

CASE STUDY

The Cheesecake Factory Invents a Recipe for Energy Savings

PG&E helps energy managers make the case for solar water heating

The Cheesecake Factory, an upscale casual dining restaurant group with more than 150 U.S. locations, takes an exacting approach to its business. This includes the company's commitment to the environment. The Cheesecake Factory established recycling programs, uses organic digesters (devices that compost organic matter) and biodegradable packaging, and has moved to paper-less electronic invoice processing. Now with help from Pacific Gas and Electric Company (PG&E), they have applied this same intensity to their energy savings efforts.

New on the Menu: Solar Water Heating

When The Cheesecake Factory's Senior Energy Manager, Ed Bashay, was asked to assess the company's energy usage, he turned to PG&E, where he learned about the industry-specific consulting that PG&E's Food Service Technology Center (FSTC) offers to restaurants.

Like many companies today, The Cheesecake Factory was keenly interested in how to incorporate renewable energy into their existing restaurants. Using the company's Pleasanton and Walnut Creek restaurants as possible test cases, the FSTC conducted energy audits to see if either location was a good fit. Both restaurants were deemed too electricity-intensive for solar electric systems, so the team opted to investigate solar hot water heating systems instead. The Pleasanton location is a freestanding building, making it an ideal test site for this efficient water heating method.

Representatives from PG&E, the FSTC and a solar water heating system installer gave technical and financial presentations to The Cheesecake Factory's senior management to help Bashay make the case for the project. "The company saw the long term and wanted to do the right thing in 'greening' their system," Amin Delagah of the FSTC explained. "Having an unbiased third party in the meetings helped them see the whole picture."

Solar Water Heating Savings Results*

- PG&E incentive paid: **\$47,485**
- Annual gas savings: **3,704 therms**
- Annual reduction in carbon emissions: **43,337 pounds**



Being in Hot Water Pays Off

Rooftop solar collectors and an 800-gallon water storage tank were installed at the Pleasanton Cheesecake Factory. The solar water heating system uses an active closed loop system, which provides protection against freezing, overheating and water scaling. Fluid is pumped through the solar collectors and a heat exchanger transfers the collected heat to water in the tank. This preheated water is then fed into the primary boiler, reducing the energy needed to provide the facility with hot water. The installation included a control panel that allows real-time monitoring of the system's energy usage.

Taking a Top-to-Bottom Approach to Going Green

The energy audits that the FSTC conducted yielded recommendations for other energy efficiency measures beyond adding a solar water heating system to the roof of the Pleasanton restaurant. Monitoring the Walnut Creek restaurant's hot water and gas systems revealed leaks that were easily fixed. On the FSTC's advice, The Cheesecake Factory then undertook additional projects at that site and began implementing measures at its Pleasanton restaurant as well.

Some of these measures included installing low-wattage lighting, energy-efficient patio heating and variable-speed hood technology on exhaust hoods that run 24 hours a day. Throughout the process, FSTC advisors helped the company find products with the highest efficiency ratings, and that allowed them to maintain their superior standards of comfort and aesthetics.

Bashay says, "Our PG&E service representative and our contact at the PG&E Food Service Technology Center offered a wealth of knowledge and valuable resources. We were on the phone with them on a regular basis, running ideas by them about new technologies we wanted to try. We always got helpful answers."

Results That Last

The Cheesecake Factory earned a \$47,485 incentive from PG&E under the California Solar Initiative (CSI) Thermal Program. The solar water heating system saves an estimated 3,704 therms of natural gas per year, which keeps 43,337 pounds of carbon emissions out of the air annually.

The FSTC continues to help The Cheesecake Factory monitor and track its Pleasanton location's solar water heating system, providing a precise measure of the water temperature as it arrives from the city, after it is preheated, when it is in the main boiler, and when it is dispensed inside the restaurant. This allows The Cheesecake Factory to track and document system performance as well as energy and cost savings.

Next Steps

To learn more about how the California Solar Initiative Thermal Program and PG&E programs can help your business reduce energy consumption and costs, contact your PG&E Account Representative, call our **Business Customer Service Center** at 1-800 468 4743, or visit www.pge.com/solarsavings.

*Represents customer's results between 2009 and 2011
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