

Quarterly Report: Walpole Building Retrofits

Greenhouse Gas Emissions Reduction Fund

Andrew Dey, for the TriVillage Energy Committee

August 31, 2010

1. Program Title: **Weatherizing and Insulating Two Walpole Town Buildings**
2. Program Type: **Weatherization of New Hampshire commercial building stock**
3. **Summary of Work Completed** from 1May10 through 31Jul10:

Task 1. Initial Project Planning

Percentage complete: 100%

The initial project planning work was completed prior to this period.

Task 2: Retrofit the Walpole Town Hall

Percentage complete: 95%

Tasks Completed:

- Insulated the building's rim joist
- Insulated the walls of the basement conference room
- Sealed and insulated the heating ducts
- Re-piped the two boilers and upgraded the controls system for greater efficiency and more precise control
- Installed a heat recovery ventilation system for the basement conference room

Notes:

Insulation and air sealing of the building was completed. The rim joist was sprayed with two-part polyurethane foam. The exterior walls of the basement conference room were insulated with 2" polyisocyanurate rigid insulation. All accessible ducts of the heating distribution system were sealed and insulated.

The upgrades to the mechanical system were completed during this period. The boilers were re-piped for greater efficiency. Several zones were added to isolate areas of the building that are used at different times and with different intensity. The conventional electric water heater was replaced by a tankless electric water heater for the kitchen area that is used only occasionally. A heat recovery ventilation system was installed in the basement conference room to ensure that healthy indoor air quality will be maintained.

Task 3: Retrofit the North Walpole Municipal Building

Percentage complete: 98%

Tasks Completed:

- Installation of exterior foam insulation around three sides of building and both gable ends (brick front was not included in scope of work)
- Siding with rainscreen detail installed over rigid insulation
- Installation of new windows at front gable end to replace existing non-insulated windows at that location

Notes:

The insulation work and new siding are complete, and have generated many positive comments from townspeople. The offices and library located on the south side of the building have been noticeably cooler during the hot summer weather.

The scope of work included framing a new façade on the upper front of the building in order to address a water-management issue, and to make the building more attractive. The labor and materials for the upper façade work were paid for by the Village of North Walpole, not from the RGGI funds.

Task 4: Site visits to Monitor Progress

The project manager, Andrew Dey, has been a consistent presence on site to monitor and document the work, and to help address issues as they have arisen. The work has proceeded smoothly, with minimal disruptions and complications.

Task 5: Build Community Awareness

Updates about the progress of these energy upgrades are part of each monthly meeting of the TriVillage Energy Committee, and the minutes from these meetings are posted in several places in town.

Andrew Dey is creating a presentation for townspeople that will describe the work that was done, the money, fuel and CO2 emissions that are being saved, and the applicability of these strategies to peoples' houses.

4. Work to be Completed 1Aug10 – 30Sep10**Task 1. Initial Project Planning**

- The project planning phase is complete.

Task 2: Retrofit the Walpole Town Hall

- Installation of weatherstripping and patching of holes in exterior entry doors
- Miscellaneous clean-up (particularly of the town stage that ended up accumulating significant cellulose dust)
- Touch-up painting of areas where holes had to be drilled in walls for blowing cellulose
- Final sheetrocking and painting of wall that was insulated in basement conference room

Task 3: Retrofit the North Walpole Municipal Building

- Work on this building is essentially complete. If any funds are left over after the rest of the expenses have been covered, they will be used for targeted air sealing at the hose-drying tower.

Task 4: Site visits to Monitor Progress

- Site visits by the project manager will be ongoing as the final tasks are completed.

Task 5: Build Community Awareness

- The TriVillage Energy Committee will sponsor a presentation by Andrew Dey about the work that has been done on the two Walpole town buildings. Handouts will be provided at the presentation that will assist homeowners in making their own homes more energy efficient. The presentation will put the RGGI-funded work on these two buildings in the context of a master energy plan for all town buildings.
- Mention will be made during the presentation of the EECBG grant funding that was awarded for audits of the three schools in town. Now that the town hall and the North Walpole municipal building have received significant energy reduction retrofits, the three schools in town are good candidates for similar work.

5. Jobs Created

A considerable amount of work is being funded by this grant. The spreadsheets accompanying the invoices describe the hours of work for the various completed tasks.

6. **Obstacles Encountered** and Milestones Not Reached

A number of tasks were encountered that had not been anticipated, but that were required for the successful completion of the project. Funding these tasks depleted the money available for additional air sealing work that could have been completed on the hose-drying tower at the North Walpole building. The specific tasks falling into this category of “extras” were all in the Walpole town hall, and they included:

- Re-working the sprinkler heads in the conference room ceiling so that the HRV ducts could be installed – and to bring the sprinkler heads into code compliance
- Significant wall patching and touch-up painting where holes were drilled in the walls so that they could be dense-packed with cellulose
- Cleaning cellulose dust from the stage curtains and back stage area at the second floor of the Walpole town hall. The only access for insulating the attic was above the stage. Although the building performance contractor did an admirable job of containing the cellulose fibers, the curtains and backstage area ended up with a thin coating of cellulose dust. This had to be addressed by a professional cleaning company.

7. **Beyond the Contract**

Inspired in part by the success of the RGGI-funded energy reduction retrofits, the TriVillage Energy Committee received EECBG funds to conduct energy audits of the three schools in town. The energy audit procurement process is being led by Andrew Dey, and it is now underway.

8. **Brochures, Announcements, etc.**

The TriVillage Energy Committee will be creating an announcement publicizing the upcoming presentation on the work that was done. Additional documents will be created to provide resources for townspeople interested in having similar work done.

Photo albums of the work that has been done have been uploaded to the following locations:

http://picasaweb.google.com/107419735924771875939/TownHallOverview?authkey=Gv1sRgCJui_dzTt6v7HA#

<http://picasaweb.google.com/107419735924771875939/TownHallWindows?authkey=Gv1sRgCOidns3n9diVhgE#>

<http://picasaweb.google.com/107419735924771875939/TownHallAirSealingAndInsulation?authkey=Gv1sRgCJTn8aHqtu7plwE#>

<http://picasaweb.google.com/107419735924771875939/TownHallHVAC?authkey=Gv1sRgCNaJot6q14W3Rw#>

<http://picasaweb.google.com/107419735924771875939/NorthWalpoleRetrofitPresentation?authkey=Gv1sRgCNir0oPbyYeqfA#>

Chuck Bingaman, a freelance reporter based in Walpole, plans to write an article about the work that was done on the two Walpole buildings.

9. Budget vs. Actual Expenditures

A final expense report will be submitted in the coming weeks. It will include minor adjustments that address the unanticipated expenses described in Section 6 above.