



# ENCYCLE

INTELLIGENT BUILDINGS MADE EASY

Autonomous HVAC energy management delivered through connected smart thermostats

**SMALL AND MEDIUM SIZE BUSINESS SOLUTIONS**

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## MANAGE YOUR HVAC SYSTEMS WITH A VIRTUAL EMS FOR A FRACTION OF THE COST AND COMPLEXITY OF A FULL ENERGY MANAGEMENT SYSTEMS

Small and medium-sized businesses often can't justify the cost of a traditional energy management system, but they need more savings and operational insights than a basic connected thermostat can provide.

Encycle's Swarm Logic gives customers the best of both worlds – the intelligence of a EMS with the ease of use and cost-effectiveness of connected thermostats.

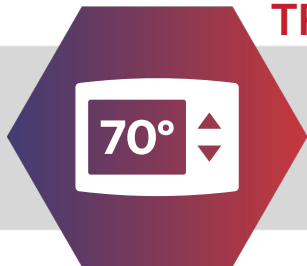
Swarm Logic customers typically realize 10%-30% savings on HVAC energy consumption and peak demand costs and 10%-30% reduction of HVAC-related emissions without impacting occupancy comfort.

Swarm Logic, Encycle's multi-patented, cloud-based software works autonomously to determine optimal HVAC control decisions by communicating with connected thermostats to collect HVAC asset and building operational data.

Deploying Swarm Logic via connected thermostats is an optimal solution for customers who want to manage their

HVAC systems better, but do not need integration with other systems such as lighting, security, fire suppression, and refrigeration. No capital investment is required unless new thermostats need to be installed or existing thermostats need to be replaced.

## TRANSFORMING SMART THERMOSTATS



Easy cloud deployment brings the power of Swarm Logic technology to customers through compatible connected thermostats. Aimed at small and medium-sized businesses, this approach offers a unique value proposition, that adds a new suite of next-generation control and reporting capabilities. This allows customers to create a Virtual EMS and realize many of the same benefits of a complex and expensive building automation system for a fraction of the cost.

TOTAL ENERGY SAVINGS **\$20 Million**

SAVINGS  
ACROSS  
**2700+**  
LOCATIONS

REDUCED HVAC ELECTRIC CONSUMPTION BY MORE  
THAN **141 GWh**

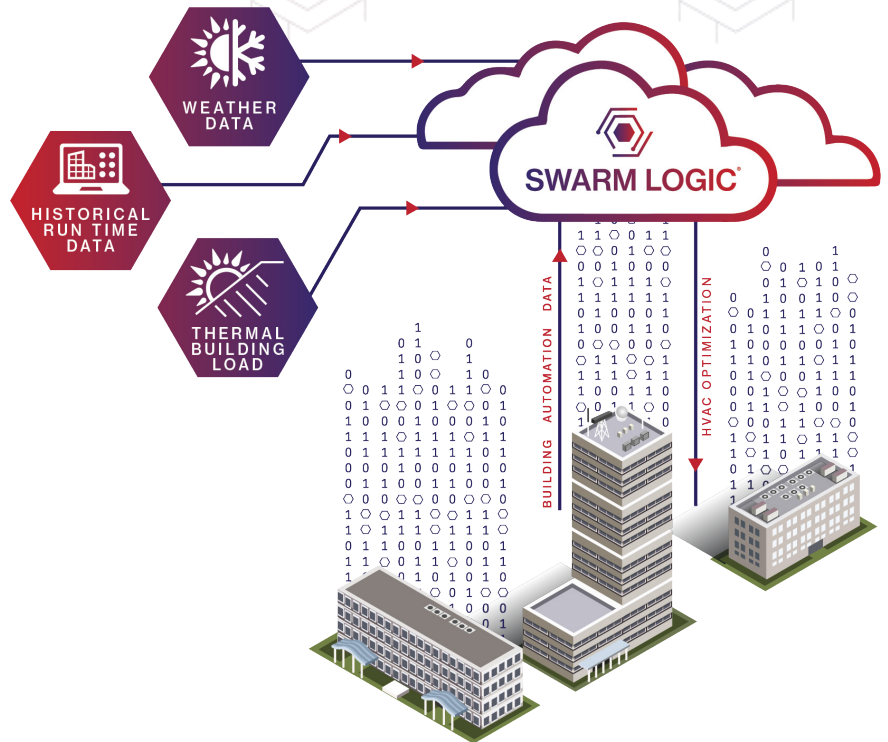
LOWERED PEAK ELECTRIC DEMAND  
BY **682 MW**

REDUCED GREENHOUSE GAS EMISSIONS BY  
**100,000 METRIC TONS**

### SWARM LOGIC:

Powered by Data, Driven by Sustainability™

Swarm Logic is 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.



