

CASE STUDY SWARM LOGIC

HOW ENCYCLE HELPED A LARGE, MULTI-FACILITY SCHOOL REDUCE AVERAGE MONTHLY **ENERGY CONSUMPTION BY 28%**, RESULTING IN SIGNIFICANT UTILITY BILL SAVINGS.



EDUCATION FACILITY

PRIVATE MULTI-BUILDING HIGH SCHOOL

Originally founded in 2000, this California college preparatory school is situated on a 30-acre campus and features multiple academic buildings, a library, a gymnasium, a 30,000-square-foot arts facility, a new state-of-the-art science center, and various outdoor athletic fields.

Being a private school system that relies primarily on tuition fees to operate, this customer sought ways to reduce their energy costs without making a large initial investment or placing a significant new burden on their facility staff.

Sustainability is a key tenet of the school and students engage in community service and environmental stewardship programs, which made Swarm Logic[®] technology a natural fit. The deployment maximized the energy efficiency of the school's HVAC operations and resulted in utility bill savings that could go back to the students through increased program budgets.





CASE STUDY

CUSTOMER CHALLENGES

- Automate and simplify demand response (DR) participation to unlock new revenue streams while maintaining a comfortable environment for students.
- Enable remote, decentralized load management for easy scheduling and energy consumption reduction.
- Provide a remote monitoring platform to track electricity usage and demand response performance.
- Access to real-time and historical load data to help identify mechanical issues and improve maintenance decisions.
- Achieve a low cost of deployment that would not overburden school staff members.

SWARM LOGIC RESULTS

In early conversations with Encycle, the school learned about the incentives available through utility DR programs. The combination of reducing their electric spend and the ability to add a new source of revenue proved to be a compelling option to consider.

With Encycle's help, the school enrolled in an automated demand response (AutoDR) program and Swarm DR[™] allowed them to earn revenue by effectively participating in DR events without manually changing settings within their existing energy management system. The HVAC system continues to provide some cooling, so that a reasonably comfortable environment is maintained.

In addition to the DR revenue, the school realized over \$24,000 in annual energy cost savings resulting from reductions in electric consumption and demand with Swarm Logic optimization. What is more impressive, these results were on top of the significant savings that the campus had already achieved with its comprehensive energy management system.

Encycle's web-based platform, Swarm Portal™, provides real-time and historical load data to help customers identify malfunctioning equipment and optimize HVAC load schedules, ultimately allowing facility managers to make informed maintenance decisions and implement cost savings strategies.

ENCYCLE'S SWARM LOGIC SOLUTION

Encycle integrated Swarm Logic technology to control 26 rooftop HVAC units, capturing energy savings 24/7/365, and enabling automated load shed during events when DR dispatch notifications are received from the utility. DR performance data was easily monitored by the school's facility management in Swarm Portal.

"ENCYCLE'S SWARM LOGIC SOLUTION PROVIDED AN EFFICIENT WAY TO MONITOR AND CONTROL PEAK CONSUMPTION AND EFFECTIVELY CLIP THE HIGH DEMAND CHARGES, ESPECIALLY DURING THE SUMMER RATE MONTHS OF TOU."

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