



ST. JOHN'S
UNIVERSITY

Verdant Energy Management Solutions

St. John's University



About

St. John's University, located in New York City, offers diverse student housing options, including traditional and apartment-style residences. The university is committed to sustainability, striving to create a greener campus. It is on track to achieve a 50% reduction in carbon emissions from building energy use by 2030, in line with the NYC Climate Mobilization Act.



Number of Units
478



Building Type
Dormitories



Building Location
**Jamaica,
New York, USA**



Building Class
**Student
Housing**

VERDANT
by **COPELAND**



Energy Consumption Challenges

St. John's University faced a series of significant energy-related challenges across its dormitories, Founders Village Dorms and Henley Road Dorms. Operating on a limited maintenance budget, the university needed to prioritize cost efficiency. Yet, high utility costs for electricity and gas were a major issue, driven by outdated gas-powered PTAC systems and high local energy rates.

Energy Management Ecosystem

HVAC type: Gas PTAC

Climate Zone: Mixed-Humid

Electric Rate: \$0.193/kWh

Gas Rate: \$1.480/Therm

Student behavior also contributed to energy inefficiency. Since utilities were covered by the university, students often left HVAC systems running in unoccupied rooms, whether they were in class or away on breaks. This energy wastage not only inflated costs but also conflicted with the university's sustainability goals.

The combination of high energy costs and inefficient energy use created a pressing need for a more efficient, sustainable, and cost-effective energy management solution.

Property Goals

When St. John's University partnered with Verdant, their primary goals aimed to achieve the following:

Lower Utility Expenses:

Reduce electricity and gas bills, especially during periods of low occupancy, by implementing a solution that delivers measurable savings.

Improve Energy Efficiency:

Minimize energy waste while maintaining comfortable living conditions for students.

Optimize HVAC Usage:

Automatically adjust heating and cooling based on room occupancy, ensuring energy is only used when necessary and HVAC lifespan is prolonged.





Solution

Taking Control of Energy Usage

St. John's University implemented Verdant's energy management solution to address their energy challenges, enhance operational efficiency, and support their sustainability goals.

In August 2021, the university first installed the Verdant solution in Founders Village Dorms, covering 168 rooms. The wireless, plug-and-play retrofit installation of thermostats, tailored to the building's PTHPs, was completed efficiently and without disruption.

Impressed by the energy savings, the university expanded the installation to Henley Road Dorms in January 2024, covering an additional 310 rooms. This seamless integration focused on energy savings and maintenance ease, leveraging the simplicity of the PTHPs and Verdant's efficient design.

How Verdant Saves Energy

Our smart thermostats tackle energy inefficiency by using advanced occupancy sensing technology to continuously monitor the room for motion and body heat. When students are present, they have full control over the room temperature. Once the room is unoccupied, Verdant thermostats automatically switch to 'setback mode'. This mode allows the room temperature to drift naturally by a few degrees, significantly reducing HVAC runtimes by 45% on average.

Centralized HVAC Management

Student housing often experiences fluctuating occupancy patterns, especially during breaks and the end of semesters. Verdant's centralized HVAC management system provided St. John's University with a unified platform to control and monitor heating and cooling across all dorms and common spaces.

By automatically adjusting HVAC settings based on real-time occupancy data, this adaptive approach minimized energy waste, ensuring that heating and cooling were only used when rooms were occupied.

Simplified Installation Process

Verdant's solution was designed with retrofit projects in mind, featuring a wireless, plug-and-play installation that ensured a smooth and efficient process. This ease of installation was particularly beneficial for St. John's University, allowing them to quickly implement the system.

Additionally, Verdant's thermostats offer universal compatibility with various HVAC systems, including the older gas-powered PTAC units in the dorms. This flexibility ensured that the university could seamlessly integrate the new technology with their existing infrastructure.



Results

Performance Highlights

Following the installation, the university saw immediate savings. Con Edison provided a utility incentive to the property, validating the expected energy reductions and supporting their efforts to lower emissions.



Henley Road Dorms:

- **Installation Date:** January 2024
- **Rooms:** 310
- **9-month kWh Savings:** 210,931.79 kWh
- **9-Month \$ Savings:** \$43,646.75



Founders Village Dorms:

- **Installation Date:** August 2021
- **Rooms:** 168
- **12-Month kWh Savings:** 65,574.00 kWh
- **12-Month \$ Savings:** \$15,570.44

Big Picture

Overall Portfolio Savings
(Both Dorms Combined)



Total kWh Savings
276,505.80 kWh



Total \$ Savings
\$59,217.19



Equals to
30 gasoline-powered cars
off the road for one year



Equals to
106 electric-powered cars
off the road for one year



Take Control of Your Energy Management with Verdant



Reduce Energy Costs

Save up to 20% on energy costs and reduce HVAC runtimes by 45% on average without affecting guest comfort.



Plug & Play

Suitable for both retrofit and new construction projects, our wireless thermostat can be self-installed in under 15 minutes.



True Mesh Networking

Keep your thermostats connected without interfering with your Wi-Fi.



Effortless Integration

The Verdant system can integrate with all HVAC types, PMS, BMS, lighting controls, and other smart technology

Say goodbye to unnecessary heating and cooling costs with Verdant's energy management system. Installed by top student properties, Verdant prioritizes energy efficiency without compromising resident comfort.

Want to Learn More?

Contact Us: verdant.sales@copeland.com

Book a Web Demo: verdant.copeland.com

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