



Energy Efficiency Case Study

Brought to you by Unitil

Energy Savings For A Local School

Fitchburg, MA

Montachusett Regional Vocational Technical School
1050 Westminster Street

Project Summary

The Montachusett Regional Vocational Technical School (Monty Tech) investment of \$3.5 million for a new automated heating and cooling system and LED lighting is realizing significant energy savings for the Fitchburg-based school, which serves 18 communities.

The original heating, ventilation and air-conditioning systems dated back to 1971, when the school was built.

Monty Tech hired an outside vendor to assess and update all its heating and cooling systems. The school system was based on the individual boilers and rooftop air-conditioning units.

Gary Miller, Senior Business Development Executive at Unitil, said they used a holistic approach to design a completely integrated system.

Once it had been designed, workers installed a new energy-efficient HVAC system. There is a central natural-gas fired boiler that produces heat for the building and 200 sensors that monitor temperatures and carbon-dioxide levels in each classroom.

It's a sophisticated system, which saves energy by detecting the right amount of heating, cooling and venting. A computer system senses changed conditions automatically and can be controlled remotely by Monty Tech's director of facilities.

If something goes wrong, such as a system failure or a sudden temperature spike, school officials are alerted automatically.

As part of the overall project, the school also replaced its roof and made other improvements, which pushed the overall investment to \$10.7 million. The energy savings were so significant that the school was able to use the savings to pay for the entire project, instead of asking the school's 18 member communities for money.

Need

Like many schools throughout the state, Monty Tech heating and cooling systems were well beyond their serviceable life—over 40 years old.

Solution

Unitil worked closely with Monty Tech to secure energy efficiency incentives through its suite of Mass Save programs. In addition to providing these rebates/incentives, Unitil offered expert advice on the type of equipment that would qualify.

Total Project Cost

\$3.5 million

Mass Save Sponsor Incentives

\$507,444

Estimated Annual Gas Savings

23,400 therms

Estimated Annual Electric Savings

1.9 million kilowatt hours



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The school borrowed \$10.2 million and will pay it back over time using money saved from energy bills.

Unitil's \$507,000 in rebates came through its Mass Save suite of programs.

In the first two months the system was operational, the school cut its electric bill by about 50 percent, when compared to the previous period. Their natural gas bill in September was slashed 72 percent over the same period.

The estimated kilowatt saving annually is 1,867,800 (lifetime is estimated at 23,182,000). Total estimated therm savings annually is 23,400 (lifetime gas savings estimated at 583,800).

“We used a holistic approach, which contributed to such a significant reduction in their overall energy usage.”

Gary Miller
Unitil

Mass Save as a Strategic Partner

Whether you are building a new manufacturing facility, upgrading old, inefficient equipment or manage a property in need of energy improvements, the Sponsors of Mass Save will help you identify cost-effective energy efficiency improvements, provide technical assistance, and offer financial incentives in addition to interest-free loans to help kick-start your company's next big project. To learn about these and other commercial and industrial energy efficiency programs available, visit MassSave.com/Business.



Unitil's Gary Miller

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Together, we make good happen for Massachusetts: Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid and Unitil. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

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