

# Energy Efficiency Inside Yum! Buildings



## Exhaust Hoods

Exhaust hoods capture heat and steam produced by our cooking equipment and are essential for the safe operation of our kitchens. They are also the primary driver of heating, ventilation and air conditioning (HVAC) energy use because they remove large quantities of air during operating hours. This air needs to be replaced, which uses energy. Restaurants can reduce the volume of air that passes through their hoods by using efficient equipment that generates less heat and by orienting hoods to decrease exhaust rates. At Pizza Hut restaurants in France and Germany, improved hood design reduced exhaust by more than 50 percent, with a payback of less than two years. Taco Bell has implemented higher efficiency HVAC systems in more than 1,000 restaurants from 2012–2017, reducing energy usage by approximately 25 percent.



## Lighting

From kitchens to dining areas, parking lots to signage, lighting is an important part of all our restaurants. Transitioning to LED lights in both new and existing restaurants makes for a double win: The lights use less energy and last longer than traditional bulbs, so less material is wasted. When combined with daylight and motion sensors in strategic areas, we can further reduce our electricity use. Installing LED lights at all KFC restaurants in Australia led to a 50 percent decrease in lighting power consumption. Taco Bell is retrofitting its existing restaurants with LED light fixtures.



## Pizza Ovens

As with all types of equipment, the design and performance of the ovens that Pizza Hut uses to bake its pizzas has improved greatly over the years. Newer ovens offer benefits in insulation and energy efficiency. Upgrading equipment brings not only cost- and energy-saving benefits, but it also ensures consistency, allowing Pizza Hut to deliver quality pizzas everywhere they operate. New high-efficiency ovens, as well as new HVAC and controls installed in 2017, are expected to save a total of roughly 832.4 MT CO<sub>2</sub>e at Pizza Hut restaurants in the U.S.



## Solar Energy

Frying KFC chicken uses significant amounts of energy, which is why KFC restaurants worldwide have begun to explore the use of solar energy to help power its restaurants. In Australia, more than 50 KFC restaurants, both franchisee- and company-owned, are joining together to get preferred rates on a solar rollout. Meanwhile, four KFC restaurants in South Africa recently installed solar panels, which will deliver a combined savings of more than 130 MT of CO<sub>2</sub> per year. At a Taco Bell restaurant in El Paso, Texas, a 3-kilowatt solar photovoltaic system produces 7 MWh of renewable energy per year. Taco Bell is testing self-contained parking lot lighting, site signage and building signage using off-the-grid solar harvesting methods.



## Smart Devices

Operating more efficiently means not only upgrading individual pieces of equipment, but also improving the way that equipment and people work together. For example, motion sensors and set points for air conditioners reduce the possibility of using more energy than necessary. At KFC restaurants in Australia, extractor hoods and cookers are linked: The hood dynamically adjusts its extraction rate depending on how many cookers are venting. In certain geographies, both KFC and Pizza Hut restaurants can use smart energy monitoring tools that make them aware of peaks in energy usage and alert them to possible malfunctions. KFC Australia restaurants can monitor power use online in 15-minute intervals and receive a warning if usage spikes by more than 10 percent.



## Smaller Footprints

What's left to do once equipment is fully optimized? Pizza Hut and Taco Bell have discovered that decreasing a restaurant's physical footprint is an effective way to lower its emissions. Pizza Hut's delivery-carryout (Delco) restaurants and Taco Bell's urban in-line locations are our smallest restaurants, which means there's less space to cool, heat and illuminate. Delco and in-line restaurants also share walls with existing buildings, which leads to greater energy efficiency and fewer construction materials needed. These new restaurant types have become popular both for their cost and energy benefits. More than five years ago, Pizza Hut introduced the "Delco Lite" restaurant concept, shaving several hundred square feet off its traditional Delco restaurants. Taco Bell's in-line restaurants are a newer introduction, and the brand plans to open up approximately 275 of these restaurant types annually around the world by 2022.