



Better Buildings Neighborhood Program
Peer Exchange Call: *Incorporating Do-It-Yourself Projects
into Programs*
Call Slides and Discussion Summary

March 1, 2012

- Call Logistics and Attendance
 - How does your project approach DIY projects?
- Program Experience and Lessons:
 - Vermont/Neighborworks HEAT Squad:
 - Paul Markowitz, Vermont Energy Investment Corporation
 - Paul Zabriskie, Central Vermont Community Action Council
 - Liz Schlegel, Center Vermont Community Action Council
 - Repower Bainbridge:
 - Seth Kolodziejski, CSG
- Discussion:
 - What are the drivers for incorporating DIY into programs?
 - What messages resonate with DIY'ers?
 - How can programs ensure quality work and what resources help DIY'ers do it right?
 - What challenges or benefits have programs encountered?

Participating Programs

- Austin, TX
- Bainbridge Island, WA
- Kansas City, MO
- Philadelphia, PA
- Rutland County, VT
- Southeast Community Consortium

Do-It-Yourself Home Energy Efficiency Pilot Project

2011 Behavior, Energy, and Climate
Change Conference

Prepared by Paul Markowitz



Goal of DIY Program



Image courtesy of US EPA

- Ensure interested homeowners received the training and guidance they needed to achieve meaningful energy savings in their homes
- Implemented by Central Vermont Community Action Council, in partnership with Efficiency Vermont

Why DIY?

Huge untapped demand!

- 25% of Vermonters said they were very interested in working under the guidance of a certified professional to make significant energy efficiency improvements to their homes
 - another 28% -- somewhat interested

DIY Participants Receive



Image courtesy of David Keefe

- Professional energy audit and detailed audit report
- Mid-term inspection after air sealing
- Final inspection by auditor after completion of work
- Direct technical assistance from auditor
- Encouraged to attend a day-long “Weatherization Skillshop”

Roles

Central Vermont Community Action Council (CVCAC)

- Coordinated program
- Presented Weatherization Skillshops
- Developed model documents
- Coached and supported homeowners
- Enrolled and trained auditors

Roles

- **Auditors** - conducted energy audits and prepared reports, conducted mid-way inspections and final test-out, reported results to Efficiency Vermont
- **Efficiency Vermont** - provided financial incentives and tracked savings



Photo courtesy of Efficiency Vermont

Quantitative Results



Images courtesy of EnergySmart of Vermont

- 24 Vermont homeowners completed the process
- Participants achieved average energy savings of 39 MMBTUs -- compared to 40 MMBTUs for standard Home Performance with ENERGY STAR jobs

Qualitative Results

- 82% of auditors said quality of work was high, while a similar number said that homeowners had the necessary skills and knowledge
- 77% of participants said they were either satisfied or very satisfied with the DIY program
- CVCAC and EVT are continuing program

Highlights and Lessons: Vermont

- DIY programs are not for every auditor. Those who enjoy the human aspect of the work were drawn to the program.
- To incentivize DIY'ers to follow through with the work, CVCAC provided a \$1000 incentive that covered the cost of the audit (CVCAC arranged the audit fee with auditors). The DIY'ers received the \$1000 to cover the audit if they proceeded with achieving the minimum standards suggested through the audit.
- In some circumstances, DIY'ers decided to have a professional finish the project (either after the skill shop or once they began the work).
- The skill shop was an important part of the quality assurance process.
- One challenge was finding those potentially interested in DIY and encouraging them to participate in the program.



Insulation Checklist

Use this checklist to ensure energy-efficiency installation(s) performed by homeowners or non-allies meet our required specifications to receive cash-back incentives. Review this checklist or your contractor to understand all requirements before beginning an energy-efficiency project.

Only the following installations are permitted to be self-installed by a homeowner:

- Attic / knee wall insulation
- Floor insulation
- Electric hot water heaters

All other installations must be performed by a RePower trade ally.

This completed checklist must be submitted—along with the other required application forms—receive RePower Rewards or cash-incentives. Submit all forms to:

RePower
400 Winslow Way East, Suite 160
Bainbridge Island, WA 98110

For more information about this checklist or installation requirements, contact Seth Kolodziejski, RePower trade ally manager, at seth.kolo@csgroup.com.



Electric Water Heater Checklist

Use this checklist to ensure energy-efficiency installation(s) performed by homeowners or non-RePower trade allies meet our required specifications to receive cash-back incentives. Review this checklist or provide it to your contractor to understand all requirements before beginning an energy-efficiency project in your home.

Only the following installations are permitted to be self-installed by a homeowner:

- Electric hot water heaters
- Attic / knee wall insulation
- Floor insulation

All other installations must be performed by a RePower trade ally.

This completed checklist must be submitted—along with the other required application forms—to receive RePower Rewards or cash-incentives. Submit all forms to:

RePower
400 Winslow Way East, Suite 160
Bainbridge Island, WA 98110

For more information about this checklist or installation requirements, contact Seth Kolodziejski, RePower trade ally manager, at seth.kolo@csgroup.com.

