

# Green Strategies

Paul Kuck

## Three sustainable strategies for restaurants

Today's restaurant industry brings about a unique conundrum. In the last decade, spending at restaurants and bars has grown twice as fast as other retail spending, and millennials eat out five times a week on average, 14 percent more than baby boomers. Despite these growing demands, restaurateurs are seeing their costs increase, making it increasingly difficult to compete and differentiate themselves in a crowded market.

Although often overlooked, sustainability offers a solution for decreasing costs through managing energy, waste and water usage, which is more vital to the restaurant industry now than ever before.

Averaging 38 kilowatt-hours of electricity and 111 cubic feet of natural gas annually per square foot, restaurants in the United States are among the highest energy-consuming buildings. Because energy is one of the top three operating costs for restaurants, any reductions would dramatically improve the bottom line and even ensure long-term success. Some restaurants operate on margins so slim that a \$1 increase in minimum wage can increase the likelihood of closing.

## Embracing Sustainable Strategies

By embracing effective resource management practices, not only can restaurateurs save significant costs, but they can also appeal to consumers. According to a Nielsen study, 66 percent of global consumers say they're willing to pay more for services that come from companies committed to positively impacting the environment.

Sustainability is more than just a tactic to drive down costs and increase efficiencies. It's a core business component for restaurateurs looking to make the most of this golden age of dining. To understand what projects to prioritize, restaurant managers need to understand where their business has the greatest waste. Many are surprised to find low-cost to no-cost changes that can lead to significant savings in just a few short months.

Here are three strategies to help achieve significant reductions in energy, water and waste expenses:

### Benchmark to reveal energy hogs.

Energy management begins with bench-marking across both utility bills and facility operations. Restaurants with multi-site portfolios can leverage historical utility expense data to compare consumption and utility rates across sites. This prioritized list reveals the ideal opportunities to begin a deeper investigation into potential efficiency measures that will pay back quickly.

The next step for energy management starts onsite with energy and water audits from a representative sampling of restaurants. These audits identify a target list of low-cost energy efficiency measurements and capital investment opportunities. These could include anything from LED retrofits and smart control implementation for heating and HVAC to the full installation of energy-efficient cooking equipment and refrigeration. Engaging with a third-party auditor can help reveal opportunities that an internal facilities team may be less likely to notice.

For Arby's, data collected from audits was instrumental in developing a strategic capital investment plan to replace lighting, HVAC and water fixtures, ultimately helping the company realize more than \$5.5 million in annual savings.

Don't be afraid to dumpster dive.

Waste audits are an excellent way to truly understand employee and customer behavior. Capturing qualitative and quantitative waste data enables restaurant operators to build a business case for waste reduction, identify new opportunities for recycling and food-waste programs, and target training programs to maximize diversion. If restaurants are unable to perform a scientific waste audit, simply looking in the dumpster can provide valuable insight.

A look at waste expense data and a real dumpster dive inspired new initiatives to manage waste for Caesars Entertainment Group. First, Caesars' wanted to get its waste data into a format that can be analyzed. A common challenge for companies, Caesars historical waste invoices varied by utility, with differing formats and missing information, making it difficult to identify where to focus waste programs. Second, the company dug deep into its data to understand tonnage and haul counts, and married these findings with the data from their waste audits. As a result, Caesars launched a waste-management program matched to its unique needs, including a project that recycled wine corks and diverted alcohol bottles from the restaurant waste streams. They now send these bottles to a company that repurposes them into glassware, such as cheese trays, which Caesars then sells in its casino properties. Since 2012, Caesars has diverted more than 270,000 tons of waste away from landfills, increasing its diversion rate from 23 percent to 40 percent.

Account for water. Instead of focusing on reducing food waste first (as is common with food service), Shari's Cafe and Pies began with water waste. In the process of conducting energy audits, Shari's also identified significant water saving opportunities. The data from energy audits revealed that the dipper wells used to clean ice cream scoops were using approximately 26 million gallons of water every year. As a result, Shari's switched from a perpetual flow of water to a heated demand-based system that reduced water usage by 35 percent and natural gas usage by up to 18 percent.

Without a strategic focus on water measures, Shari's could have missed key opportunities to cut down on consumption. Similarly, Arby's led an effort to prioritize water usage and installed Weathermatic's EPA WaterSense-labeled irrigation controllers at 190 restaurant locations, saving enough water in six months to fill 11 Olympic-size pools.

Looking Ahead

Many forward-looking restaurateurs are already thinking about how to turn energy, water and waste data into action. Regulations are prompting action, while technology is enabling action. The next technology wave will improve efficiencies and productivity, allowing staff to concentrate on operations and customer service.

Automation, for example, is increasingly taking over mundane tasks, such as recording refrigeration temperatures for hazard analysis and critical control point records. Enterprise energy-management systems allow remote management of HVAC, lighting and other systems throughout a portfolio of sites, which enables better management of company standards and insight into equipment performance issues.

Variable-speed technology provides significant savings across exhaust hoods, rooftop units and walk-in refrigeration systems for both condenser and evaporator fan speeds.

Heat recovery is another innovative enhancement to commercial kitchens. While some of these technologies can require significant capital investments, Energy Star-qualified equipment is 15 to 70 percent more efficient than standard equipment for little to no additional incremental cost over standard efficiency units. Heat capture and recovery is more on the cutting-edge for commercial kitchens, but manufacturers are beginning to produce technologies that can reuse the kitchen heat for other purposes. New air-conditioning systems, for example, can capture heat to then use to help pre-heat water.

Beyond technology advancements, evolving regulations with solid waste collection are forcing restaurants to rethink waste practices. At 21 percent, food waste is the largest contributor to landfills. In 2010, more than a third of the available food supply in the U.S. went uneaten, at an estimated value of \$161.6 billion. The EPA aims to cut that food loss in half, equaling \$66 billion by 2030.

In California, legislation AB 1826 will require businesses that produce food waste to compost it rather than bring it to a landfill. This regulation has not only inspired restaurants, hotels, hospitals and other organizations to examine everything from their produce sourcing to their food donation and waste separation programs, but it has also driven infrastructure changes. With a predictable waste stream from local businesses, composters now have incentives to set up shop.

Restaurants typically operate with narrow profit margins and have pretax income that is 4 to 7 percent of total revenue. However, within this industry, sustainability practices may not receive the priority they deserve. In fact, efficiency measures are often the greatest opportunity for savings and a direct contribution to profitability.

With limited resources and capital, it is critical to gather the right information for your business case, as efficiency measures often have a higher return on investment than increased sales, promotions or other projects. By thinking strategically about the costs at stake, restaurant organizations can realize what is possible with a holistic approach across energy, water and waste. Using energy and waste data for key insights will help restaurants take action and drive powerful results by optimizing operations and investments for long-term success.

Paul Kuck is a Senior Energy Manager at ENGIE Insight, formerly Ecova, a company that makes businesses more successful through energy and sustainability management. ENGIE Insight serves more than 25 percent of Fortune 500 companies by blending data and technology with people and insight. As a Senior Energy Manager, Kuck provides strategic and tactical guidance to help clients manage their resource consumption and sustainability programs, providing sustainable solutions to the most energy-intensive commercial industries around the globe.