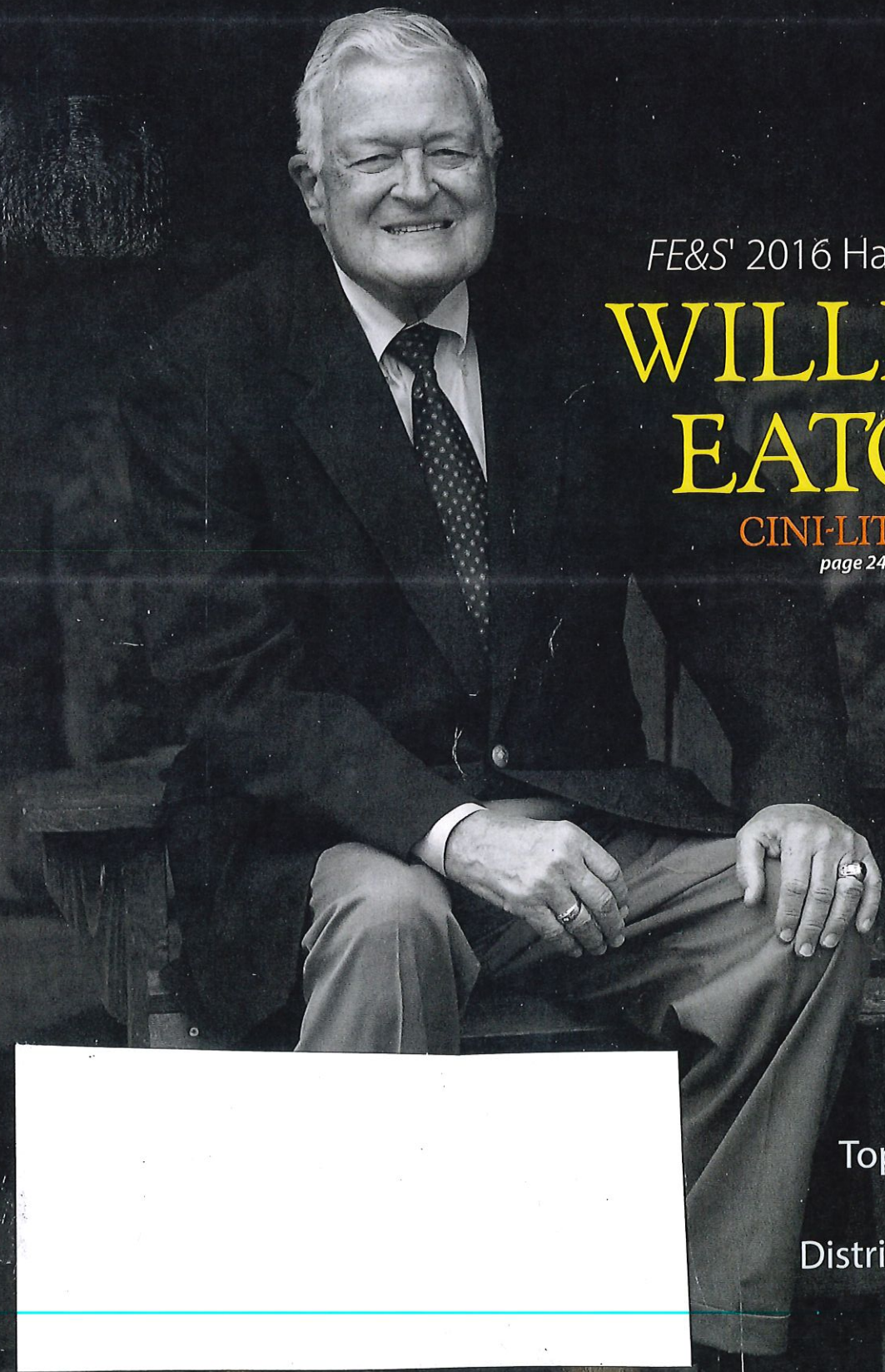


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# Foodservice

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By Amelia Levin, Contributing Editor

