

Finding Energy Savings in a Facility With 24/7/365 Uptime

LOCATION

Josie Robertson Surgery Center, NYC

UTILITIES INVOLVED

Electricity, water, gas

GOAL

Provide the optimal healing environment at lower utility consumption

BUILDING DESCRIPTION

15-story, 180,000-sf surgical center with:

- ✓ 12 operating rooms
- ✓ 18-bed surgical prep unit
- ✓ 28 patient recovery suites
- ✓ Pathology lab, retail pharmacy
- ✓ Café and patient lounges
- ✓ 3 chillers (2 electric, 1 gas engine-driven)

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Instead of just guessing, we knew exactly what points we were trying to hit, which efficiency we were trying to hit, and we were able to scale it up.... We were thrown obstacles and we were able to work around them and still find improvements.

Jonathan Liang

Energy project manager, Memorial Sloan Kettering Cancer Center

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Background

Opened in 2016, the Josie Robertson Surgery Center is a freestanding surgical facility specifically designed for (largely) outpatient cancer and reconstructive surgeries. Part of the Memorial Sloan Kettering system, the facility is committed to patient-centered care and environmental sustainability. To create a healthy patient and community environment, the facility brought in utiliVisor (a partner at other MSK locations) to implement a best-in-class real-time energy management system.

The Challenges

JRSC faced many obstacles to more efficient operations. The best way to save energy is to turn it off, but that strategy isn't an option in a surgical center. In addition, the relatively new systems were trained to assume 100% use at all times, rather than the fluctuations of normal demand. Also, no bypass or preheat setpoints had been installed. The ability to evaluate the system was constricted by the facility's building automation system, which was limited in its volume, frequency, and level of detail. On top of these infrastructure issues, JRSC also needed to meet data privacy laws, joint commission and ASHRAE standards, and local emissions laws.



The utiliVisor Solution

To meet JRSC's strict operational and regulatory requirements, utiliVisor developed a gateway system to interface between the local BAS and the 500 points being measured throughout the facility. This advanced software uses a secure, networked solution built on open standards to collect and formulate the data, which is then transmitted through a direct data push without additional hardware. The system collects measurements at 5-minute intervals while keeping the BAS operating under normal conditions. utiliVisor's operations experts document and report on savings monthly and compare them to base operating costs, normalized for weather.

Results

- 523,000 kWh/\$53,200 saved annually
- 14.6% reduction in EUI
- 30% of installation + 30% of 3-yr service costs covered by NYSERDA

JRSC's operators are now able to push the boundaries of energy efficiency without impacting patient care. RTEM gives them visibility into how to satisfy the building's pinch points with more efficient strategies. utiliVisor's continuous real-time plant data analytics continue to guide the facility on the best path forward on ECMs, capital improvements, and NYC reporting requirements.

Top 5 ECMs Implemented After RTEM

- Reduced condenser approach
- Increased enthalpy of heat exchangers through free cooling
- Reset AHU scheduling
- Lowered AHU preheat valve settings
- Cleared chiller surge map (after careful analysis of surging causes)

About utiliVisor

Founded in 1978, utiliVisor offers comprehensive energy monitoring and submetering services, not just software. Our Operations Center is staffed with expert engineers, billing analysts, and meter technicians who review your data for accuracy to deliver insights and save you money.