

Better Buildings Residential Network Peer Exchange Call Series: *Training: How to Get Results – What Matters, What Doesn't (201)* April 14, 2016 *Call Slides and Discussion Summary*



Call Attendee Locations







Call Participants – Network Members

- Alaska Housing Finance Corporation
- Center for Sustainable Energy
- CLEAResult
- Connecticut Green Bank
- Energy Efficiency Specialists
- Housing Authority of the City of San Buenaventura
- Midwest Energy Efficiency Alliance (MEEA)
- United Way of Long Island
- Vermont Energy Investment Corporation (VEIC)





Call Participants – Non-Members

- AAA Energy Audits
- AppleBlossom Energy
- City of Orlando
- Cleveland Public Power
- Conservation Connection Consulting
- DAP
- Energy Design Update
- Energy Smart Colorado
- Eversource
- Flathead Electric Cooperative
- Franklin Energy Services
- Fruitfull Energy
- Holy Cross Energy
- JOHNSON A/C
- National Grid (New York)

- NW Energy Coalition
- Okaloosa gas
- Ontario Ministry of Energy
- PA PUC
- Parker Interests Unlimited
- SEEC LLC
- Snohomish PUD
- Solar Habitats, LLC.
- SPEER
- Tenderloin Neighborhood Development Corp.
- TRC Energy Services
- USGBC
- V3
- Ventura County Regional Energy Alliance





Agenda

- Agenda Review and Ground Rules
- Opening Polls
- Brief Residential Network Overview
- Residential Network Training Toolkit Overview
- Featured Speakers
 - Dan Wildenhaus, Building Science Manager, CLEAResult (Network Member)
 - Jeffrey Granger, New Mexico Energy \$mart Academy, Santa Fe Community College
- Discussion
 - What experience do you have with contractor training?
 - What training approaches are most effective for improving work quality?
 - What training is most useful for generating more energy upgrades?
- Closing Polls and Upcoming Call Schedule





Opening Poll #1

- Which of the following best describes your organization's experience with training for energy efficiency professionals?
 - Very experienced/familiar 46%
 - Some experience/familiarity 29%
 - Limited experience/familiarity 20%
 - Not applicable 5%
 - No experience/familiarity 0%





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Opening Poll #2

Which of the following best describes your organization?

- Program administrator or implementer 52%
- Contractor/trade ally 15%
- Training provider 15%
- Other (please specify) 17%





Better Buildings Residential Network

Better Buildings Residential Network: Connects energy efficiency programs and partners to share best practices and learn from one another to increase the number of homes that are energy efficient.

Membership: Open to organizations committed to accelerating the pace of home energy upgrades.

Benefits:

- Peer Exchange Calls 4x/month
- Tools, templates, & resources
- Recognition in media, materials
- Speaking opportunities

- Updates on latest trends
- Voluntary member initiatives
- Residential Program Solution Center guided tours

Commitment: Provide DOE with annual number of residential upgrades, and information about associated benefits.

For more information or to join, <u>energy.gov/eere/better-buildings-residential-</u> <u>network/join</u>





Better Buildings Residential Network Members join together to identify and address common challenges and market opportunities.

Self-Assessment Template

U.S. DEPARTMENT OF





Toolkit – Training

Table of Contents:

- Getting Started With Good Partners
- Types of Training
 - Technical Training
 - Outreach Training
 - Professional Training
- Additional Resources







Toolkit – Technical Training

Contractors:

- Strong building science knowledge necessary
- Need to be able to convey benefits to customers
- Stakeholder engagement informs planning
- Main point of contact







Sales training for contractors:

- Comprehensive evaluation of more than 140 programs in \$500M grant
- Successful programs increased contractors'

sales effectiveness

A top success factor







Sustainable residential energy efficiency markets:

- Have successful contractors that stay in business
- Provide general business assistance and training
- Regular engagement btw programs & contractors

Next Step Living, Out of Cash, Shutting Doors -- March 17, 2016



2013 HPwES Contractor, Housing Innovation Awards





Training Experience Poll

- What types of contractor training has your program offered or used?
 - Technical: building science, EE technologies and techniques 41%
 - Outreach: sales training & promotion of program offerings 29%
 - Professional: business development and management skills -19%
 - None or Not Applicable 8%
 - Other (please explain) 0%





Training Toolkit

Better Buildings

Training Toolkit

BETTER BUILDINGS RESIDENTIAL NETWORK

The Better Buildings Residential Network Training Toolkit can be used by residential energy efficiency programs interested in realizing the value of providing training opportunities for contractors, staff, and volunteers. For example, according to a comprehensive evaluation of more than 140 energy efficiency programs across the country that participated in a \$500 million grant program, contractor training activities have achieved positive results, including more comprehensive upgrades, a higher assessment-toupgrade conversion rate, improved program processes, improved quality control, and increased revenues, among other benefits.