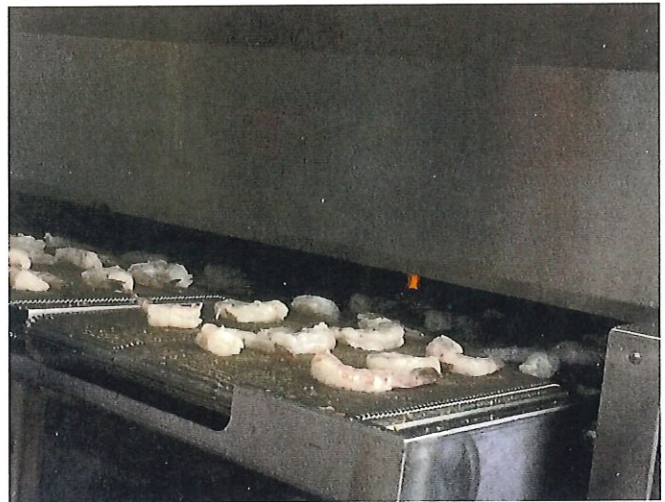
## PG&E Cookline Project Update: Gate Gourmet

**P**roducing 20,000 to 34,000 meals a day requires a lot of firepower, energy and labor. That's the reality Gate Gourmet faces on a daily basis. And thanks to its participation in an ongoing test program, the producer of airline catering and other provisioning services has been able to reduce energy consumption by 20 percent at its Southern California location.

Gate Gourmet is the latest participant in the Comprehensive Commercial Kitchen Equipment Retrofit (aka, "the cookline project"), a grant project awarded by the California Energy Commission to the PG&E Food Service Technology Center (FSTC) in San Ramon, Calif. As part of the project, the FSTC has teamed up with SoCalGas and San Diego Gas & Electric (SDG&E) to study various foodservice operations in a demonstration of high-efficiency commercial cooking equipment and kitchen system optimization in commercial foodservice.

Another participant in the study, the Werewolf Bar & Grill in San Diego, was able to demo newer, higher-efficiency equipment pieces — including a broiler, griddle, fryer and combi oven — at SDG&E's innovation center and test kitchen to fine-tune cooking processes before the equipment was installed at the restaurant. It's too soon to report measured energy savings, but check future issues of *FE&S* for the results.

After swapping five older equipment pieces with more energy- and performance-efficient models, Gate Gourmet was able to save 20 percent in total energy costs for the Southern California location alone, according to O'Rourke.



Gate Gourmet saved 20 percent in total energy costs by upgrading to more efficient equipment.

Due to Gate Gourmet's expansive volume the FSTC and SoCalGas team focused on just a handful of equipment items rather than replace every part of the equipment package, according to O'Rourke. The old equipment was removed in May of last year, at which point the FSTC began the metering and monitoring process, while SoCalGas and manufacturers trained the staff on the new equipment.

"We chose specific pieces to expose them to new technologies and new ways of cooking the same foods but with more efficiencies," says O'Rourke.

Aside from the energy savings, working with the chef and

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reconfiguring some of the cooking processes and platforms has also helped the kitchen team gain operational efficiencies, which has led to increased production and reduced labor and costs. In some cases, swapping out equipment even improved working conditions in the kitchen space.

In fact, the overall improvements were so impactful that Gate Gourmet plans to replicate some of the changes in other locations around the country, according to O'Rourke. "Gate Gourmet and the staff have been really happy with the changes," she adds. "The changes have made their jobs easier, and so they have really embraced the new equipment."

### From Kettle to Steamer

A major provider for various Asian airlines, Gate Gourmet looked to enhance its processes for cooking rice, a key staple for many meals on flights overseas. In fact, the caterer cooks nearly 10 different varieties of rice for its Asian-focused gourmet meals, from jasmine to different types of basmati, Arborio, brown and red among others.

Previously, the company had used a quartet of 16-quart rice cookers, but the FSTC swapped all of these out for a high-efficiency, 2-compartment steamer, saving 11.21 therms per day, or roughly 81 percent in energy usage.

Using just this steamer, Gate Gourmet staff now prepare larger batches with faster heat recovery in between the different types of rice. The company also hopes to add another steamer thanks to the improvement in cooking performance, according to O'Rourke.

"We cook over 50 different rice recipes, preparing 400 pounds of rice every morning," says Gate Gourmet Executive Chef Asif Ahmed. "We wanted to find a better solution than the rice cookers because they can be inconsistent and we end up wasting rice on occasion." Not to mention cooks must pay closer attention to the rice cookers versus the steamer, which has a set-it-and-forget-it timer option.

Ahmed's team cooks the different rice types according to their recipe in large batches, one after another, using only a couple of staff members rather than four or five. "We had to figure out how much time and water to add to the rice, but now that we have that down to a science, we're able to cook 5 pans of about 12 pounds each of the same rice in under 30 minutes," Ahmed explains.

