FSTC GREEN SHEET

HOT TIPS to Cool Down Your Kitchen and Cut Your Energy Use

It's summer, which means it's time to stay up later, eat watermelon, drink lemonade, and generally have more fun! But summer brings with it two downsides for your restaurant – hotter kitchens and higher energy prices. Statewide, electricity use goes way up in the summer as we all switch on our air conditioners. This means higher prices for both the energy you consume and the "demand charge" you pay based on the power needs of your restaurant. Here are some tips and tricks that you can use to help lower your kitchen temperatures and your energy bills.

Kitchen Ventilation

Your kitchen exhaust hoods are supposed to capture and contain the grease and heat produced by your cook line. If your hoods aren't working correctly, then you end up with an extra hot kitchen. A couple of common things that can cause your hoods to fail include broken exhaust fans and ducts and exhaust fans that are clogged with grease. Your makeup air supply (air that is supplied to the kitchen to make-up for the air exhausted) also has a dramatic affect on your hood performance. Too much or too little make-up air will cause the hood to fail as will make-up air that is blowing directly on the front of the exhaust hood. If you can see smoke or steam spilling out of the front of your hood, then you are also spilling heat into your kitchen and it's time to call a mechanical contractor.

Some things they can do to improve your kitchen ventilation include cleaning and repairing those ducts and fans, replacing directional, 4-way, make-up air diffusers with perforated diffusers, rebalancing the make-up air supply with the exhaust air and, in some cases, adding side panels to the exhaust hoods. Tune up your kitchen ventilation and you'll benefit from a cooler kitchen and a happier staff. For more information on how to improve your kitchen ventilation system, you can download the *Commercial Kitchen Ventilation Design Guide* from the Food Service Technology Center website at www.Fishnick.com.

Evaporative Coolers

Many kitchens rely on evaporative coolers to provide make-up air to the exhaust hoods. Evaporative cooling is a very effective, low-cost way to bring cool air into your hot kitchen but it only works if the unit is in very good order with water flowing onto clean and undamaged pads. So, repair and maintain your evaporative coolers and make sure that there is not too much water flowing onto those pads – they should be damp but not saturated.

Plug loads

Pay careful attention to your kitchen "plug loads". Turn off your holding cabinets, coffee pot warmers, conveyor toasters, steam tables, plate and food warmers, and heat lamps when they are not needed, for instance during the lull time between lunch and dinner. Most of these electric loads are not under the exhaust hoods so all of their waste heat goes directly to warming up your kitchen. For example, it takes over a ton of air conditioning to offset the waste heat generated by a standard conveyor toaster. Also, the electricity used by all these different appliances can add up to some pretty big dollars, so tightening up control of your plug loads can be very lucrative!

Ice machines

If your ice machine is cranking away during the afternoon hours, there is a strong possibility that it is driving up your restaurant's "demand charge." And, if your ice machine is a packaged unit, meaning the condenser is mounted on top of the icemaker instead of outside the building, it is also generating a lot of heat in your kitchen. You can work around these challenges by moving your ice production to the off-peak period during the nighttime and morning hours and by turning off the ice machine during the peak period. In order to pull this trick off, your ice machine must have enough capacity to float through that peak period and you need some way to automatically control the icemaker like an energy management system or time clock. If your current ice machine is ready for replacement, then consider over-sizing the new machine to get extra capacity and be sure to check out the energy efficient purchasing recommendations and savings calculator created by the Federal Energy Management Program

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.