TABLE	OF	CON	TENTS	
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Types	of Tr	aini	ng				•	•	• •	. 2
Tech	nical	Trai	ining		 					. 3
Out	each	Tra	ining		 					. 4
Prof	essio	nal	Traini	ng.						5

This Training Toolkit is for program managers to identify training resources and opportunities to help staff, volunteers, and contractors enhance their understanding of building science; sales and marketing; residential energy efficiency program offerings; and business development. Better Buildings Residential Network members provided input and review for toolkit content.

Successful residential energy efficiency training approaches start with partner organizations that can help deliver training. Three types of training for contractors, staff, energy advisors, and volunteers follow below:

- 1. Technical training: building science, energy assessments, technologies, and techniques
- 2. Outreach training: promotion of program offerings, sales training, and customer engagement
- 3. Professional training: business development and management for participating contractors

Additional resources follow at the end of the toolkit, including more details on the Better Buildings Residential Program Solution Center, which is an online collection of resources and lessons learned concerning training and many other topics from years of hard-won experience by residential energy efficiency programs.

Getting Started With Good Partners

When it comes to training, there's no need to reinvent the wheel. Collaborate with organizations such as colleges, trade groups, and local job or skills development organizations to access and enhance existing training programs and resources. For example, community colleges can be great partners; they have been willing to add home performance studies to their curricula, and in return, can use your program for training with home energy upgrade projects in the field.

Trade organizations and job placement programs for underserved communities also make good training partners, and have access to funding that can subsidize technical training as a way to build the local workforce and economy. Following are just a few programs and examples that have found local partners to enhance training program success:

 Southeast Energy Efficiency Alliance programs partnered with veterans' groups and job training programs to reach and teach new sources of home performance contractors. Nexus Energy Center, the program implementer in Huntsville, Alabama, used a U.S. Department



Learn more at betterbuildings.energy.gov/bbrn

ENERGY

http://energy.gov/eere/better-buildings-residential-network/resources#trainingtoolkit



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Presentation Highlights: Training Toolkit

- Use with contractors, staff, energy advisors, and volunteers:
 - Technical Training:
 - Avoid jargon. Explain building science simply to customers.
 - Outreach Training:
 - Contractor sales training increases business & program success.
 - Professional Training:
 - Successful contractors need business & building science skills.





Lessons Learned: Dan Wildenhaus Building Science Manager CLEAResult



WHAT MAKES TRAINING WORK?

Dan Wildenhaus Building Science Manager/Trainer CLEAResult

Supporting Community Power Works for Home, Energy Trust of Oregon Existing Homes, NEEA Efficient Homes Initiative, and others

Standard program designs depend on standard metrics for measuring success.

How do we measure the impact of quality, well trained contractors and auditors?

Does counting qualified projects really tell us if we have successful training?

The Ripple Effect



Whose goals does the training serve?



Idea Number One

Ask if the training goal is aligned with a program goal.

Program goals are often required to be quantifiable (gaining certifications, lead directly to improved QA, increase conversion rates).

Does a general training on duct sealing lead to specific quantifiable goals?

How about



Root Analysis of core problems

Ask "why" questions three to five times for at least one of our stories



Idea Number Two

Props rule!

In person is likely best, but not always feasible.

Activities help concepts to sink in.

Repetition, repetition, repetition.



Hands on, even when not in the same room.





To learn more, visit: <u>http://www.forwardthinking.hone.weil.com/products/v</u> entilation/ventilation_products.html



REVISION DATE: 10/07/2013



Template Version

Idea Number Three

Program Checklists

Access guides directly from checklists for Zero Energy Ready Home, ENERGY STAR Certified Home, and Indoor airPLUS



Sales Tool Translate building science technical terms into a new language of value.



Building Science Pubs Search library of building science publications from Building America.



Building Components Access guides for new and existing homes based on building components of interest.



Climate Packages Review new home energy efficiency specifications and case studies that exceed 2009 IECC by 30%.



Mobile App Join our mobile community to access saved field kits wherever you need them.



