



Town of Agawam

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GREEN COMMUNITY GRANT FINAL REPORT

NOTE: Final reports are due within 2 months following project completion. For final payment, all questions must be answered and a site inspection approving the project work.

Please submit this signed completed page by mail.

Jane Pfister, *Green Communities Grant Coordinator*
Massachusetts Department of Energy Resources
100 Cambridge Street, Suite 1020
Boston, MA 02114

Please submit the rest of the Final Grant Report electronically, along with the GC Grant Final Table (as Excel; other files such as outstanding invoices, pictures, and any studies or reports funded by the grant funded) to: Jane.pfister@state.ma.us

Date of Final Report Submission: _____

Name and Title of Person Submitting Final Report:

Signature of Person Submitting Final Report: _____

THE REPORT NARRATIVE SHOULD INCLUDE
DETAILED INFORMATION FOR EACH GRANT-FUNDED PROJECT:

The Final Grant Report is intended to tell the story about how the community used the grant funds, what projects were implemented as well as when and how, and what the community learned from the process of doing the energy efficiency work. Some of this story has been provided in a progress report but this report is intended to be a summary of all the work undertaken.

The narrative should include:

- Descriptive detailed narrative of each project(s) explaining what work was done-what was installed, what it cost and what funding and utility incentives contributed, and the overall process of implementing the measure. It should also include:
 - the team managing the project and their responsibilities; final, actual timeline with major milestones; and procurement details (which procurement law was used)

Clark School

Advanced Energy Group located at 26 Deer Park in East Longmeadow MA 01028 has implemented a No-Cost energy evaluation on behalf of The Town of Agawam MA and EverSource. A team of energy auditors evaluated the Clark School located at 65 Oxford St Agawam MA. During this walkthrough AEG was looking for cost effective energy savings with Lighting, HVAC, Mechanical and Refrigeration.

After working together with the engineers at EverSource, AEG developed a scope of work to assist the Town of Agawam with an energy savings strategy.

The first step was on the lighting end, the entire school will be switched out from dated fluorescent lighting to LEDs. We proposed solid state LEDs in areas that had high current wattages or extremely long hours of operation. In other areas of which the body of the fixtures were in good condition, we recommended changing out the internal components to LEDs. All of the exterior fixtures will be changed over to LED lighting as well as replacing all emergency ballasts to be compatible with the new lighting inside the school.

The second step was looking into the schools walk-in refrigeration. Currently there are no controls and the fan motors are outdated. So AEG's recommendation was adding evaporator controls and fan replacements.

The last step was HVAC and Mechanical. The school was recently furnished with a newer energy management system. However AEG did find some energy savings opportunity with the implementation of VFDs. Currently no VFDs are existing and our recommendation was to add them to (2) 3 HP Fan Motor and (2) 10 HP pump Motors.

Estimated Energy Savings

	<u>kWh Saved</u>
LED Lighting Retrofit	70,067
Added VFDs	45,728
Refrigeration	4,221

Marc Strange, Director of Planning & Development, along with Doug White, Building Maintenance Director, worked with the Advanced Energy Group team, led by Kyle Houser, to coordinate the project, which was started on September 11, 2017 and completed around October 13, 2017. When consulting with the vendor(s) about procurement, we were told that as long as the net project cost was below \$100,000, the project did not need to be bid. Unfortunately, we now know that was incorrect and the town did not bid this project out. Lesson learned and we will be sure to follow procurement guidance issued by DOER moving forward.

Roberta Doering Middle School

Siemens Industry, Inc.'s Building Technology Division provided Siemens PXC controllers with extended I/O to replace the existing legacy control pak DDC system. Upgrade of the existing non-functional controls for the AHU and exhaust systems, control interface for the boilers and associated pumps, VFD for the large AHU system, new control sequences of operation for the associated systems, including DCV for CO2 control based on RA. New schedules with OSS to reduce the run time of the associated systems. Temperature setback for unoccupied control. PM (one-time) of the 49 existing UVs, including the replacement of their associated pneumatic thermostats (49). Program both occupied and unoccupied control.

