Town of Belchertown
Municipal Energy Efficiency

BACKGROUND

Several years ago, Belchertown, located in western Massachusetts bordering the Quabbin Reservoir, was struggling to meet budgets due to rising energy costs for municipal facilities. When the Green Communities program began, the town saw an opportunity to receive support for energy efficiency projects that would help to control operating costs. The Pioneer Valley Planning Commission (PVPC) assisted Belchertown and other towns in the region with the program application, which required the community to establish an energy use baseline and develop a five year plan to reduce energy use by 20 percent.

In the spring of 2010, Belchertown was one of the first Green Communities designated by DOER. The Department of Public Works (DPW) Director and his Administrative Assistant have coordinated participation in the program, in cooperation with the Facilities Director for the School Department, which accounts for the majority of the town’s energy consumption.

ACTIONS

Belchertown has reduced its energy consumption through wide ranging improvements to its aging town facilities.

Municipal bonds – Belchertown issued municipal bonds to fund implementation of energy efficiency measures.

Contract with an energy service company – With assistance from PVPC, Belchertown selected and hired an energy service company (ESCO). The ESCO identified and implemented most of the energy efficiency measures described below, guaranteeing annual energy savings levels over the 20 year contract period. Each year, the ESCO will verify the savings achieved and reimburse the town if the guaranteed levels are not met.

Energy audits – The ESCO began their work by auditing all town buildings and developing a proposal of recommended energy efficiency measures.

Energy efficiency measures

Belchertown has implemented energy efficiency measures in every major town facility. These were funded through a combination of municipal funds, Green Communities grants from DOER, Mass Save® rebates, and federal grants through the 2009 American Recovery and Reinvestment Act. While most measures were implemented by the ESCO, the town has recently put a Green Communities grant toward additional work that wasn’t part of the ESCO contract.

- **Interior lighting upgrades and controls** – Belchertown has upgraded to energy-efficient lighting in many buildings, including the Town Hall and schools. In several areas, occupancy sensors have been installed to automatically turn lighting on and off based on occupancy.
- **Exterior lighting upgrades** – The town has upgraded lighting outside the wastewater treatment plant to energy efficient LED technology.
- **Weatherization** – Belchertown has done weatherization work, such as air sealing, in most town buildings.
- **Storm windows** – New exterior storm windows were installed to reduce heat loss in two buildings.
- **Water efficiency** – Belchertown has installed efficient plumbing fixtures in schools to reduce use of water and fuel for water heating.

Employees record vehicle mileage when refueling, as part of Belchertown’s vehicle fuel management program.
Results

Belchertown was one of the first communities to achieve the Green Communities program’s energy reduction goal, reducing municipal energy consumption by 21 percent from 2009 to 2014. The town has reduced its annual energy costs by approximately $300,000 to date.

Previously, several facilities had outdated equipment that had become unreliable or difficult to maintain, such as the oil boiler that was original to the 1920s Town Hall, and the town struggled with funding to make needed improvements. Green Communities grants and utility incentives have helped Belchertown to modernize its facilities, while investing in energy efficient equipment that will reduce operating costs for years to come.

Recommendations

Take advantage of assistance available from organizations such as regional planning agencies.
Support from PVPC has been critical to Belchertown’s success in reducing its energy consumption. PVPC has assisted throughout the process, including developing the energy reduction plan, completing the Green Communities program application, and hiring the ESCO and managing their contract.

Consider hiring an ESCO and owner’s agent if municipal staff availability and expertise is very limited.
Belchertown was able to have so many energy efficiency measures implemented in a short period by hiring an ESCO to do much of the work. Using a third party owner’s agent, funded through a grant from DOER, facilitated the procurement process for the ESCO.