REPOWER ELECTRIC WATER HEATER SELF-INSTALL CHECKLIST FOR HOMEOWNERS

Turn off electricity to the water heater. IMPORTANT: Use a multimeter or test light to make sure there is no electrical power at the water heater.	<input type="checkbox"/>
Disconnect wiring, drain the water heater and disconnect the water piping.	<input type="checkbox"/>
Remove old water heater and position new water heater, making sure it is level and pipes and wires will easily reach the tank.	<input type="checkbox"/>
Attach water piping, install temperature and pressure relief valve and any other fittings.	<input type="checkbox"/>
Close water heater drain valve.	<input type="checkbox"/>
Open hot water faucet to release trapped air and open cold water inlet to tank.	<input type="checkbox"/>
Check for leaks and fill with cold water before restoring power to the tank.	<input type="checkbox"/>
Reconnect electrical wiring.	<input type="checkbox"/>
Set temperature to 120° for electric water heater tanks.	<input type="checkbox"/>
Install earthquake or seismic strapping in accordance with the appliance manufacturer's recommendations.	<input type="checkbox"/>

Homeowner Signature

Date

Contractor Signature
(Not required if self-install)

Date

- Bainbridge began by incentivizing measures and realized there were many self-installers doing work. This led Bainbridge to set a clear path for people who do self-installs.
- The program is contractor-based, with about 20 trade allies. The goal is to push work to trade allies to help the self-installers. Contractors can help with quality assurance.
- Bainbridge is fine tuning its checklists, which are based on Energy Trust OR's self-install checklist (see previous slide).
- Bainbridge is using the DIY program to gather data about which efficiency upgrades are being performed. Bainbridge does not have access to specific utility information, so this provides another avenue to collect this information.

Discussion: Training

- Vermont's program emphasizes training; the opportunity to work with a contractor does not seem to be a strong incentive.
- Vermont's skill shop focuses not only on the hands-on upgrade skills but on energy savings as well as health and safety of the house.
- Some measures may be more appropriate for DIY'ers to perform than others.
 - Bainbridge focuses on four areas which seem to be the easiest for homeowners. The program did not want to involve combustion appliances where combustion testing would be required.
 - The Vermont program focuses mainly on attic air sealing, but also box fills in basements. This provided an opportunity to discuss the benefits of air sealing (and ventilation) with homeowners.
 - Programs have found that attic air sealing around chimneys can be difficult for DIY'ers.

Discussion: Outreach/Marketing

- Vermont did specific marketing for the DIY program. The program encouraged contractors to talk to customers about the DIY option if the customer was hesitant about contracting for the full project.
- Hardware stores, such as Lowes or Home Depot, may be interested in programs to reach DIY'ers. (Vermont offered to participate in a pilot program for this.)
- Vermont used the town energy committees to market the program. 40% of towns in Vermont have volunteer groups that promote energy efficiency and renewable energy.
- Representatives from the Bainbridge program attend local home and garden shows and provides DIY presentations.

Discussion: Outreach and Marketing



- Vermont's message to DIYer's is "You Can Do It. We Can Help."
- Vermont noted that those choosing the DIY option had similar demographics to those participating in the program generally (e.g., they tended to be highly educated.) A larger DIY market may still be out there to be tapped.

Discussion: Cost and Employment

- Vermont lowered the cost of the skill shops from \$150 to \$50 for one person after receiving feedback that the cost was too high. However, the lower cost hasn't resulted in increased participation. Vermont received outside funding for the skillshops.
- Vermont offers a cheaper price for two people (\$75 versus \$100) to attend; the program markets it as a “couple’s activity.”
- DIY can still help create jobs.
 - For example, Bainbridge is promoting the use of the trade allies to support DIY’ers.
 - For Vermont, some initial DIY’ers decided to bring in contractor help to perform or finish the work; this type of job may not have happened without the initial connection and training through the DIY program.

Discussion: Quality Assurance

- Bainbridge uses its checklists as a way to provide quality assurance.
- Vermont's contractors conduct QA checks during work and in post-work inspections.
- Vermont attributes good program results, in part, to the use of blower door testing during the initial audit and in post-work inspections.

- Vermont distributes “The Homeowner’s Handbook to Energy Efficiency: A Guide to Big and Small Improvements” by John Krigger and Chris Dorsi to skill shop participants (see: http://www.amazon.com/The-Homeowners-Handbook-Energy-Efficiency/dp/1880120186/ref=sr_1_1?ie=UTF8&qid=1332977914&sr=8-1)
- Vermont created YouTube videos for their Button Up Vermont videos (see: <http://www.youtube.com/watch?v=EExEt9f20Bk>)
- Bainbridge added “Insulate and Weatherize” by Bruce Harley to their local library system, so residents can have access to it. (see: http://www.amazon.com/Insulate-Weatherize-Tauntons-Build-Like/dp/1561585548/ref=sr_1_1?s=books&ie=UTF8&qid=1332978609&sr=1-1)