The energy management project also included:

- New Siemens controls for 10 existing building automation panels
- Migrate and upgrade to Siemens BMS PXC100-E96A controller
- Boiler enable/disable function
- Installation of 9 room temperature sensors
- Replacement of 49 pneumatic thermostats
- Wiring for 1 new Siemens Panel for boiler room exhaust time clock replacement and upgrade

The town also worked with Advanced Energy Group on retrofitting the school's lighting. The entire school's existing lighting—both interior and exterior—was switched out from fluorescent lighting to LEDs.

Estimated Energy Savings

	<u>Energy Saved</u>
LED Lighting Retrofit	116,696 kWh
EMS Upgrade/Replacement	13,795 kWh
Kitchen Ductwork/Exhaust Fan Controls/Insulation	4,209 therms

Marc Strange, Director of Planning & Development, along with Doug White, Building Maintenance Director, worked with Martin Pitek from Siemens and the Advanced Energy Group team, led by Kyle Houser, to coordinate the project, which was started around June 1, 2018 and completed around August 14, 2018. When consulting with the vendor(s) about procurement, we were told that as long as the net project cost was below \$100,000, the project did not need to be bid. Unfortunately, we now know that was incorrect and the town did not bid this project out. Lesson learned and we will be sure to follow procurement guidance issued by DOER moving forward.

- Descriptive narrative of public involvement and support

The Town of Agawam has a city form of government. As such, our City Council is the final decision maker on all funding-related endeavors. The Council voted unanimously to accept the Green Community grant funding, which included public meetings where the intended use of those funds were discussed in open forum. The City Council also had to vote on whether to allocate funding for the final payments on those projects while we await reimbursement from DOER for those town expenditures. Once again, this process involved public meetings where the scope of the projects were discussed and the intended use of the funds. And, once again, the City Council voted unanimously to approve funding.

- Descriptive narrative of lessons learned from the project(s)

First, the Green Community program has been a tremendous kick starter for the town's efforts to become more energy-efficient and energy-conscious. Our Energy Commission is energized and will be promoting an event at the schools to promote energy-efficiency in town ("Cooler Agawam"). We are also looking at other projects outside of our Green Community efforts.

I think the biggest lesson learned from these projects is that the town needs an Energy Manager. The projects were drawn out longer than we would have liked and we just couldn't keep on top of the consultants' progress, project details, and reporting.

As discussed above, we also learned how procurement of these projects needs to be handled.

- Photos of the project after implementation and if available, before and/or during

Attached electronically

- Narrative for other energy-related activities completed or underway in the community

As we alluded to above, the town's school administrators and the Energy Commission are working with Ener-G-Save and the Harold Grinspoon Foundation on putting together an event we're calling "Cooler Agawam." It's modeled after "Cooler Concord," (<http://coolerconcord.org/>) which was the first program of this kind conducted by the Grinspoon Foundation. Agawam's event is scheduled for Thursday, May 23rd from 5:30-8:00pm at Agawam High School. The committee is still putting together the details but we foresee heavy student

involvement with projects and presentations but also energy-efficiency vendors, kids' activities, and pledges by parents in attendance to become more energy-efficient.

We also had a consultant replace all of the town's water faucet aerators—municipal and school buildings—with lower flow versions to save on water consumption and heating.

- If not already provided in progress reports, invoices and payment documentation—

Attached electronically

- Updated "GC Grant Final Table.xls" with actual dollar funds contributed by the grant, utility rebates, other grant sources, municipal funds. (*Contact Jane Pfister for this table, jane.pfister@state.ma.us*) For funding provided by the municipality, please indicate capital, operating, or another source. Review and update as needed energy and cost savings numbers.

Attached electronically

- Web links to, or copies of, any outreach and publicity relating to the grant and/or projects
 - This could include copies of press releases issued by the municipality/school; clippings of published newspaper stories; links to electronic media coverage of the projects (i.e., local access cable TV); municipal/school web site articles, blog posts, or other web posts; municipal/school newsletters.

N/A. We plan to publicize the Green Community projects and their projected impact along with the new aerators and their projected savings in early 2019 in the Energy Commission's *Green Energy Times*. We will also be promoting Cooler Agawam in that same edition.

- Contact person with title, phone and email for future reporting of actual energy savings at 1 year and 2 years following the final report.

Marc Strange, Director of Planning & Community Development; Green Community Coordinator
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