



SWARM LOGIC  
ENERGY OPTIMIZING TECHNOLOGY

## Swarm Service™

Dramatically increase the energy savings benefits from your existing IoT platform, smart thermostat or BMS solution.

*Cut your HVAC energy costs even more –  
by up to an additional 20%*



ENCYCLE  
SMART ENERGY, SMARTER SAVINGS



Swarm Service delivers all the benefits of the patented and award-winning Swarm Logic® energy optimization solution through your existing building management system, smart thermostat or IoT platform provider.

### Smarter Energy Management – In the Cloud

Smarter Energy Management Through a Cloud-Based API If you're already using – or plan to install – a building management system, smart thermostat, IoT platform or other energy management devices, then you're already focused on reducing HVAC energy costs and CO<sub>2</sub> emissions. But what if you could multiply the benefits of your energy efficiency hardware many fold?

You can – by up to 20% more, in fact. That's a lot of energy savings – savings that are reflected in your financial bottom line and corporate sustainability initiatives. With Encycle's Swarm Service, you can quickly and easily take advantage of the cost and carbon-cutting benefits of our multi-patented Swarm Logic solution via a simple-to-deploy, cloud-based API that enables enhanced synchronization and control of your rooftop units (RTUs) using technology you already own. Our cloudbased solution eliminates the risk of hardware obsolescence and provides for easy deployment of future enhancements.

Typical Demand  
and Consumption  
Reduction Through  
Swarm Logic®

**10-20%**

### Swarm Logic – What's the Buzz?

Inspired by the swarm intelligence of honey bees, Swarm Logic uses the elegant simplicity of biomimicry to make your RTUs behave in a way that best benefits the overall operation of your building. With Swarm Logic, instead of operating in isolation, your RTUs become self-organizing and are able to synchronize themselves to reduce unnecessary consumption and automatically optimize electricity usage by controlling the aggregated whole as one unified, coordinated group.



As a result, your RTUs work intelligently together – delivering cooling when it makes most sense based on cost, the unique parameters of your buildings and the comfort needs of your occupants.

Encycle offers consulting services in the field of energy usage management and energy efficiency to deliver the power of Swarm Logic to its customers using their existing devices or platforms. With Encycle's proprietary APIs, you get the connectivity to unleash the power of Swarm Technology™ and make your RTUs a whole lot smarter.



## Big Results, Small Investment

Working with your current energy efficiency providers, Swarm Service provides a behind-the-scenes, simple-to-install and economical energy management solution that can immediately deliver many important benefits.

### Unprecedented ROI

With Swarm Service, overall energy costs are lower because RTUs are synchronized and run only when they are needed while maintaining occupant comfort. Peak demand charges are reduced through automatic balancing of loads. High savings plus no capital costs bring industry-leading ROI.

### Simple to Implement, Fast Results

Swarm Service is an inexpensive, simple-to-enable solution that works with a Swarm Logic partner's solution to reduce energy use and improve demand management results, in most cases very significantly.

### Automated, "Set and Forget" Operation 24/7/365

The Swarm Logic system is fully automated with no need to increase personnel overhead on your part.

### Reduced Maintenance Costs

Swarm Service gives you better insight into building performance, providing the intelligence needed to cut your maintenance costs and extend the life of your equipment.

## Delivered with EASE™

You can start reaping the energy efficiency benefits of Swarm Logic immediately with EASE, our Energy as a Service by Encycle™ program. EASE minimizes the capital outlay needed to deploy Swarm Logic and eliminates the burdens of technology deployment, management, implementation and operation. Encycle and our energy partners do all this for you as part of our Encycle 360 program, which ensures you are up and running smoothly and quickly.

*"With Encycle's Swarm Logic, RTUs now work smarter than ever, reducing peak demand and consumption without the need for constant customer interaction. The Swarm Service API allows Encycle's Swarm Logic partners to integrate Swarm Technology™ while leveraging, rather than replacing or disrupting, existing BMS solution components. The API approach enables greater energy management features and, ultimately, cost savings with much lower enablement costs."*

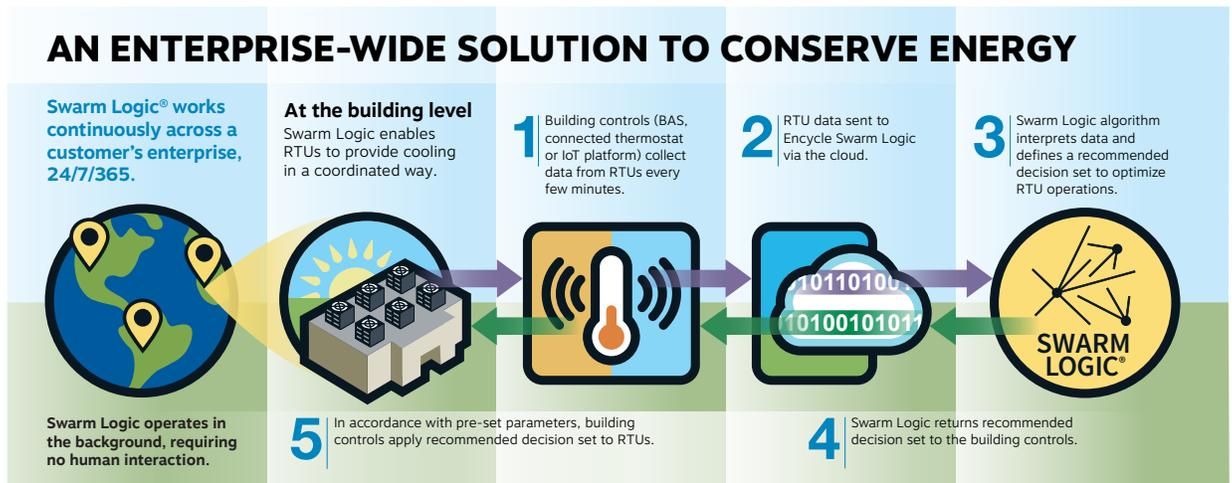
James McPhail,  
CEO, Zen Ecosystems





## How It Works

Working together like a swarm of honey bees, Swarm Logic-enabled RTUs intelligently communicate and synchronize their operation. As set points are changed or new temperature readings are received, Swarm Logic re-evaluates equipment control decisions to ensure that the best possible energy efficiency and demand management decisions are being made.



## About Encycle

Encycle provides unique sustainability benefits to many Fortune 500 companies. The EASE (Energy-as-a-Service by Encycle) program maximizes the performance of HVAC systems to save commercial and industrial companies money while reducing their carbon footprint. Based on patented Swarm Logic technology, Encycle's platform uses biomimicry techniques to reduce HVAC energy costs, participate in demand response programs, and gain valuable insight into HVAC performance. Swarm Logic is simple and easy to install, optionally integrates with leading IoT solutions, and delivers ROIs that far exceed most solar, storage and lighting initiatives focused on the same goals. Encycle's EASE program brings better results, at a lower annual cost and faster payback – it's a win-win.

Calculate what a 10-20% savings on HVAC energy costs would mean to you. Then give us a call. We'll show you what Swarm Service and other Encycle solutions can do for your organization.



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