



Maximum energy savings with real-time energy management

Case Study

Company Name:
Edison Properties

Square Footage:
350,000 Sq. Ft.

Energy Savings Results:
500,000 kWh,
9700 Therms, and
\$85,000 in cost savings

Sector:
Commercial

Location:
New York, NY

Services:
Big data creation and
analytics, Real-Time
Energy Management,
and Optimization

Background

Edison Properties, owner of self-storage company Manhattan Mini Storage, was facing high energy costs primarily due to spiking electricity consumption on hot days and a network of inaccessible, manual thermostats that made it impossible to modulate temperature setpoints. With New York State's ambitious energy efficiency goals, incentives that support innovation at the grid edge are flourishing in the State. As a result, companies like Edison Properties have exciting new options for reducing energy costs with real-time technology platforms that produce coordinated big-data analytics and perform energy systems optimization.

Challenges

- High electricity costs
- A network of inaccessible, manual thermostats that made it impossible to modulate temperature setpoints or analyze HVAC system operations
- No visibility into equipment diagnostics until occupant hot/cold complaints were received

Outcomes

- Installation of advanced HVAC monitoring and control system
- Less than one-year financial payback period
- Operations improvements
 - Remote control of temperature setpoints and heat/cool modes
 - Advanced fault detection of chiller and AHU operations
- Savings seamlessly extended to portfolio locations



“Logical Buildings’ smart building software and solutions played a critical role in achieving our significant energy and operating cost reductions. With the company’s intuitive software platform and team of experts, Edison Properties was able to navigate energy efficiency incentives that not only benefit us but also help New York to be a leader in sustainability.”

—Greg Maser, Edison Properties

Solution

In partnership with Logical Buildings (formerly Energy Technology Savings or ETS), a smart building software and solutions company, Edison Properties was able to participate in the New York State Energy Research and Development Authority’s Real Time Energy Management (RTEM) Program and reap significant savings from the implementation of Logical Buildings’ RTEM platform, SmartKit AI™, at their largest facility. The platform is an advanced HVAC monitoring and control system that integrates data from Edison Properties’ electricity-consuming equipment (AHUs, chiller, electric meters) with external signals from the electric grid, such as demand response and other time-of-use price indicators, to curb energy consumption automatically when rates are highest.

The system is designed to create outsized energy cost reductions by modulating energy consumption at the most valuable moments and preventing all the equipment from running simultaneously, while maintaining comfortable temperatures inside the building. The platform provides 24/7 optimization and fault detection of HVAC systems, reducing energy consumption on a daily basis. Edison Properties is now expanding SmartKit AI™ to six additional sites in New York City, with the goal of creating a virtual power plant in one of the most electrically-constrained grids in the country.

Benefits Beyond Energy Savings

The site has experienced massive operational improvements:

1. Switching the building from heat to cool and from cool to heat used to be a full day process with extra staff brought in to manually climb ladders and change over each thermostat in the facility. This entire process is now automated.
2. The facilities team can better respond to hot/cold calls by adjusting temperature setpoints. For example, during a cold stretch in January 2018, the facilities team raised the heating setpoint by two degrees for a few days. This was not possible previously.
3. The HVAC service provider for the facility has access to advanced alerts for chiller operations. In summer 2018, the HVAC service provider was able to repair the chiller in the early morning on a 90° day because of early fault detection. Previously, this repair would not have occurred until much later in the afternoon when occupants complained of hot temperatures.

The NYSERDA Real Time Energy Management Program

Through the Real Time Energy Management Program, NYSERDA offers up to a 30% cost-share incentive to support RTEM projects that serve customers in multifamily, commercial, and industrial sectors. The program helps evaluate and qualify vendors, ensuring high-quality RTEM projects that create a smarter building or facility with lower operating and utility costs, and greater appeal, comfort, and marketability.



Discover how to transform the way you manage and consume energy with NYSERDA.

Visit nyserdera.ny.gov/RTEM