

Encycle Announces New Patents for its Swarm Logic® HVAC Energy Management Technology

The company announced the issuance of two new patents bringing the total number of patents to nineteen.

SAN MARCOS, Calif., August 1, 2020 – [Encycle Technologies, Inc.](https://www.encycle.com), a software technology company focused on helping commercial and industrial customers dramatically improve the efficiency of their HVAC systems using IoT-enabled services, today announced the issuance of two new patents for its Swarm Logic® HVAC energy management technology. The new patents bring Swarm Logic’s total number of patents to 19.

Swarm Logic is a cloud-based software-as-a-service (SaaS) solution that enables commercial and industrial customers to lower electric costs, maximize efficiency, and reduce environmental impact. Companies using Swarm Logic routinely reduce HVAC electric costs and consumption by 10 to 20 percent with little or no capital investment.

“We are pleased to strengthen our intellectual property while adding greater benefits for customers who rely on Encycle’s technology to meet their energy reduction goals,” said Robert Chiste, Encycle Chairman and CEO. “Encycle consistently strives to improve our flagship product and expand its accessibility in an increasingly complex energy environment. We consider the growth of our patent family to be an indicator of our company’s value, as well as our commitment to research and innovation,” Chiste added.

The new patents focus on enhancements to Swarm Logic’s proprietary big data and cloud capabilities. One key enhancement is the development of a highly accurate HVAC power estimation model that expands Swarm Logic’s machine learning capabilities. The company has also added new functionality to its Swarm Portal®, the web-based reporting and analytics platform that provides centralized access to Swarm Logic. These new developments within Swarm Portal include:

- HVAC fault diagnostics and detection to help customers quickly identify and resolve issues involving faulty HVAC units across the enterprise.
- Identification of new and recurring HVAC performance issues with ranking / filtering according to impact, duration, and type of issue .
- Automatic site meter and HVAC submeter data importing for enhanced energy and HVAC operational reporting and analytics.
- Real-time energy savings reporting and analytics at enterprise and site levels.

“Along with the improved ease of use and enhanced HVAC operational insights, our customers no longer need to use submeters as tools to track energy use,” said Andrew Stickler, Encycle Executive Vice President, Engineering. “Swarm Logic requires no additional equipment to optimize HVAC energy consumption, demand, and cost, just an API into the building controls,” Stickler commented. “This is a significant advantage as it removes the costs associated with purchasing and installing metering devices.”

Encycle’s proprietary software makes it possible for a variety of industry partners to deliver new energy-saving capabilities to their customers using the power of IoT, big data, and cloud computing without adding any capital

costs. “By partnering with a growing number of leading building control OEMs, we are providing a rapidly growing number of customers the ability to optimize their HVAC operations with Swarm Logic,” remarked Chris Hensley, Executive Vice President of Sales and Marketing at Encycle. “We are pleased to have integrated Swarm Logic with Honeywell Multisite, Tridium’s Niagara Framework®, ENTOUCH Controls, and Lightstat,” Hensley stated. Encycle also added connectivity to more models of Carrier Connect™ and Honeywell thermostats. To help customers participate in demand response programs offered by utility companies, Encycle expanded its connectivity and compatibility with OpenADR and CPower Link automated DR protocols, according to Hensley.

Encycle developed Swarm Logic as a cloud-based technology that dynamically synchronizes HVAC rooftop units (RTUs), enabling them to operate most efficiently by responding in real-time to changing conditions such as outdoor temperature and building occupancy levels. Swarm Logic uses machine learning capabilities to create dynamic models for each building and its thermal load profile. With Swarm Logic, RTUs become part of an IoT-based closed-loop system that coordinates their activity and distributes energy consumption more logically among the individual RTUs without the need for additional hardware or equipment in most cases. The enterprise-wide solution, which has been awarded 19 patents to-date, operates quietly in the background, requiring no human interaction to maintain or monitor its actions.

For additional information regarding Encycle’s Swarm Logic energy management solution, please call Encycle at 1-855-875-4031.

About Encycle:

Encycle is a technology-driven company that is transforming energy management for multisite commercial and industrial companies. The company leverages its patented cloud-based technology to lower its clients’ electric costs, maximize energy efficiency, and reduce environmental impact. Companies using Swarm Logic® routinely reduce HVAC electric costs and consumption by 10%-20% with little or no capital investment. For more information about Encycle, visit www.encycle.com.

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