### FEATURES AND BENEFITS:



Dramatically reduces energy costs and consumption while maintaining desired building comfort levels



Integrates with several manufacturers' smart thermostats



Requires no additional hardware purchase unless new thermostats need to be installed or existing thermostats need to be replaced



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



Reduces energy consumption (kWh) and demand (kW) for both cooling and heating



Provides energy and HVAC unit reporting and analytics through Encycle's web-based Swarm Portal and Swarm Mobile platforms



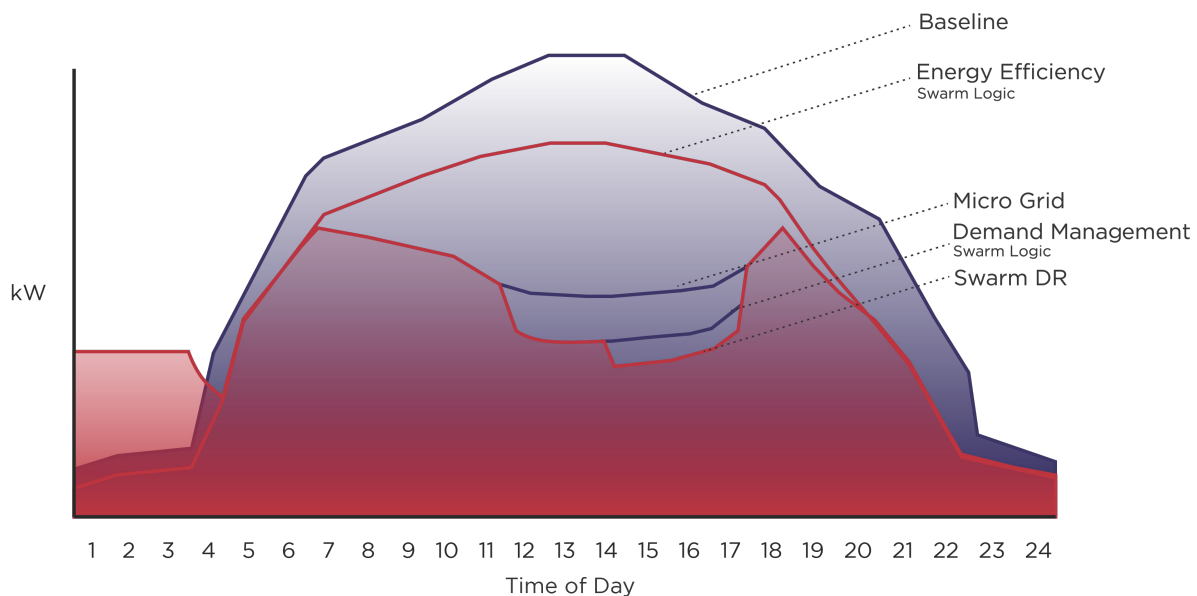
Supports demand response protocols to unlock additional revenue (OpenADR 2.0 and CPower Link)

## 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 2,700 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.

Reducing CO2 emissions is a priority for mitigating climate change. A company's environmental, social, and governance (ESG) actions are now the main criteria used to evaluate whether an investment is socially responsible or ethical.

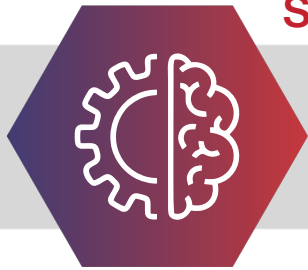


## WITH ENCYCLE DEMAND MANAGEMENT YIELDS IMMEDIATE SAVINGS

Traditional demand management (DM) strategies involve a static set of operating processes and programming that are designed specifically for each building's current design, equipment, and utilization. This highlights a major limitation of traditional DM strategies, which is the inability to adapt to continually changing business landscapes or other conditions. Besides this lack of flexibility and responsiveness, traditional DM approaches require technical expertise, significant time, individual site customization, and capital investment.

Encycle's Swarm Logic uses its IoT-based technology to help companies quickly realize the savings and benefits of DM for a fraction of the cost while solving typical DM issues. Swarm Logic is a smart choice that wins "hands down" compared with traditional DM strategies in terms of ease of implementation, simplicity, risk, adaptability, responsiveness, scalability, value, and comfort.

### 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.

#### 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.

#### 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 e<sup>o</sup>ciency 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.

