



ENCYCLE

INTELLIGENT BUILDINGS MADE EASY

Helping companies attain their **energy efficiency** and **decarbonization** goals with clarity and simplicity

ENCYCLE CAPABILITIES OVERVIEW

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WE'RE TAKING THE HVAC INDUSTRY BY SWARM

Encycle brings the only autonomous holistic approach to “everything HVAC” – energy savings, decarbonization, asset management, and sustainability – all with little or no capital cost.

Swarm Logic is Encycle’s multi-patented technology that’s empowering some of the biggest retailers and other multi-site companies to combat HVAC related energy challenges. This AI-enhanced software looks at HVAC as a system instead of trying to drive efficiency out of individual rooftop units (RTUs). Swarm Logic is unlike any other energy management software offering on the market. It is a truly unique and transformative solution that requires no capital investment, is fast and easy to install, and delivers instant energy savings.

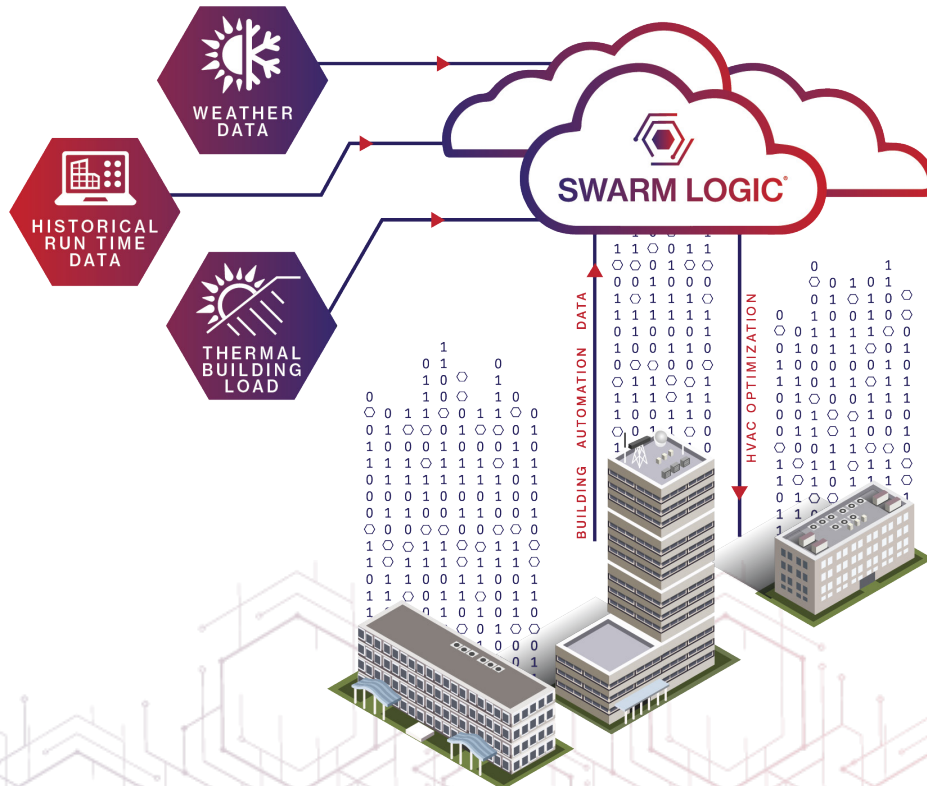
SWARM LOGIC®

How it works

Swarm Logic can be integrated with an energy management systems (EMS), connected thermostats, and IoT-enabled equipment to dynamically synergize power-hungry HVAC rooftop units (RTUs). The technology enables RTUs to operate most efficiently in response to changing conditions such as outdoor temperature, building occupancy levels, and RTU performance. Instead of operating in isolation, the RTUs become part of a closed-loop system that coordinates RTU activity, balancing energy consumption more logically among the individual RTUs.

Swarm Logic

- Dramatically reduces energy costs and consumption while maintaining desired building comfort levels
- Integrates easily with existing building automation systems or cloud-connected smart thermostats
- Requires no additional hardware purchase or installation
- Through advanced machine learning, adapts to each building’s individual RTU zone requirements and characteristics
- Uses real-time analysis of energy-related data, collected every five minutes
- Operates autonomously 24/7/365
- Supports sustainability goals by reducing CO2 emissions
- Provides energy and HVAC unit reporting and analytics through Encycle’s web-based Swarm Portal™ and Swarm Mobile™ platforms
- Reduces BOTH energy consumption (kWh) and demand (kW) for cooling and heating



TYPICAL CUSTOMER SAVINGS

Swarm Logic typically saves customers 10%-30% on HVAC-related energy consumption, spend, peak demand charges, and emissions with results verified by independent third-party reviewers and several utilities in the United States and Canada.

Encycle's Swarm Logic technology significantly outperforms LED retrofits with a comparably greater ROI and no capital expense or human interaction required. Since Encycle evolved into a software only solution provider, it has saved our customers over \$20 million in energy costs across more than 2,000 facilities and 18,000 RTUs. Even the most energy-efficient buildings — including those that are LEED certified — have the potential to lower their energy consumption and emissions with Swarm Logic.

SWARM IQ Actionable Fault Detection



Swarm IQ™ is Encycle's autonomous RTU fault detection tool that provides actionable intelligence to customers subscribed to Swarm Logic, helping them become more proactive with their HVAC activities and more efficient in budget spending. This data-driven functionality allows facility managers to gain unprecedented visibility into the maintenance and efficiency of their HVAC assets. Learning about equipment issues and addressing potential major issues early allows facility managers to bundle low-priority service calls and reduce truck rolls and downtime.

