



# Energy Efficiency Case Study

Brought to you by National Grid

## Whitman-Hanson Regional High School

### Project Summary

The Whitman-Hanson Regional High School in Whitman, Massachusetts was interested in learning how they could build a state-of-the-art school building utilizing sustainable design principles. Partnering with National Grid, a Sponsor of Mass Save, Whitman was able to design a building that offered:

#### High Performance Building Envelope Features

- High performance glazing

#### Efficient Mechanical Equipment and Systems

- Variable air volume (VAV) HVAC distribution system with optimized controls
- Variable flow hot/chilled water pumping system
- Demand control for kitchen exhaust hoods
- Optimized chiller plant with chilled-water supply temperature reset control
- Demand control ventilation in gym, cafeteria and auditorium with CO2 sensors
- High efficiency gas boilers

#### High Efficiency Lighting Systems and Controls

- Direct/indirect pendant lighting fixtures
- Reduced lighting power densities
- Daylight harvesting controls

#### Other “Green” and Renewable Systems Technologies

- 49.5 kW photovoltaic power generation system
- Storm water recovery system
- Site design that reuses existing parking lots and athletic fields to minimize the impact on open space
- Full life-cycle cost analysis, including utilization of DOE-2 simulation to predict energy performance and incorporate integrated engineering principles

### 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](http://MassSave.com/Business).

### Solution

An integrated approach utilizing resources from electric and gas utilities as well as the Massachusetts Technology Collaborative (MTC)

### Mass Save Sponsor Incentives

\$43,631

### Annual Electric Savings

577,037 kWh

### Carbon Reduction

5,789 tons

### About Whitman-Hanson Regional High School

Whitman-Hanson Regional High School serves approximately 1,250 students in grades 9-12 and is fully accredited by the New England Association of Schools and Colleges. The Whitman-Hanson Regional High School Community is committed to the intellectual, ethical, emotional, and social development of students as well as to their physical well-being.

### About Mass Save:

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.

WE ARE MASS SAVE®:

