

**GREENHOUSE GAS EMISSIONS REDUCTION FUND (GHGER)
Quarterly Progress Report - PAREI**

The second quarter grant report is due March 1, 2010.

1. Program Title:

PAREI Solar Energy Raiser Expansion & Weatherization Pilot Program

2. Program Type:

1. Energy audits; (Weatherization Pilot)
2. Weatherization of NH residential housing stock; (Weatherization Pilot)
3. Energy efficiency work force training and development; (Weatherization Pilot)
8. Improve the electric and thermal energy efficiency of existing residences;
(Solar hot water (with existing electric hot water) and Weatherization Pilot)
9. Programs to foster the retrofitting of highly efficient and affordable housing;
(Solar hot water and Weatherization Pilot)
10. Education, outreach and information programs that promote energy efficiency and conservation to reduce greenhouse gas emissions generated within NH.
(Solar hot water and Weatherization Pilot)

3. Summary of work completed during this reporting period **Oct 1, 2009 – Dec 31, 2009**

Task 1: Solar Energy Raiser Expansion – Three NH Communities

- Continued outreach and support for Energy Action NH – new group modeled after PAREI in the Canterbury/Concord area that plans to hold their first Energy Raiser in Spring/Summer of 2010.
- Continued support for SEAREI – who has gone on to complete two more Energy Raisers on their own.
- Continued outreach and support for LARELLA who has held three of their own Energy Raisers with PAREI's support but needs continued training. They plan to hold another Energy Raiser in Spring/Summer of 2010.
- Continued outreach and support to prospective groups in Salem and North Conway area with the hope that they will develop a new Energy Raiser team.

Task 2: Solar Energy Raiser Expansion – A Non Profit Organization: Task Completed

- Conducted Solar Site Visit, Solar Energy Raiser Panning Session and Energy Raiser at the Appalachian Mountain Club Cardigan Lodge in Alexandria, NH. With a team of 15+ volunteers including a certified plumber, we installed two Apricus Evacuated 30 Tube Collectors on the side of the building's deck. SEE ATTACHED PHOTOS.
- We have responded to a request for assistance by the Pemi Baker Home Health and Hospice for help with a solar project to heat their therapeutic pool. We have conducted two site visits and prepared an estimate for them as well as advising them on funding opportunities.

Task 3: Solar Energy Raiser Expansion – A Low Income Home

- On the Habitat home in Rumney, NH, where we completed our Housewarming, we will be conducting a solar water heating Energy Raiser in April of 2010. In November, 2009, we prepared for this Energy Raiser while the home was under construction. The insulated pipes and wire have been run from the roof to the basement. A double coil tank was purchased and installed. The second coil in the tank remains unused while it awaits the solar hook up. The family (see attached case study) is very engaged in the process and has been attending our potlucks known as Energy Exchanges.

Task 4: Solar Energy Raiser Expansion: Conduct five energy raisers above and beyond those planned for 2009/2010

- We conducted two site visits in preparation for a Solar Energy Raiser on a dorm at the New Hampton School. (Now scheduled for Earth Day in April)
- We conducted one site visit with the Appalachian Mtn. Club in Pinkham Notch, NH with the hope of an Energy Raiser there in Spring/Summer of 2010. It is our hope that this Raiser can be used to help train the North Conway group of volunteers who have been slow to organize themselves.
- We conducted outreach to the Lakes Region Community Council to plan a possible Energy Raiser on their new home for people with disabilities in Plymouth, NH.
- We developed a plan, in partnership with a faculty member, for an Energy Raiser at the EcoHouse at PSU in Plymouth. The site visit and design will take place in early 2010 with the hope of an Energy Raiser in Summer/Fall of 2010.
- We conducted two site visits and provided design consultation to a member's home under construction in Sandwich, NH. This project involves using solar water heating for space heating. This is considered an extra Energy Raiser because we don't normally conduct Energy Raisers on new construction in the winter time. The plan is to install a digital flow meter so we can use this installation for data tracking. This Energy Raiser is scheduled for February, 2010.

