

The Challenge

A family dining restaurant franchisee was looking for a solution to tackle their high-energy consumption issues. With energy bills over \$6,000 the owner was looking for an energy management system to suit the needs of their east and west coast locations.

The Solution

The Small Box Energy platform chameleon™ was installed in 12 locations. Six of the locations were located in the east coast while the remaining 6 were located in the west coast, this was done deliberately to account for climate differences geographically. The duration of the data collection was 90 days, this data was used to compare with kWh consumption the same time the year prior. The energy management system was comprised of adaptive walk-in controllers that defrost on a needs base rather than time based, wireless thermostats that can be controlled, schedule set, and locked remotely, wireless temperature sensors/receivers that continuously monitor and report temperatures of a designated space, a lighting control panel, and a programable web server which allows the data received to be communicated up to the cloud and enables all the equipment to be altered remotely.

The Results

Reduction in energy was acheived at 9 out of 12 locations monitored. All of the East coast loctions saw a savings while 3 of the 6 west coast locations did not see a savings due to store equipment malfunctions. The data from those locations were removed due to store equipment malfunctions and no repairs made to said equipment. Highlights from the results include:

- East Coast locations saw an average of 10% monthly energy reduction, and an annual savings of \$13,572 on average.
- West Coast locations saw an average of 11% monthly energy reduction, and an annual savings of \$6,096 on average.

	West Coast Locations	East Coast Locations
Energy Reduction Monthly	11%	10%
Kilowatt Reduction Monthly	13,278	12,986
Cost Savings Monthly	\$508	\$1,131
Annual Cost Savings	\$6096	\$13,572

chameleon also helped the fanchisee save in other ways beyond energy reduction.

- Inventory loss prevention and food safety:
 - The system sent alarms that the walk-in freezer was not reaching it's set temperature and a technician was called on site to fix the unit. The unit was fixed and functioning properly, preventing any loss in quality of food, or food loss.
- Early Equipment Diagnostics:
 - The chameleon system alerted the manager on duty that the HVAC unit was not functioning properly in that it was blowing warm air when the unit was calling for cooling. A tech was dispatched and unit started performing as expected, eliminating the situation where the unit would have failed, leading to a more costly repair and customer discomfort.



6 Locations



\$19,668 Savings Annually



That's 12,292 Pancakes