

Learning to reduce operational costs with Real Time Energy Management

Case Study

Institution Name:
Cardinal Hayes
High School

Total Sq.Ft.:
450,000

Annual Energy Savings Results:
304,340 kWh

Annual Cost Savings:
\$92,784

Sector:
K-12

Location:
Bronx, New York

Background

Cardinal Hayes High School is a Catholic school for boys located in Bronx, New York. Since 1941, the high school enables students from immigrant families to receive a superior education. To this day, the school remains steadfast to this mission in the face of dramatic social, demographic, and economic changes.

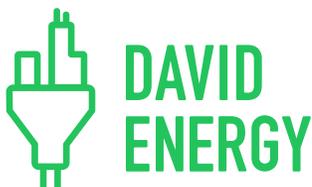
To continue providing affordable, quality education, management focused on optimizing its operational capabilities to lower facility upkeep costs. As energy and utility expenses are a significant portion of operational overhead, gaining insight and control of energy use was expected to contribute significantly toward the school's long-term goals.

Taking Action

Through the New York State Energy Research and Development Authority's (NYSERDA) Real Time Energy Management (RTEM) Program, the school commissioned energy management service provider David Energy Systems, Inc. to perform a comprehensive analysis of various energy efficiency measures. The firm presented the school with a full energy management solution.

Several projects were identified and implemented as part of this initiative, including lighting retrofits, steam trap modifications, and ventilation system upgrades. Installing an RTEM system was recommended to monitor and manage operational setpoints for all equipment.

Mycor® is a universal software infrastructure designed to integrate several systems, devices and field controllers into one web-based software platform. The system also forecasts algorithms to predict electric demand and shift or shave peak loads on a real-time basis. This enables management to make data-based decisions about building optimization, potential capital investments, implement cost reduction strategies, and energy performance analyses.





Due to the success of the completed energy savings upgrades, Cardinal Hayes is embarking on a second wave of efficiency projects to continue with their commitment to sustainability.

The Benefits

The project proved to be an overall success, reducing energy use by 304,340 kWh, saving Cardinal Hayes \$92,784 annually. In addition to cost and energy reductions, a significant benefit of the project has been in changing perceptions toward energy efficiency and sustainable operations. Implementing the recommendations provided by the RTEM system has enabled Cardinal Hayes to achieve an ENERGY STAR® certification and become a flagship for other schools managed by the Archdiocese of New York.

Next Steps

Buoyed by the successes of implementing an RTEM system, Cardinal Hayes embarked on a second wave of upgrades to integrate indoor temperature sensors with the heating plant and manage air quality at the school through demand-controlled ventilation. The project was completed in March 2020.

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

Visit nyserdera.ny.gov/RTEM

