-qualified equipment.

Partner with the Supply Chain

Utilities that are running successful food-service programs have built strong relationships with restaurant owners indirectly through partnerships with kitchen equipment dealers, manufacturers, and suppliers. Equipment dealers already know which restaurant decision-makers to talk to, whereas it is often time-consuming for utility account managers to identify these key contacts. Equipment dealers also know when to approach restaurant operators to pitch a new piece of equipment. More than half of restaurant operators purchase equipment when they need to be replaced, and 65 percent of restaurant operators purchase equipment from dealers and distributors.³³ Energy-efficiency program implementers can train dealers how to explain to their customers why it is worthwhile to pay more up front for efficient equipment, and they can also prepare the dealers to promote utility programs.

So what’s in it for the dealers? They gain from increased sales revenue as energy-efficient appliances tend to be more expensive than standard models. In establishing partnerships with dealers, it is vital to educate dealers on the benefits of energy-efficient appliances and prepare them to promote incentives customers can receive from their energy provider.³⁴ It