In addition to saving on energy, water and labor, the new steamer also saves space. By replacing the large rice cookers with just one or two steamers, Gate Gourmet has freed up both floor and counter space in a kitchen where every square foot of space is invaluable, Ahmed says.



The double-stack hydrovection combi was a first for Gate Gourmet.

### Faster-Recovery Fryers

Replacing the old fryer with a newer, higher-efficiency one has helped Gate Gourmet save 31 percent on energy usage for this specific piece of equipment.

But perhaps even more significant, O'Rourke says, was the dramatic reduction in oil changing as a result. Using an older model without filtration, the staff previously changed 45 pounds of oil every single day. Now, with the newer, filtration-equipped fryer, staff change the oil every two or three days. This amounted to a whopping \$720 per month for just one fryer (the kitchen uses two total).

"They are also seeing better quality food and a faster recovery time, so they're able to cook more batches fresh but in the same amount of time," O'Rourke says.

At Gate Gourmet, menus change every month (Ahmed maintains 2,000 recipes at one time), with new cycles and new dishes every month to keep frequent fliers excited about their meals during business and international travel. As such, the company chose to select equipment with more straightforward controls to prevent complications from overprogramming. However, O'Rourke says, staff have responded favorably to the more automated fryer.

The fryers are also used to feed the staff. "We feed our employees three meals a day, so we're using the fryers quite a bit," Ahmed says. He separates the three units based on the type of foods being fried to maintain freshness and oil quality.

Like the rest of the equipment changes, the cookline project demonstrates that upgrading to newer, higher-efficiency models can not only save energy and costs, but in many cases can also improve cooking performance and operational efficiencies.

### Convection Charbroiling

By swapping out a 4-foot traditional charbroiler for a higher-efficiency, conveyor-style alternative, Gate Gourmet was able to save 17 percent on energy use while also increasing throughput and improving air temperature and quality for staff in the kitchen.

Prior to the equipment changes, Gate Gourmet's kitchen ran a pair of 72-inch open-flame charbroilers nearly 24 hours a day, creating a hotter, greasier workspace for broiler operators and the kitchen in general. The new conveyor model, with its enclosed cabinet, helps keep the heat inside the unit, creating a safer and more comfortable workspace for the staff and adding less pressure to the HVAC units, especially on hotter days, O'Rourke says.

In addition, cooking performance and quality improved, allowing Ahmed to use the unit for a wider variety of foods that could be cooked faster and in larger batches.

"We use the broiler for grilling 50 different vegetables, and the employees love it because they can just set the food on a tray and send it through the conveyor," Ahmed explains.

That's 800 pieces of tomato in one morning alone. "The broiler creates nice grill marks with better consistency, and we can use it for burgers, proteins and other foods."

### Right-Sized Ranges

The FSTC did not collect baseline data for the existing range, so there is no comparison data available; however, by replacing the previous six-burner unit with a higher-efficiency, four-burner stockpot unit equipped with turbo pots, Gate Gourmet has seen an improvement in cooking consistency and throughput, O'Rourke says.

The swap made sense, seeing as the large pots and pans used for the previous gas burner did not quite fit the smaller size of the individual burners.

"We pointed out the perfect size — a little wider and shorter for better consistency when cooking sauces and braising," says Ahmed. "More heat is now going into the pot, rather than escaping out to the sides. We can cook in 2-, 5-, 10-pound batches with the same consistency throughout."

### Introductory Combi

The FSTC introduced a hydrovection unit as an introduction to combi-style cooking. While no apples-to-apples comparison could be made since the double-stack hydrovection replaced a single-cavity convection oven, the swap did save labor thanks to an automatic cleaning function.

In addition, the introduction of steam helped retain moisture for baked chicken, fish, casseroles and other heat-sensitive dishes, improving the quality of the food in some cases.

Gate Gourmet has since introduced a traditional combi oven to support its needs for more controlled, combination cooking.

"Everything we cook we have to finish in an oven," Ahmed says. "Even if we are roasting or searing or braising food, including vegetables, we now finish everything in the combi for consistent, safe temperatures." He notes that the self-cleaning capability is an added plus.

Like the rest of the equipment changes, the cookline project demonstrates that upgrading to newer, higher-efficiency models can not only save energy and costs, but in many cases can also improve cooking performance and operational efficiencies. This, in turn, can have dramatic improvements on labor and other related costs.

Stay tuned for more news about the FSTC's cookline project, including updates from Werewolf, Gate Gourmet and other operations including the DoubleTree Hotel and the University of California, San Francisco. **FE&S**