Task 5: Solar Energy Raiser Expansion: Conduct 12 Solar Information Sessions (six outside the Plymouth community)

- We conducted two public solar water heating information sessions at the AMC Cardigan Lodge in Alexandria.
- We conducted one public solar water heating information session at our October Energy Raiser in Plymouth. This Information Session was covered by the local newspaper as well and NH Public TV. NH Public TV turned this information session into one of their "Planet Granite" shows. This spot has been showing over and over again since November of 2009.

Task 7. Weatherization Skill Development/Training – Weatherization Equipment & Infrared Camera – Staff and Contractors

1. Four PAREI part-time employees and one contractor took the Building Performance Institutes (BPI) Energy Analyst Certification field test in mid-Dec. The results of the test will be announced in 2010. These five began preparing for the BPI field test in Oct 2009. During the three month period, of Oct through Dec, they conducted energy audits in 18 homes.

2. Scheduled two group classroom trainings on the use of weatherization equipment.
3. Conducted onsite group trainings at five homes. Determine insulation and air sealing requirements and lighting/appliance upgrade options. Identify inefficient refrigerators that qualify for replacement. Training conducted by NHEC's BPI Energy Analyst (2 sites), Lakes Region Thermal Scan BPI Energy Analyst (1 site), and GDS Associates BPI Energy Analyst (2 sites).

Task 8. Weatherization Training – Whole House System & Blower Door - Public

1. Prepared for and scheduled two group classroom trainings for homeowners in early 2010 on Whole House as a System and the use of the Blower Door. The Whole House as a System training will be conducted in partnership with Cool Air – Clean Planet. Together we will sponsor a “Button-Up NH workshop for central NH homeowners.
2. Prepared for and scheduled two on-site trainings for staff, volunteers and Housewarming participants in early 2010 on the use of the Blower Door and related test equipment.

Task 9. Weatherization Energy Raiser Pilot Program

1. PAREI staff and contractors conducted site visits, weatherization testing and produced reports for a portion of the ten homes that will host Housewarmings. Additional homes will be tested in early 2010. Estimated weatherization project costs for homeowners will be complete prior to each Housewarming.

Task 10. Weatherization Energy Raiser Pilot Program

1. Process and procedures have been drafted for Housewarmings. The goal is to complete weatherization work via the volunteers on at least ten homes in 2010.

Task 11. Weatherization Energy Raiser Pilot Program – Low Income – Task Completed

1. Successfully conducted one Housewarming at one low income household. Over ten people spent over 140 hours planning for and implementing the weatherization of a Habitat for Humanity home. PAREI's recently trained Energy Analysts coordinated the Whole House as a System approach to weatherization.
2. In addition to whole house insulation and air sealing the team installed a Heat Recovery Ventilator (HRV). This HRV exhausts stale air from the house and exchanges it with fresh air from outside. During the exchange process 70% of the heat is transferred to the incoming air. Details of this overall project are explained in an attached case study.

Task 12. Monitoring and Evaluation

1. Continue collecting energy and cost data for future reporting requirements. Await the GHGER database tracking requirements from NH Carbon Challenge's designers.

Task 13. Project Management and Administration

1. Continue working with added partners, including NH Electric Co-op for audit training and weatherization funding and Cool Air – Clean Planet for Button-Up community education training sessions.
2. Purchased weatherization tools and supplies for Housewarmings.
3. Updated spreadsheet to track GHGER grant expenditures.