Use resources that provide consistency and are not proprietary

To earn the ENERGY STAR® label, new single-family homes must be built to the Northwest ENERGY STAR Homes Performance Path guidelines. Multifamily projects must be built to one of the Multifamily Builder Option Package, or BOPs. Click on the appropriate topic in the dropdown menu below to find these documents, other tools and resources to help you reach certification.

If you have any questions or cannot find a document you are looking for, please contact us.

Technical Resources	Marketing Materials	Current Incentives	Find a Verifier/Rater
Select a Topic Technical Tools	Ŧ		
Apply			
Title	Description	Updated	File
ASHRAE 62.2 - Table for Wallet Card	Printable wallet-card provides a sheet for calculating CFM	cheat- 01/11/2016	Download
Mini-Split Technology in New Construction	Poster highlighting the benefits considerations for four highly effi heating and cooling strategies advanced performance home	icient for	Download
HR∨ System Best Practices	 Educational tool to help builders HVAC contractors understand considerations for system selec duct design and installation, a testing and commissioning. 	key tion, nd	Download

FINAL THOUGHT

Use trainers that used to be contractors

OR

Invite your program contractors to participate in designing your training program



Presentation Highlights: CLEAResult

- **Goals**: Set specific training goals that meet program goals.
- <u>Pain Points</u>: Reduce contractor "pain" points by hosting trainings on difficult or new industry standards:
 - CLEAResult developed a training with contractors that interpreted 15year old specs for current equipment more effectively.
- Market Successfully: Market trainings using a multipronged effort:
 - Don't flood your contractors with emails; think about the best day and time to reach your audience.
 - Partner with groups like Efficiency First chapters. Use shared training calendars and existing meetings to engage your audience.





Lessons Learned: Jeffrey Granger New Mexico Energy \$mart Academy Santa Fe Community College



WHAT DIDN'T)

Jeffrey Granger, Trainer New Mexico Energy\$mart Academy Santa Fe Community College



IREC Accredited Programs / BPI Certifications



Metrics?

Job Task Analysis (JTA)

Standard Work Specifications (SWS)

State Standards

Training vs. Performance

How do you know that <u>your</u> training programs are working?

How do you get feedback?

SWS

Standard Work Specifications

2.02 Combustion Safety

	ombustion Safety Testing-General Combustion Appliance Zone (CAZ) Testing	
	Assessment	35
2.0201.1b	Fuel leak detection	37
2.0201.1c	Venting	39
2.0201.1d	Base pressure test	41
2.0201.1e	Depressurization test	42
2.0201.1f	Spillage test	44
2.0201.1g	Carbon monoxide (CO) test in appliance vent	45
2.0201.1i	Combustion safety testing at completion of retrofitting home	47
2.0201.2	Combustion Safety	
	Outside combustion make-up air	
2.0201.2b	New appliances	51

Weatherization ... New Mexico Mortgage Finance Authority

2 of 479

March 04, 2015

SWS

Standard Work Specifications

2.0201.1c

Desired Outcome:

Accurate information about appliance safe operation is gathered

Specification(s):

Combustion venting systems will be inspected for damage, leaks, disconnections, inadequate slope, and other safety hazards

Objective(s):

Determine if a draft regulator is present and working and if vent system is in good condition and installed properly



If ventilation system puts occupants at risk, it needs immediate attention



Safe

Properly vented appliances make a house healthier and more efficient

SWS

Standard Work Specifications

How are you using the SWS tool?



https://sws.nrel.gov/

How do we know if "they're" listening?

Quizzes

Student Demos

Student Practice

Student Teaching

Photos | Forms | Diagrams



CAZ Depressurization Test Day 1 Day 2 Day 3 CAZ Door CAZ Door CAZ Door Open Closed Closed Closed Open Open Furnace Fan: OFF Pa Pa Pa Pa Pa Pa Furnace Fan: ON* Pa Pa Pa Pa Pa Pa Category 1 Category 3 Vent Pipe Above 140° Flue positive pressure ·Flue negative pressure Flue gas over 140°F Flue gas is over 140°F Sealed combustion Vent Pipe Negative Vent Pipe Positive Category 4 Category 2 Vent Pipe Below 140° Flue positive pressure ·Flue negative pressure •Flue gas under 140°F Flue gas is under 140°F

Condensing of flue gas

Sealed combustion

Some condensing of

flue gases

I agree... Props Rule!

