
7 STEPS TO 'POWER' YOUR RESTAURANT BUSINESS

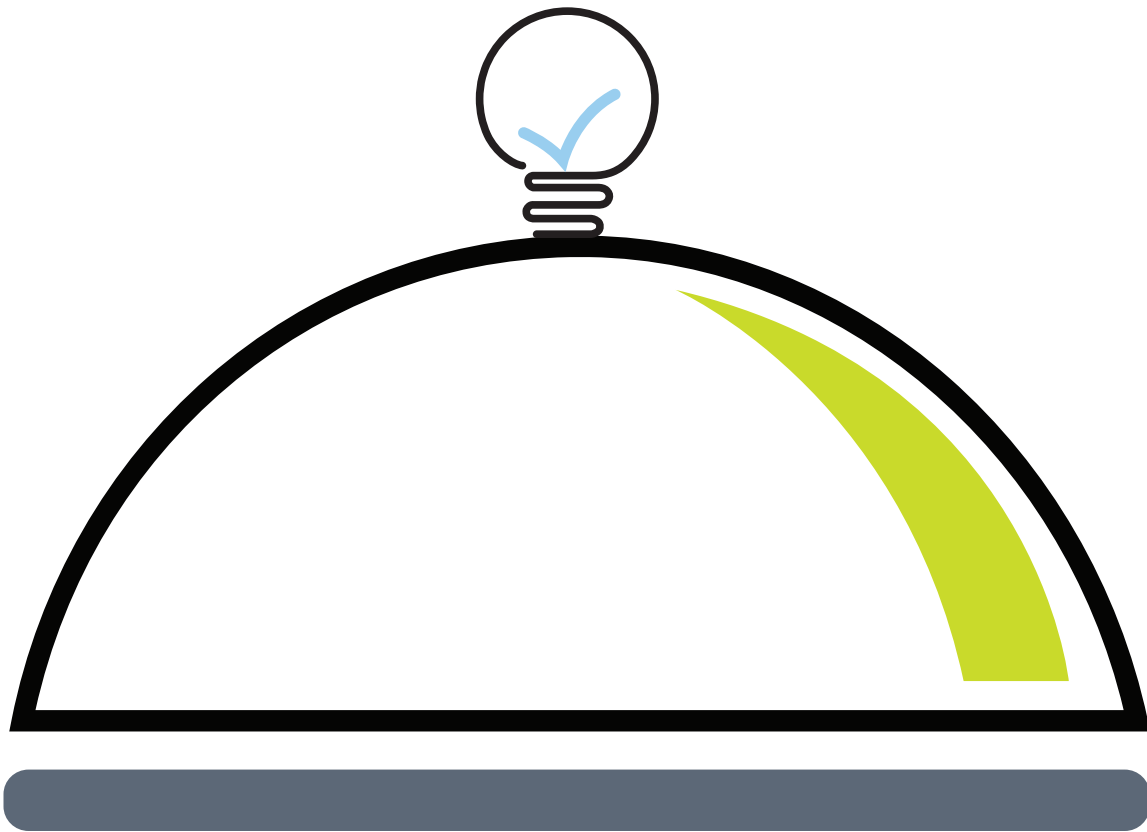




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Introduction

Energy is one of the top 3 costs for a restaurant operator, and also the fastest growing. However, it is something that restaurant operators, COOs & CFOs struggle the most to get a handle on. Restaurant sites normally would have site-level metering for electricity, gas and water, but that too belongs to the utility service providers for their billing requirements. These meters provide consumption data that is aggregated over a month, and thus are not able to give visibility on the day-to-day leakages that would have happened at the site. The impact of variables like business volume, weather, off days, etc. is also completely missed.

This paper talks about a 7-step easy-to-implement method to save energy costs without any equipment upgrades, retrofits, or overhauls. The proposed steps provide a framework for launching a data-driven continuous improvement program with no capital expenditure. All that is needed are analysis and pattern detection skills. Using the Service Window™ framework outlined below, it is possible to easily align business intensity (guest count, sales, etc.) with the restaurant's energy intensity (kWh) to improve bottom line, especially when same-store sales (sales of stores opened for at least one year) is flat to low.

Analyzing Restaurant Types

An analysis of various restaurant types shows the ways in which restaurant operations can be transformed by evaluating energy consumption patterns. This is especially true for restaurants that have a high staff turnover, as it is difficult to implement training program for the staff in short time spans, and it is also true for those that have low appetite for capital investment in efficiency enhancement. Also, there are differences in the way restaurant policies are implemented.

Energy consumption patterns across restaurants vary and are dependent on multiple factors. These could be types of consumption equipment and their condition (age, maintenance, technology, etc.), sales turnover and footfalls, seasonality, weather, type of retail outlet (layout, size, orientation), etc.

There are large variations in energy consumption patterns in a restaurant within a working day as well as during the week and across months. While all these complexities exist at each individual site, the energy management challenge increases manifold when power has to be managed across a network or a chain involving several restaurants.

