

Restaurant & Entertainment Complex

National indoor chain improves profits by reducing its energy spend

Known for its sports-themed arcade games, this restaurant and entertainment customer operates over 100 facilities across the U.S. Each location features a complex environment that includes a full-service kitchen, dining and electronic gaming areas, and private event rooms. The customer was interested in reducing its energy spend but needed a low-cost solution that would not require a lot of day-to-day support from its lean facility operations team. The team realized it needed better visibility and insights into the performance and uptime of its existing HVAC rooftop units (RTUs), and they wanted a simple way to remotely monitor and analyze the equipment to control energy use.

How Encycle is helping a national restaurant and entertainment chain save over \$500,000 annually on HVAC-related energy costs.

Customer Challenge

- Customer wanted to reduce their HVAC energy spend and usage, but had not found an effective solution that was simple and easy to use.
- Each location featured a kitchen with heat-producing equipment as well as large open areas where guests expect cool comfort during hot summer months.
- Lack of insight and visibility into the performance of existing HVAC equipment was limiting the facility management team's ability to anticipate, prioritize, and budget for maintenance activities.
- Without remote access and control of RTUs by the corporate team, on-site staff were overriding corporate setpoints, resulting in excessive energy consumption and demand, and delayed discovery of mechanical maintenance issues needing attention.

Swarm Logic® Solution

The customer elected to deploy Encycle's Swarm Logic® cloud-based technology at 69 initial sites. This allowed the customer to:

- Achieve a low cost of deployment.
- Realize attractive and almost immediate financial payback period.
- Leverage utility incentives and demand response programs in certain markets to further reduce program costs.
- Gain insight into RTU operation to help diagnose the root cause of equipment issues and stay informed on maintenance decisions.
- Access many of the benefits of a building automation system (BAS) by coupling Swarm Logic with commercially available smart thermostats. This "Virtual BAS™" comes at a fraction of the cost of a traditional building automation system, and is much simpler to install, operate and maintain.

The quick and seamless integration enabled each of the site's RTUs to operate as part of a networked system, responding more efficiently to changing conditions such as outdoor temperature and building occupancy, thereby apportioning energy consumption more logically. The customer appreciated how the Encycle team was able to rapidly adapt to changes in operating processes that are implemented on a routine basis. This approach assures that Swarm Logic is continually delivering the desired results while minimizing time and effort required



from the corporate and site staff. Routine training by Encycle added yet another layer of ease while demonstrating its commitment to supporting customers on an ongoing basis.

Swarm Logic Results

To ensure the customer received the full benefits of Swarm Logic across their locations, Encycle partnered with the customer's engineering firm to incorporate our cloud-based technology into the existing design of their facilities. These energy cost savings were significant enough to use a portion of the improved profits to award annual bonuses to a number of site managers.

The facilities management team also gained access to valuable analytics on the performance of their HVAC system, including early indications as to when an RTU is not performing as expected. This information helps the team and its HVAC contractors to direct maintenance efforts where they will have the greatest impact, leading to reduced repair costs.

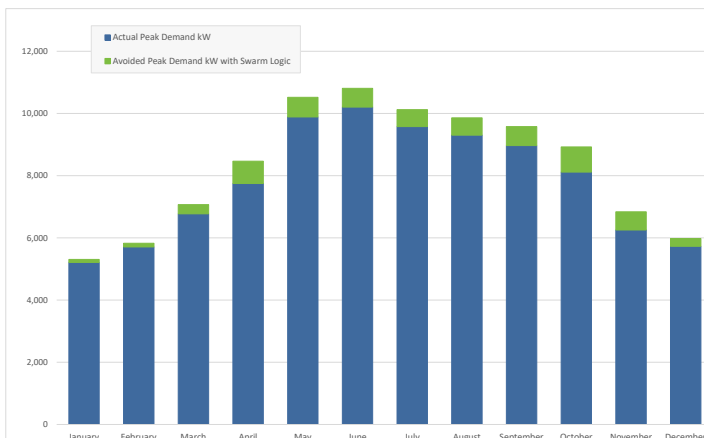
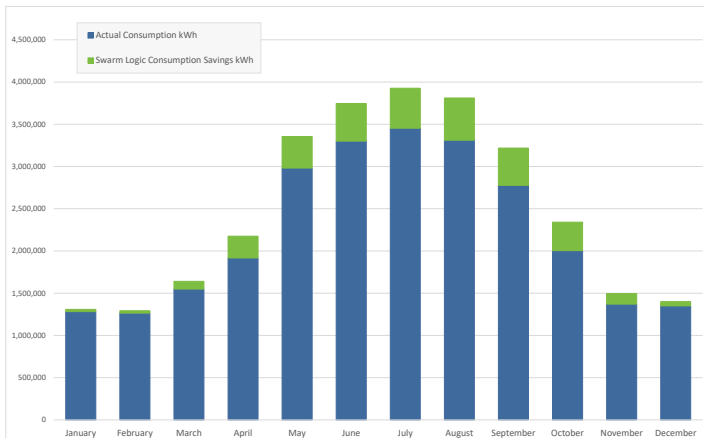
Further, the application of Swarm Logic has enabled the customer to participate in Demand Response programs.

Swarm Deployment Update

Following the successful implementation of Swarm Logic across 69 of its restaurant and entertainment sites, Encycle's customer has deployed Swarm Logic to all of its 100+ locations, further amplifying its energy cost savings and sustainability efforts.

The Numbers

- Average per-site savings of \$4,500 annually
- Across 100+ locations:
 - Annual energy savings exceeding \$500,000
 - Reduced total HVAC electric consumption by more than 5 million kWh annually
 - Lowered peak electric demand by an average of 800 kW per month
 - Reduced greenhouse gas emissions by 3,900 tons



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