

Seems like everybody collects something. Some people collect baseball cards, some people collect fine china, and some of us just collect parking tickets. The engineers at the Food Service Technology Center spend a lot of time in restaurants collecting data, which they study to find out how appliances use energy. You might think this is twisted, and maybe its just an “engineer thing,” but collecting data is actually fun because each appliance tells a story and quite often those stories are surprising. For this edition of the Green Sheet, we'd like to share one of those surprising stories we've come across – a story with a moral for every operator out there.

ONCE UPON A TIME

Our story begins with a common appliance found in many restaurants – the steamer. For many years all steamers included a boiler, a water line, and a drain line. Then, just a few years ago, a new type of steamer entered the marketplace that was simpler. Gone were the boiler, water line, and drain line and end users fell in love with the lower maintenance requirements for these new “boilerless” steamers. These units are now fully accepted in the marketplace and have even earned an Energy Star rating because they use much less energy than the classic boiler based steamers. The FSTC engineers have loads of lab data on these new steamers but, never being satisfied, they set out to monitor some boilerbased and boilerless steamers in actual restaurants where “human factors” can have a significant impact on actual appliance energy use. What they found surprised them.

THE TEST

The FSTC engineers wanted to start by gathering info on a classic boiler-based steamer so they located a three-pan unit at a typical full service restaurant. The staff was using this steamer for about 16 hours a day and the kitchen was manned in two eight-hour shifts. The engineers hooked up some data loggers, made sure they were getting readings on both the energy and water use and then headed back to the office. They didn't make a big deal about the data gathering so that the staff would feel comfortable and use the steamer as they always did. A couple of weeks later, the engineers returned, downloaded their loggers and began crunching the numbers.

THE SURPRISE

Very quickly, the FSTC engineers noticed a difference between the way the steamer used energy and water during the first and the second shifts. During the morning shift, the steamer used 60% more energy and twice as much water even though the hours of use and amount of food cooked were about the same for each shift. What was going on? The engineers went back to the restaurant and observed how the cooks were using the steamer. The morning cook was turning the controls to the “manual” setting, which overrides the steamer's timer and ensures that the unit never turns off. The afternoon cook was using the timer. How did this affect the bottom line? The morning cook was costing the restaurant about \$1,300 a year more in energy and \$600 in water charges.

These energy saving tips are offered by the Food Service Technology Center (FSTC), an unbiased food service resource center located in San Ramon, CA and funded by California utility ratepayers under the auspices of the California Public Utilities Commission. For more information on the FSTC and for our schedule of free energy efficiency seminars, please visit our website at www.fishnick.com.