245Project Narrative: LED Lighting Upgrade at the Shutesbury Elementary School, Phase 2

The Town of Shutesbury proposes to finish the LED lighting upgrade at the Elementary School. In 2022, the Town received a Green Communities competitive grant to complete the first phase of lighting upgrades, which primarily consisted of interior lighting upgrades. The remaining work is for some of the classrooms, restrooms, hallways, and storage areas. The Town has already converted all other municipal buildings to LED lighting.

I. Existing Conditions

a. Municipality Overview

i. Total energy consumption in MMBtu: 3,485.8

ii. Greenhouse Gas Emissions in MTCO2e: 245.0

b. Facility/Facilities and/or Vehicle(s) Overview

i. Energy consumption in MMBtu for the Shutesbury Elementary School: *1,830.4*

ii. Greenhouse Gas Emissions in MTCO2e for the Shutesbury Elementary School*: 132.3*

iii. Native energy units (e.g., kWh, therms, gallons, etc.) If applying for a vehicular project, please provide the total gallons of diesel and gasoline used by the municipality in the last fiscal year.

FY23 Shutesbury Elementary School Energy Use

Building	Heating Oil (Gallons)	Propane (Gallons)	Electricity (kWh)	MMBTUs (Total)	Emissions (MTCO2e)
Shutesbury Elementary School	8,004	-	210,400	1,830.4	132.3

c. Provide a general description of the facility, including age, use, square footage, condition of existing equipment and building envelope, recently completed energy efficiency measures, and future efficiency measures planned. What are the long-term plans for the facility?

The Elementary School was initially built in 1972. The last renovation done was 1993. The main part of the building has wood framing and an asphalt shingle roof. The gym is cinder block and metal beam construction. The EPDM roof was replaced in 2022. The gym roof was leaking badly prior to replacement. The school is in fair condition and well-maintained by staff. The building envelope was quite leaky, due to failing weatherstrip and sealants, as well as construction framing details along several sections of the structure. However, the Town was awarded a Green Communities competitive grant in Fall 2022 to weatherstrip all exterior doors, weatherstrip the attic hatch, and other air-sealing to remediate those issues. Shutesbury plans to add mini splits (electric heaters) to the classrooms and activity areas of the building.

II. Proposed Project(s)

a. Describe the scope of the proposed project including:

i. Purpose

The primary purpose of the lighting project at the Elementary School is to decrease the amount of electricity the school consumes each year from lighting. Ideally, the building will eventually receive the majority of its electricity from renewable sources, and using the least amount of energy possible will reduce strain on the electric grid and municipal funds.

ii. Benefits

Benefits include reduced GHG emissions, reduced electrical costs to the town, and reduced maintenance costs. This will also finish the school's transition to all LED lighting so all of the lighting equipment and replacements will be standard.

iii. Timeline

The town plans to proceed as quickly as possible to continue working with a project expediter as allowed under MGL Ch. 25A.

iv. Required procurement for the project.

The Town will be able to work with a project expediter as the total cost for the weatherization and lighting projects falls under $300,000.

b. Provide specification sheets for all equipment to be installed including cut sheets for lighting.

Please see the attached documents. All required information for LED lighting upgrades, as stated in the PON, is included in the supporting documentation from Energy Conservation, Inc.

c. Anticipated impact, qualitatively and quantitatively

i. How the project supports the municipality's five-year Energy Reduction Plan and the Commonwealth's emission reduction goal

This project is anticipated to save the Town 39 MMBTUs and 3 tons of CO_2. Shutesbury is supportive of the Commonwealth's goals to achieve net zero emissions by 2050. Any step taken to reduce municipal energy use will put the State closer to its goal.

ii. Why grant funding is needed to complete the project(s)

Grant funding is required for this project because Shutesbury is a small, rural community with a limited municipal budget. Although the Town is committed to reducing energy use when possible, full funding is not readily available for all energy efficiency projects. Converting LED lights at the Elementary School was phased into two parts to limit the amount of grant funding requested at one time. Grant funding is critical to reducing energy costs and maintaining a viable financial base. Funding from the Green Communities program will allow the Town to pursue projects necessary to mitigate climate change.

iii. Why this proposed measure was prioritized for implementation over other measures in the building?

This project was prioritized because it is halfway complete, and the Town would like to finish the LED lighting upgrade before moving on to other projects.

iv. Provide a comprehensive overview of required permits, indicating their status.

Local permits will be needed to complete the project. Shutesbury is a member of the Franklin County Cooperative Inspection Program. The hired contractor will be responsible for applying for all necessary permits.

v. Identify any other approvals required, e.g., local, state, federal, and the status for each.

This is not applicable to the LED lighting project at the Elementary School.

vi. Opportunities for education and outreach and a concrete plan to accomplish them

Shutesbury will give updates about the municipal building weatherization project in the town newsletter and on the town website. The Energy and Climate Action Committee (ECAC) will also utilize the town email list-serv for residents, which currently has over 600 subscribers, to give project updates and report energy impact.

vii. Describe how the project(s) would benefit EJ populations in your community, as identified through the Massachusetts EJ Map Viewer. For applicants applying for a higher grant amount for projects that directly benefit Environmental Justice (EJ) communities, please see the requirements on page 3.

This item is not applicable to Shutesbury's project, as there are no EJ populations in the community.

III. Cost/Budget

a. Provide a complete accounting/proposed budget for the project. Include:

i. A total project budget with cost estimates/quotes (annotated to clearly identify the option selected for the budget)

ii. Other funding sources, including matching funds, utility incentives, rebates, or grants.

iii. Applicants must include documentation of either:

1. Confirmed, preapproved utility incentives.

2. Application for utility incentives

3. Applications for any other grants

4. Justification for any funds to be used for administrative costs; this MUST be provided. In no case shall more than 10 percent of the grant award (or $10,000, whichever is higher) be used to fund administrative costs

- Total material and installation cost: $63,368
- Total utility incentives: $18,620
- **Total Green Communities funding request: $44,748**

National Grid confirmed the utility incentive for the lighting project; please see the "Energy Initiative Pre-Approval" letter included in the packet from Energy Conservation, Inc. There are no other sources of funding for this project other than the funding request from the Green Communities program and the utility incentive. The Town is not requesting any funds for administrative costs.

IV. Personnel

a. Provide a description of the applicant and the project team and its qualifications for completing the project, including all identified partners, contractors, and any technical service providers. Applicants are encouraged to seek qualified, independent project managers or Clerks of the Works to coordinate the day-to-day activities. Grant administration funds can be used for this purpose.

i. Identify the specific roles and responsibilities of each of the parties

ii. Identify how the project will be managed on a day-to-day basis

iii. Provide a generic description of potential additional partners or contractors that will be required for the completion of the project but have not yet been identified by the applicant or incorporated into the project team

The Shutesbury Town Administrator will act as the day-to-day project manager and will provide general project coordination and oversight. The Town Administrator will complete all required project reporting. The Town will continue working with Energy Conservation Inc. (a certified PEX) to complete the LED lighting upgrade.

ATTACHMENTS:

- Shutesbury Elementary School final phase lighting improvements proposal.pdf
- Shutesbury Elementary School Lighting Cut Sheets Phase 2.pdf
- Shutesbury Elementary School Lighting Savings Summary Phase 1.pdf