Teach Process

PPE Requirements

Case Studies

Multiple Vendors (red & gold / black & white)








Distance Learning Prerequisite

Retrofit Installer Technician

Energy Auditor

Crew Leader

QCI Multi-family

Quality Control Inspector

SANT/	FE COM			
Login				
jeffrey.gran	iger			
Password				
•••••	••			
Stay signe			Log) In
Forgot Passv	word?			
User Research	Help	Privacy policy Twitter	Terms of service	Facebook
	B	Y INSTRUC	TURE	

Distance Learning Prerequisite

Retrofit Installer Technician

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Welcome to the Virtual Academy

We at the New Mexico Energy\$mart Academy would like to welcome you to this online training course for **Crew Leaders**. You are probably like us, and don't have much time in your normal day for training. Don't Panic. You can access your course from anywhere in the world as long as you can get an internet connection...even on your smartphone!

A syllabus for this course is available at this link: Crew Leader Online Syllabus 📄 🧭

To navigate through this course start by clicking on the MODULES tab on the left side of this page. You can identify the purpose of a Module, just by looking at its **icon**. Our courses generally have 4 types of Modules - Discussions, Pages, Assignments, and Quizzes.

In-person Classes

Retrofit Installer Technician

Energy Auditor

Crew Leader

QCI Multi-family

Quality Control Inspector

Reinforce Online Content









Add to the list....

Presentations

Videos

Props

Equipment

Forms

Checklists

Role Playing

Games

Textbooks

Distance Learning

What are <u>you</u> using to train employees or contractors that wasn't mentioned?

Presentation Highlights: Santa Fe CC

- Feedback: Use auditors to ensure trainings have positive impacts
- <u>State Focus</u>: Help contractors navigate local standards and specs.
- <u>Changes</u>: Train contractors to sell the value of change to consumers:
 - Communicate the value of automatic controls in new equipment
 - Training can help contractors explain the value of automatic controls in new equipment to clients.
- Repetition, repetition, repetition:
 - Before: Outline goals and skills to be addressed in training.
 - During: Use props and interactive materials to engage trainees.
 - After: Give tools, like templates, that can be used in the field.





Residential Program Solution Center Resources

Training resources to help you support your contractors:

- <u>Contractor Engagement & Workforce Development –</u>
 <u>Develop Resources</u> like procedures, forms, & materials.
- How successful programs offered multiple training opportunities to contractors.
- Provide materials and training to ensure data quality, consistency, and accuracy.



- While you're there, see the latest <u>Proven Practices</u> post on <u>Helping Contractors Sell Home</u> <u>Upgrades</u>.
- The Solution Center is continually updated to support residential energy efficiency programs—<u>member ideas are wanted</u>!





Residential Program Solution Center Navigational Example

Buildi

Contractor Engagement & Workforce Development – Develop Resources Print this handbook Where Am I? 📆 PDF of handbook Description Step-by-Step Tips for Success Examples Toolbox Topical Resources Develop training resources for participating contractors Step-by-Step At this point, you have assessed the market [1] to determine skill gaps and training needs, identified partners Having defined your contractor audience and pa to help with training (III), and made design decisions (IIII) about training and workforce development. These engagement plan, and created evaluation plans efforts should have helped you to identify any gaps in training at the intersection of program requirements, they need, and support quality installations of e contractor skills, and training providers. To fill these gaps, you will likely need to develop resources to support technical and business skills training, and to establish mentoring processes to help home performance professionals develop and retain their skills. In this step, you'll learn about developing training resources by working with your training partners and the types of training to provide. RETURNING TRAINER SIGN IN I NEW TRAINER? REGISTER cal resources, and on whether you've and the program requirements with industry standards GO forgot password? Home tions, you may have fewer resource-development in in this arena. To the extent that you've 2015 Training Guide ue standards or that local training partners cannot meet technical needs, though, you need ed to invest in developing training resources. In any event, I want to work with your STER A PROGRAM HOME I TRAINING GUIDE HOME I LIST OF TRAINERS I mers, so that they understand program requirements and can b epare contractors to meet Home Energy Guide to Training Programs Join hundreds of other students of Find a Training Program whole-house performance by finding Use the search form below to hone in on the right training for you in your area ergy magazine maintains a database of national, regional, and local training organizations. the training courses that meet your needs of North America and within your areas of interest. Come back often, as this help you find partners 🛄 to work with directly. Alternatively, some of your local partners may list is ever-expanding! Good luck with your training! New trainings come about every day in ble to team up with other training organizations to speed the development of technical areas like weatherization, auditing, Name of organization lesigned to meet the needs of contractors in your program. and HERS rating so check back National Regional Are you looking for a specific trainer? Both can be selected often State or Province - Please Select -Which, if any, weatherization assistance program training areas are you interested in? Basic Competencies Inspector Safe Work Practices Consumer Education Installer Monitor (technical) Crew Chie Monitor (administrative) U.S. DEPARTMENT OF Audito Program Manage

