

Energy Efficiency in Healthcare

Glens Falls Hospital

Serving the Glens Falls area since the late 1890s, not-for-profit Glens Falls Hospital (GFH) is the largest hospital between Albany, NY and Montreal, Canada, and is the anchor of the comprehensive healthcare system that serves New York's Southern Adirondack region. With more than 300 affiliated physicians and 25 regional healthcare facilities in various counties, GFH employees are highly connected to the communities they serve, with many outreach programs aimed at improving the health of all community members.

Energy efficiency – just what the doctor ordered

Although GFH has been helping and healing patients for more than 100 years, they're certainly not behind the times. GFH is always looking to the future – to everything from cutting-edge medical technology to the latest in energy-efficient practices. To take their facility forward, GFH worked with National Grid's experts to complete more than 15 energy efficiency upgrades. Not only did they upgrade their air handling unit, lighting, chiller and heat pump, but they also invested in heating, ventilation and air conditioning (HVAC) building automation controls. National Grid provided more than \$600,000 in incentives to help GFH accomplish these energy-saving projects.

Upgrade: HVAC building automation controls (BAC)

Outcome: Enhanced patient comfort, increased convenience and improved safety

Web-based building control, including monitoring, alerting and analytics, makes it easy and efficient to manage facility-wide energy use and equipment. Using BAC with their HVAC system enables a smoother

sequencing of operations through scheduling, night setback capability, demand control ventilation and more. These and other upgrades to the building controls help GFH use energy more wisely, reduce energy costs and enhance patient comfort and safety. When buildings are kept at a reliable temperature, physicians and nurses perform better and patients stay comfortable. Plus, comprehensive BAC involves much more than HVAC systems. BAC is able to integrate fire safety and security lighting controls – helping keep everyone safer.

Total Project Results:

Annual Energy Savings:	2,500,000 kWh and 166,000 therms
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Annual Cost Savings:	\$290,000
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National Grid Incentive:	More than \$600,000
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Building Automation Controls Results:

Annual kWh Savings:	522,595 kWh
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Annual Cost Savings:	\$99,624
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Annual Therm Savings:	83,435 therms
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National Grid Incentive:	\$200,545
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Air Handling Unit Results:	
Annual kWh Savings:	383,891 kWh
Annual Therm Savings:	82,087 therms
Annual Cost Savings:	\$82,205
National Grid Incentive:	\$204,130

Lighting Results:	
Annual kWh Savings:	178,827 kWh
Annual Cost Savings:	\$18,777
National Grid Incentive:	\$23,401

Upgrade: Air handling unit (AHU) modernization

Outcome: Improved indoor air quality for greater patient and staff comfort



Prior to the upgrade, the operating room AHU controls weren't functioning properly – with units contending with dampers in fixed positions and a high amount of outside air. By replacing old components (like supply fan airflow stations), adding variable speed drives, adjusting scheduling and installing demand control ventilation sensors, their AHU not only saves the hospital therms, kWh and money, but it also improves the indoor air quality of the operating room. Of course the hospital was meeting all requirements for air quality, but thanks to the new AHU, air quality, humidity and circulation are even better, benefiting both patient health and employee performance.

And when hospital staff members complete their work with greater accuracy, patients stay safer and receive first-class care.

Upgrade: Energy-efficient LEDs

Outcome: Improved safety and aesthetics



By replacing outdated, inefficient lighting with new light-emitting diodes (LEDs), Glens Falls Hospital Northwest Tower, home to various units, including oncology, is now a brighter, safer place for patients and GFH staff. LEDs mimic natural light and offer unmatched color quality. The natural light is easier on the eyes than glare-causing incandescents and gives rooms a sunny glow. Due to their cooler color temperatures, LEDs cast a blue, cool light, which can actually help doctors and nurses see better to more accurately complete their tasks.



Greater energy efficiency also leads to a smaller carbon footprint.

Glens Falls Hospital reduced carbon dioxide emission by 6,892,677 pounds.