4. Implemented plan for internal staff and contractor meetings regarding grant tasks.
5. Set up grant tracking of income and expenses on new accounting system and timesheets.

a. *Discuss any benefit your activities may have had for low income residents.*

1. See attached Case Study
2. We do not track income levels of our participants so it's hard to say where our assistance is falling. However, our membership is primarily made up of low to middle income families and it is these families that are participating in our Housewarmings.

b. *Note any problems or delays.* Regarding Housewarmings, they are initially complex to organize. For starters, narrowing down and prioritizing the projects – with volunteers in mind – is tricky. Secondly, we are finding, you really need someone with contractor skills to create the plan for the project. We are also finding we need to have two kinds of Housewarmings. One is the Neighbor helping Neighbor where we group families in threes (preferably close by to one another) and coordinate their projects based on their skills, budget and schedules. The second is the Community Energy Raiser – where we pick a date with the homeowner and do a “Shout Out” for volunteer help. The later is easier to organize but may not building lasting community ties.

Note any deviation from the work-plan. We are finding a lot of media resources on the Internet that are taking the place of needing to produce our own media on such things as Blower Door Testing and Home Insulating. (ie: http://www.youtube.com/watch?v=bk1_RWm6fv8) Energy Star (And Button Up VT) has produced many useable video spots that we are using to educate our members.

c. *Attachments and other documentation are appreciated.* Please see attached photos and case study that demonstrates some of our work.

2. Summarize work to be completed next quarter: **January 1, 2010 – March 31, 2010**

Task 1: Solar Energy Raiser Expansion – Three NH Communities

1. Continued outreach to community groups planning on hosting their first Energy Raiser. At least one site visit and information session will take place in one other community.

Task 3: Solar Energy Raiser Expansion – A Low Income Home

1. Preparation work will take place for April Energy Raiser.

Task 4: Solar Energy Raiser Expansion – Five Extra Energy Raisers

1. Conduct one extra Energy Raiser in Sandwich, NH in February, 2010.
2. Conduct on-site meetings with faculty and admin to firm up plans for New Hampton School Energy Raiser

Task 5: Solar Energy Raiser Expansion: Conduct 12 Solar Information Sessions (six outside the Plymouth community)

1. Two Solar Information Sessions will be added to PAREI's Energy Exchange to further engage the community in Solar Water Heating

Task 6: Solar Energy Raiser Expansion: Promote PAREI Took Kit

1. Conduct at least one PAREI Presentation outside Plymouth Area

Task 7. Weatherization Training – Equipment & Infrared Camera – Task Completed

Five PAREI employees and volunteers will hear if they have become certified BPI Energy Analysts.

Task 8. Weatherization Training – Whole House System & Blower Door - Public

1. Prepare for and implement two Button-Up NH group classroom trainings. To be held in January and February 2010 on Whole House as a System.
2. Prepare for and implement one on site training on the use of the Blower Door.
3. Prepare for and conduct onsite group trainings at three homes. Determine insulation and air sealing requirements of homes in preparation for conducting Housewarmings.

Task 9. Weatherization Energy Raisers

1. Prepare budgets and schedules for at least three of ten Weatherization Housewarmings in collaboration with homeowners.
2. Order insulation and air sealing materials and equipment.
3. Organize Weatherization Housewarmings for those in February and March. Evaluate installations/energy savings.
4. Begin to identify and coordinate replacement of five inefficient refrigerators.
5. Tabulate collected information and report results. Process payment of financial incentives to participants. Process other invoices and payments.

Task 10. Weatherization Energy Raiser Pilot Program

The goal is to complete weatherization Housewarmings via the volunteers on at least five homes in the first quarter of 2010 and on all ten homes by May 1, 2010.

Task 11. Weatherization Energy Raiser Pilot Program – Low Income – Task Completed

Task 12. Monitoring and Evaluation

Continue design of data tracking systems.

1. Budget vs. Actual Expenditures (if you have included this with your invoicing, there is no need to repeat this for the quarterly report.)

Using the budget you submitted for the final approved grant proposal, please add a column and provide actual expenditures as well as match dollars for this quarter. (Save this worksheet for future reporting as we will want to see your quarterly expenditures as the project continues.)

6. Explain any obstacles encountered or any milestones not reached. We feel like we continue to be on track with the completion goals of our proposed tasks. However, we do believe that we were able to more easily engage families for our Housewarming Program due to our ability to include \$500 in materials through the additional grant we received from NH Electric Coop.