Looking only at the power bill at the end of a month does not help a restaurant operator identify savings opportunities, because there is no clarity on when and where the energy leakages have happened, as the consumption is mapped across a whole month. In fact, even at a daily consolidation level, most of the opportunities get hidden because the restaurant's consumption pattern is different at different times of the day.

Restaurants can follow the 7-step framework to save up to 15% in energy costs without making any heavy investments in equipment upgrade, according to an internal EcoEnergy study on Restaurant Energy efficiency.



The Power of Seven

One of the key things that the restaurant operator needs to focus on, is to ensure that the energy consumption (energy intensity) in his restaurant is aligned to business volume (business intensity), and that there is minimal mismatch between need and consumption.

Here are the 7 simple but effective steps that operators can take to identify such mismatches:

1. Know your restaurant service windows

Every restaurant goes through a varied business load on any given day or week. You need to know when your crew sets up the restaurant, when they shut it down, the lean business days within a week and lean hours within a day. One way to analyze the consumption pattern is to break it down to a Service Window™ level. Service windows are uniquely identifiable and can distinguish energy consumption profile of a restaurant which is fairly repeatable day after day. Some examples of the service windows would be: crew setup, pre-breakfast, breakfast, lunch, post lunch, dinner, crew shutdown, no operation, etc. And then, one can define specific time slots for each of these. These service windows are a result of the business volume, weather, equipment usage, menu, etc. and can be 8-10 in number for a typical restaurant.

2. Outline your restaurant behavior for service windows

Once the service windows are identified, it is important to develop an outline of policies to be followed in each of these, keeping in mind food safety and customer comfort. Knowing a little bit about your ovens, grills, fryers, etc. and a quick check on the lighting fixtures can help one understand which are required only across some of the service windows. With this kind of categorization, you would get a good perspective as to when you can consume more and when you will be consuming lower than the average.

3. Controlling kitchen equipment during setup or shutdown

Restaurant operators need to continuously strike a balance between having equipment in ready-to-cook mode and making sure it does not inflate their energy bills. Analyzing the energy consumption pattern of critical high impact equipment helps control schedules during setup, shutdown, no-operation and lean periods. Simple steps like putting equipment on standby, putting down the platen of grills, covering the fryer vats, etc. can easily save hundreds of dollars in energy costs.

4. Control HVAC across service windows

Dining area temperature control is a critical aspect of restaurant business because it impacts customer comfort. Similarly, the kitchen area temperature is critical from an employee health and safety perspective. Temperature deviations are common because of staff resetting thermostats due to weather, not using setbacks for lean business, setup and no-operations service windows, erratic fire-up schedules, and equipment malfunctions.

These deviations can inflate the monthly bill by 5-6%. It is important to have a definition of set points for the various service windows as well as have a clear fire-up and fire-down schedule for the heating, ventilation, and air-conditioning (HVAC) units aligned to various service windows.

5. Control restaurant lighting

Restaurants use a variety of lighting for various purposes. Not only does the lighting requirement inside the restaurant change during the day, but also certain types of lighting like signage and parking are not required at all. Having a clear plan for scheduling the lights across the service windows can easily save 3-4% on energy bills while it helps bring down restaurant cooling load on account of the lesser heat generated by the lamps.

6. Continuously benchmark and improve

Restaurant operators often struggle to benchmark their restaurants with respect to energy usage, due to the many variables involved - business volumes, menus offered, schedules, age of the restaurants, weather, etc. Comparative analysis of their consumption in the different service windows can help identify operational issues.

7. Make staff Service Window™ "energy aware"

With the high staff churn rates in the restaurants, good energy-saving behavior and practices need to be constantly reinforced. Creating easy-to-understand energy dashboards based on service windows helps in training the staff to analyze the service windows and identify where the leakages have been. Some of the easy-to-act suggestions can be: keep the walk-in freezer door shut when not in use, turn off dining areas lights immediately on business hour closure, etc.



Food For Thought

Apart from direct energy consumption savings, establishing a good control on energy usage simplifies management of food safety compliance, reduces equipment downtime and operating costs, increases equipment life, optimizes utility procurement, etc. All of these go a long way in sustaining market leadership, competitiveness and profitability.

Apart from improvement in profitability, these can create a positive brand impression that would appeal to an increasingly environment-friendly consumer and thus enhance SSS!

About the Author



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HAPS Dhillon heads EcoEnergy's practice that is focused on creating Energy Management and Sustainability solutions for the hospitality and banking sectors. As part of EcoEnergy's Senior Leadership Team, HAPS is responsible for global P&L for these segments. He holds an undergraduate degree in Mechanical Engineering and is a post-graduate in Business Administration from the Indian Institute of Management, Lucknow. HAPS has extensive experience in operational cost reduction, Analytics, Energy Efficiency, M2M, Managed Services, with deep skills in solution architecting, delivery and product development.



About EcoEnergy

EcoEnergy's award-winning connected services combine the power of its Technology Platform & the agility of its Command Center with the expertise of its industry experts and analysts to deliver desired business outcomes - such as energy efficiency and occupancy comfort. Forever pushing the edge of the learning curve, EcoEnergy has built strong expertise across industries and employs only the latest technologies to deliver transformative results.

EcoEnergy is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.