

Beecher Road School

Town of Woodbridge, Connecticut



Savings Information

Energy and Operational Savings over \$283,937 Annually over the 15 Year Term of the Project

- Electric Energy Consumption Reduced by 634,786 kWh
- Natural Gas Usage Reduced by 24,130 therms

Project Size

- \$13.4 million

Environmental Benefits

Carbon Footprint Reduced by over 567 Metric Tons of CO₂ Annually or equivalent to any of the following:

- Removal of greenhouse gas emissions from 119 passenger vehicles annually
- Conserving enough electricity to power over 51 homes annually
- Planting of about 465 acres of forests annually

The Town of Woodbridge signed a \$13.4 million contract, approved by referendum in February 2014, with Energy Systems Group (ESG), a leading energy services provider, for the implementation of comprehensive building infrastructure renovations at Beecher Road School. ESG managed the building upgrades which included energy conservation measures, mechanical and controls upgrades, building envelope improvements, and security enhancements. Most work was completed during two summers and in the evenings to avoid disruption to the learning environment.

Strategies & Solutions

As the building systems at Beecher Road School dated back to the 1960s, they were outdated, performing poorly, and beyond their useful life. The sustainable infrastructure improvements implemented have significantly enhanced the learning environment while making the school more energy efficient and modernized. Major work completed through the project includes a new roof on the A, B and C Wings, installation of 970 solar panels on the school's roof, new window walls in the A and B wings, as well as completion of the new heating and air conditioning system, which provides central air to the whole school.

Energy Conservation Measures

- Lighting (Interior & Exterior LED fixtures, LED Pool Lighting)
- Building Envelope
- Water Retrofit
- Plug Load Controls
- Transformer Replacement
- Walk-in Fridge/Freezer Controls
- Window Wall Replacement
- New Entrance Doors
- Roof Replacement (White PVC Roof with Increased Insulation)
- New Classroom Casework
- North and South Canopies
- Wall Painting
- Drop Ceiling Replacements

Mechanical & Controls Upgrades

- Three (3) New High-Efficiency Condensing Boilers

- Heating, Ventilation, and Air Conditioning (HVAC) Upgrades including adding Air Conditioning to the Entire School
- Five (5) New Roof Top Units
- Six (6) Air Handler Units
- Micro Turbine ("Power Generation")
- High Efficiency Chiller
- Domestic Hot Water Heaters
- Pool Dehumidification Unit
- New Building Automation System

Security System

- Sallyports and Bullet Resistant Glass (North & South Vestibules)
- Window Security Film (15 Mil Film Installed on all Exterior Glass)
- Access Control (Video Intercom and Access Cards)
- Visitor Management



Energy Systems Group (ESG) is a leading energy services provider that specializes in energy efficiency, sustainability, and infrastructure improvement solutions in the government, education, healthcare, commercial, and industrial sectors. ESG offers a full range of sustainable infrastructure solutions including waste-to-energy, distributed generation, and renewable energy.

www.energysystemsgroup.com