SWARM SENTINEL Increasing Work Order Efficiency



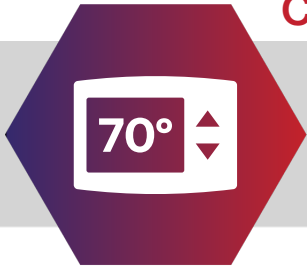
Swarm Sentinel™ is Encycle's automated HVAC RTU fault detection notification tool that provides straight-through processing of Swarm IQ-sourced data to a customer's work order solutions platform. This unique, value-added function of Swarm Logic software optimizes the efficiency, accuracy, and cost of equipment maintenance, ultimately reducing truck rolls and extending equipment life.

SWARM DR Demand Response That's Less Demanding



Swarm DR™ provides access to utility-created demand response (DR) programs, integrating our data-driven Swarm Logic software to automatically manage peak demand and load control while minimizing impact on comfort. This simplified approach removes complexity and capital outlay barriers, turning traditional energy costs into a recurring revenue stream for our enterprise customers.

CONNECTED THERMOSTATS



Encycle brings the power of Swarm Logic technology to customers through compatible smart thermostats. Aimed at small and medium-sized businesses, our Swarm Logic Solution provides a unique value proposition and adds a new suite of next-generation control and reporting capabilities. Customers can create a “Virtual BAS” and realize many of the same benefits of a complex and expensive building automation system for a fraction of the cost. Features like remote management of setpoints and group scheduling are conveniently available by Encycle’s thermostat control solution.

ENERGY MANAGEMENT SYSTEMS



Encycle’s enterprise-level energy management solution integrates Swarm Logic software with existing building controls (energy management systems or IoT platform) via an easily scalable, cloud-based application programming interface (API). Companies can leverage their existing building controls rather than disrupt or replace them. Swarm Logic helps customers make the most out of their EMS, resulting in even greater levels of energy efficiency and carbon reductions.

Encycle is transforming energy management for multi-site commercial and industrial companies.

Global environmental challenges have never been more urgent or complex. Reconciling environmental and economic performance to improve corporate sustainability is no small feat. Corporations that made ambitious net-zero or carbon neutral pledges in the last decade must now make good on those promises. Chief sustainability officers need swift and easy-to-implement solutions to help reach their 20 or 30-year targets.

Pursuing energy efficiency and decarbonization by reducing harmful CO2 emissions is no longer a choice or just a cost of doing business. It is an opportunity to become a market leader. The new standard wisdom is that setting clear Environmental, Social, and Governance (ESG) goals and attaining them helps companies gain a competitive advantage in the minds of consumers and investors.

Encycle’s purpose is to help companies reduce their energy consumption, lower their energy costs, and reduce environmental impact – autonomously, affordably, and effectively.

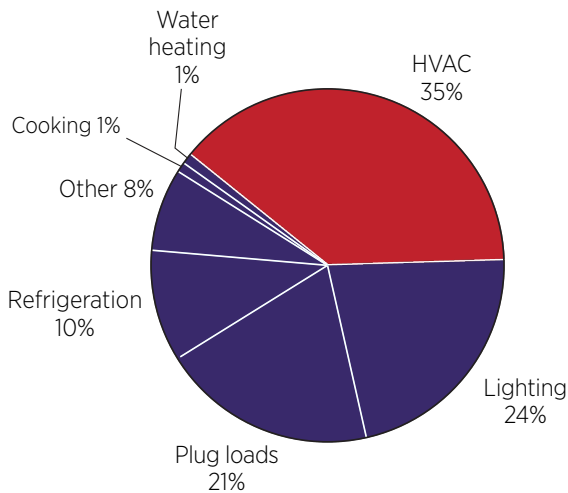
Encycle: Taking a holistic approach to HVAC has created untapped sustainability opportunities.

Owners of commercial and industrial buildings are under increasing pressure to implement sustainability programs and processes into their new and existing facilities. Rising energy and infrastructure costs, public interest in sustainability, and new regulations are driving companies to develop aggressive energy-saving goals and adopt transparent energy-efficiency and decarbonization initiatives.

By now, most of these businesses have already replaced their building's incandescent and fluorescent lighting fixtures to save energy and cost. HVAC is the next logical target given that it makes up as much as 35%-50% of a building's overall energy consumption profile.

Typical Commercial Building Energy Use

HVAC is a building's biggest energy consumer, accounting for 35%-50% of all energy used in commercial buildings.



Enterprise and utility markets served

- Retail / specialty stores
- Entertainment venues
- Restaurants
- Distribution centers
- Malls and shopping centers
- Offices
- Grocery stores
- Medical and wellness facilities
- Education facilities and campuses
- Light industrial
- Utility energy efficiency programs
- Utility demand response programs

Companies ready to embrace adaptable and scalable breakthrough technologies will benefit from Encycle's holistic approach to optimization, decarbonization, and energy savings.

Traditional approaches to HVAC energy efficiency have had limited success as they require significant capital expenditure, increase the complexity in operating and maintaining HVAC systems, and provide inadequate returns on investment.

About Encycle:

Deploying autonomous intelligence and analytics, Encycle improves commercial HVAC management, energy efficiency and building comfort to reduce operating costs and carbon footprint. As the only utility-endorsed HVAC optimization software, our patented machine learning solutions seamlessly integrate into maintenance workflows. Encycle enables multi-site commercial and industrial companies to maximize efficiency and reach sustainability goals by improving energy use and budgetary spend decisions.

