

**CUSTOMER SUCCESS**

Convenience Store Energy Solution

Saving the Planet and Improving Profits,
One Store at a Time

Convenience Store Energy Solution

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Convenience stores use more energy than any other type of commercial building, consuming as much as 94 kilowatt-hours per square foot. The additional energy demands of outdoor canopy lighting, refrigeration units, and always hot ready-to-eat food trays, it nearly doubles the kilowatt-hours per square foot. Since convenience stores operate 24-hours a day, energy management is the ideal solution. ”

SITUATION

With aggressive growth plans, this multi-state convenience store chain of 225 locations, needed to keep their eye on every aspect from asset operations to energy consumption including HVAC, refrigeration, food service, equipment, fuel pumps, and lighting controls without adding additional manpower. The rural convenience stores provided customers with fuel stations, ready-to-eat food service areas, both open-air and closed-air refrigeration units, and a quick-serve restaurant (QSR).

Rising energy costs and a lack of visibility into facility equipment were dissolving profits at this mid-size rural convenience store chain. They needed simple monitoring, reporting, and real-time remote visibility into each location as they continued to acquire new sites aggressively.

Having real-time visibility into an issue on their refrigeration equipment was critical since problems would often go undetected for hours by local staff, causing lost revenue on high margin products. A motivating focus was around real-time refrigeration controls. With aging, equipment temperature fluctuations could go undetected for hours by onsite employees. The result was not only a substantial revenue loss on high margin products but an unpleasant and memorable guest experience.

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HVAC typically represents the most significant single source of energy consumption.

CHALLENGE

After conducting a comprehensive energy evaluation, our convenience store partner determined they needed to more effectively manage their energy consumption and the related assets, which represent the most significant portion of their operating costs.

The Facility Managers knew they had some challenges but discovered during the evaluation that was more significant than they could have imagined. Their energy use, operational execution, and company policies were negatively affecting the 24/7 runtime of HVAC systems, lights, refrigeration, the ready-to-eat food service area, and the instore QSR. A multitude of uncovered issues had existed for months or even years before the evaluation.

In commercial buildings, at 44% of total energy, HVAC typically represents the most significant single source of energy consumption. Convenience stores have significantly more infrastructure, and our client also needed the energy consumption monitored on fuel pumps, open-air and closed refrigeration coolers, ice freezers, ice coolers, food service warming tables, and lighting controls.



HVAC

Their HVAC infrastructure was not being managed. The units had no temperature adjustment limits or setback controls. Often this resulted in units literally freezing, and while defrosting, the overflowing drip pans caused substantial damage to building rooftops, ceilings, flooring, fixtures, and merchandise. Many of the multi-stage systems were actually wired to operate in the second stage only. Several rooftop units were simply not functioning correctly. They identified extensive waste in operating and on-demand power, prompting the need for an automated system and upgrading existing equipment.



MAINTAINING FOOD TEMPERATURES

When refrigeration and freezers fail, or as is frequently the case, the doors are simply left open; the financial burden can be significant. In the most extreme case, all consumable products are discarded, resulting in thousands of dollars in revenue and profit loss. Similarly, when a ready-to-eat foodservice warming tray temperature is not maintained, the store incurs not only product loss, but the additional risk of guests contracting a foodborne illness. Finally, employees often inappropriately leave the equipment on during non-peak hours, adding to already high energy costs to a 24-hour location. ENTOUCH can monitor usage and monitor temperature settings.



LIGHTING

Lighting is a concern for convenience stores for several critical business reasons. A well-lit store signals to customers the location is both open and safe. Ensuring that signage and canopy lighting is illuminated is vital to communicate these messages to passing customers. It is imperative to ensure the store's lighting can be programmed to be on at dusk and off at dawn so that the right balance between being inviting and minimizing total energy cost is achieved.



FUEL IS STILL THE LIFEBLOOD

Our convenience store partner depended on fuel sales for approximately 80% of their revenue and foot traffic. If fuel pumps are not operating, the site will experience a drastic decline in revenue inside the store and negative customer experience.

It was apparent our client needed a holistic energy savings partner with a proven implementation track record that included:

Best-in-Class Equipment. Eliminating the need for multiple manufacturers while evaluating equipment durability and value. This would reduce any future warranty claims, increase productivity, and better manage valuable company time.