Solution Center Resource Slide Poll

- How have you used the Solution Center slide information after Peer Exchange calls?
 - N/A (this is my first Peer Exchange call) 44%
 - It caused me to explore the Solution Center 31%
 - I have explored one of the resources in depth 13%
 - I have not done anything based on the slide 13%
 - I have clicked on 1+ resource URLs on the slide 0%





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Discussion Highlights

- Use multiple learning methods to create engaging training:
 - Props: mobile props can provide hands-on learning in the field.
 - Virtual learning: Create online learning opportunities.
 - Public resources: Use online databases; Don't reinvent the wheel.
 - Custom materials: Give trainees templates to fill in & customize.
 - Role play: Practice working with equipment & customers.





Closing Poll

- After today's call, what will you do?
 - Seek out additional information on one or more of the ideas 54%
 - Consider implementing one or more of the ideas discussed 31%
 - Make no changes to your current approach 8%
 - Other (please explain) 8%





Peer Exchange Call Series

We hold one Peer Exchange call the first four Thursdays of each month from 1:00-2:30 pm ET

Calls cover a range of topics, including financing & revenue, data & evaluation, business partners, multifamily housing, and marketing & outreach for all stages of program development and implementation.

Upcoming calls:

- April 21: Advances in Integrating Energy Efficiency into the Real Estate Market (301)
- April 28: Driving Change in Residential Energy Efficiency: Electric Vehicles (301)
- May 5 No call
- May 12: Bullseye: Top Strategies for Targeted Marketing (101)
- May 19: Walking the Talk: Employer Assisted Programs (301)

Send call topic ideas to <u>peerexchange@rossstrategic.com</u> See the Better Buildings Residential Network Program <u>website</u> to register





LET'S ALL MEET IN MAY!

REGISTER TODAY for the BETTER BUILDINGS SUMMIT Washington, DC · May 9-11, 2016

This Summit will bring together Better Buildings partners and stakeholders to exchange best practices and discuss future opportunities for greater energy efficiency in America's homes and buildings.

There will be time set aside for a specific Residential Network discussion and meet-up! See the draft agenda <u>here</u>.





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Annual Member Reporting and Recognition

We are eager to hear about and recognize your accomplishments from 2015!

- Share your number of upgrades, and any related benefits
- New template makes it easier

Y) 2015 using this templated the information requestent, spreadsheet, graphic, ation name:	number of upgrades and associated to by May 13, 2016 to <u>bbresidentialnet</u> ted below in another format, such as vi or chart.	work@ee.doe.gov,
f contact:		RECOGNITIO
RADES:		
Home energy upg	rades completed in FY 2015 (Octobe	er 1, 2014 – September 30, 2015) *
itial building's (e.g., single-fa	mily home, multifamily unit, multifamily bui	 Any transaction intended to improve a lding) enclosure or mechanical system
ignificant aspect of your work IERGY STAR® Sponsors, G	concerning residential energy efficiency in eorgetown University Energy Prize particip	n the section below. Home Performance
EFITS:		
ts associated with comple	ted upgrades (feel free to attach more	information):
		Benefits Examples from
		FY 2014 Reporting
stions for benefits to inclu	de:	 78,530 MMBtu annual energy savings; \$60,256,000 lifetime cost benefit
row saved	Partnerships	- Efficiency Main
ney saved by consumers nomic impacts	 Health benefits Environmental benefits (e.g. greenhouse gaß or Water savings) 	 250,980.17 kWh saved annually; \$62,006.91 annual cost savings; 33,589.82 therms saved annually
	Jobs created or workers trained or certified	 Civic Works, Baltimore, ME
		w about? Please share below or
	the buildings Residential Net thial building's (e.g., single-fa sublation, air sealing, window If your organization does not ignificant aspect of your work VERGY STAR® Sponsors, G 31, 2018, do not need to rep EFITS: Its associated with comple estions for benefits to inclu- ary saved mey saved by contumers nome impace inings, assessments completed liftle! Are there any other	Its associated with completed upgrades (feel free to attach more its associated with completed upgrades (feel free to attach more issions for benefits to include: ing saved