Installation and Retrofitting of Equipment. Each system might require a different installation skillset. They were confident they needed trained and qualified technicians with a track record of installing hundreds or thousands of sites with exceptional quality, on time, and budget.

Enterprise-level View. With hundreds of locations, the centralized cloud-based view of their operations and equipment would be critical. The team was underresourced and over-burdened.

They needed automated fault detection to identify underperforming sites and assets so that they could target their scarce resources.

Optimization. Once our convenience store customer had control of their operating environment, they understood that monitoring and optimizing the performance of the assets and obtaining verifiable results would drive the best return on their investment and would be critical to their executive team.



GUARANTEED ROI

24x7x365

MONITORING



QUARTERLY BUSINESS REVIEWS

SOLUTION

The convenience store leadership selected ENTOUCH.one, ENTOUCH.cloud and ENTOUCH.360™ and executed a value assessment at two locations during the summer of 2015. After initial success, more sites were added by the end of the year.

Each location was outfitted with the patented ENTOUCH.one technology stack. ENTOUCH.one is a suite of fit for purpose devices that collects all the data from the facility's systems needed to transform our convenience store partner's operations digitally and to facilitate better decisions. This ecosystem included our controller – the smart thermostat, lighting and load control, utility-grade energy meters, and wireless sensors to monitor everything from in-room temperature to all of there refrigeration and warming assets.

Each ENTOUCH.one location communicated with the ENTOUCH.cloud. ENTOUCH.cloud took their raw facilities data, performed predictive analytics, and converted it into actionable intelligence. This is augmented by a robust set of reports and tools that prioritized their information to guide their actions. This became a force multiplier for their existing facilities team and allowed them to efficiently spend their maintenance dollars with actual and historical device performance data to focus their resources on assets that needed attention. From a single point, they were able to manage their locations, schedule events across geographies, quickly visualize data allowing them to address both immediate critical circumstances and plan for longer-term maintenance.

Finally and most importantly, they leverage ENTOUCH.360™ our best in class service to ensure their buildings were comfortable, running well, and within their corporate standards. They received a guaranteed ROI and a life of the partnership hardware warranty, a dedicated customer success representative, 24x7x365 monitoring and customer support for technical and comfort issues, and in-depth quarterly business reviews that expanded their savings and improved their ROI.

During the installation process, ENTOUCH created a complete inventory of all of their assets by location, make, and model. This combined with customized reports, enabled ENTOUCH to be their data scientist, letting them know which assets were underperforming, the cost of inaction, and where to best allocate their maintenance and capital dollars for maximum impact.

Because ENTOUCH measures energy usage in conjunction with HVAC output, ENTOUCH.360™ helped facility managers uncover issues with rooftop HVAC units. The facilities are also able to see the energy usage impacts of foodservice areas being left on during non-peak periods. Lighting loads were connected to lighting controls, automating their schedules. After ENTOUCH.360™ was implemented in the convenience store, management could compare sub-load level energy costs per square foot with other locations, ensuring that facilities are running at optimal levels.



SAVED

6%

ENTIRE YEAR ENERGY

10%

HVAC ENERGY USAGE

RESULTS

Each facility was able to achieve 6% in energy savings during an entire year with a 10% savings in HVAC energy usage.

Moreover, critical operational benefits included reduced HVAC downtime, enhanced visibility into equipment and operations, and the ability to audit vendor compliance. They also received validation that maintenance issues were resolved after each truck-roll. On several occasions, the ENTOUCH monitoring of the refrigerators and freezers resulted in early warning of failure allowing the customer to save significant merchandise in each instance. As confidence grew in the ENTOUCH data and monitoring, the customer used ENTOUCH data to influence the design of future stores and to audit the success of other energy-saving and comfort-related projects. The operational data provided by ENTOUCH became central to their store operations and helpful in future store design concepts.

ABOUT ENTOUCH

Founded in Dallas, Texas, in 2008, ENTOUCH is the pioneer in energy management as a service and smart building technology. Our turnkey solution digitally transforms and optimizes operations while reducing energy usage to drive profitability for multisite businesses. We are the only provider that owns our entire technology stack and can take over heterogeneous systems and manage them from a single cloud solution. We lead the industry in speed and quality of deployment and the ENTOUCH.360 service has earned a 100% renewal rate.

To learn more about ENTOUCH's smart building solutions, visit www.ENTOUCHcontrols.com