Better Buildings Residential Network Peer Exchange Call Series: *Where Do We Go From Here? The Changing Landscape of Residential Energy Efficiency (201)*

February 18, 2016

*Call Slides and Discussion Summary*
Call Attendee Locations
Call Attendee Locations, continued
Call Participants – Network Members

- Alaska Housing Finance Corporation
- Arlington County
- Boulder County, CO
- Build It Green
- CalCERTS, Inc.
- City of Kansas City, MO
- City of Providence, RI
- Civic Works
- CLEAResult
- Conservation Consultants Inc.
- Earth Advantage Institute
- Ecolighten Energy Solutions Ltd.
- Efficiency First

- Efficient Windows Collaborative
- Energy Efficiency Specialists, LLC
- Local Energy Alliance Program
- Metropolitan Washington Council of Governments
- Midwest Energy Efficiency Alliance
- NYSERDA
- OmStout Consulting
- South Burlington Energy Committee
- VEIC
- WECC
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<th>Call Participants – Non-Members (1 of 4)</th>
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Call Participants – Non-Members (2 of 4)

- EfficiencyOne
- Ekotrope
- Emerson Climate Technologies
- Energy Design Update
- Energy Solutions Center
- ENSYSS
- Facility Management Consultores
- Fruitfull Energy
- Fujitsu General America
- GeoPraxis
- Green Builder
- Greenergy Chicago, Inc.
- Hgi
- Holy Cross Energy
- Home Innovation Research Labs
- Home Office Training & Technology
- HSB I&I
- Idaho Division of Building Safety
- Iowa State University
- La Plata Electric Association
- LANL
- Mercy Housing
- NANA
- Nat. Assoc. of Realtors
- Natural Resources Canada
- Navigant Consulting
- New Hampshire Electric Co-op
- New world Eco center
- Northeast Energy Efficiency Partnerships
- NREL
- Nu Wool Co
- Okaloosa Gas District
- Opportunity Council
Call Participants – Non-Members (3 of 4)

- Ekotrope
- Emerson Climate Technologies
- Energy Design Update
- Energy Solutions Center
- ENSYSS
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- Northeast Energy Efficiency Partnerships
- NREL
- Nu Wool Co
- Okaloosa Gas District
- Opportunity Council
Call Participants – Non-Members (4 of 4)

- OptiMiser
- Orange Energy Solutions
- PEG, LLC
- PG&E Energy Training Center
- Philadelphia Gas Works
- Proctor Engineering Group, Ltd.
- Rocky Mountain Institute (RMI)
- Salcido Solutions
- SDHDA
- SMS
- Snohomish County PUD
- Southern Energy Management
- Sustainable Real Estate Consulting Services
- The Durst Organization

- The Energy Network
- The Oberlin Project
- Therma-Stor LLC
- TNDC
- TRC Energy Services
- Universidad Autonoma de Occidente
- University of Wisconsin-Madison
- University of Wisconsin-Madison
- US EPA
- Vogtle
- XLR8SUN.com
Agenda

- Agenda Review and Ground Rules
- Opening Polls
- Brief Residential Network Overview
- Featured Speakers
  - Rachel Gold, Rocky Mountain Institute
  - Mike Rogers, OmStout Consulting (Network member)
  - Nate Natale, Home Performance Coalition
- Discussion
  - What changes or trends have you observed in the market for home energy upgrades? Which have been most significant?
  - What do those changes imply for different market actors – energy efficiency programs, contractors, financial industry, realtors, consumers, etc.?
  - What, if anything, are you going to do differently in your energy efficiency program/business based on the changes in the industry?
  - Other questions/issues related to changes in the residential energy efficiency sector?
- Closing Poll and Upcoming Call Schedule
Opening Poll #1

What type of organization are you affiliated with?
- Consulting firm – 28%
- Non-profit organization – 25%
- Federal, state, or local government – 21%
- Utility – 12%
- Other – 21%
Opening Poll #2

What is your role in residential energy efficiency?
- Program administration and support – 53%
- Research and evaluation – 45%
- Service delivery and implementation – 32%
- Not involved in residential energy efficiency – 1%
- Other (please explain) – 18%
Opening Poll #3

Which of the following best describes your organization’s familiarity with trends affecting the residential EE sector?

- Very experienced/familiar – 52%
- Some experience/familiarity – 43%
- Limited experience/familiarity – 5%
- No experience/familiarity – 0%
- Not applicable – 0%
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, email bbresidentialnetwork@ee.doe.gov
Rachel Gold
Senior Associate
Rocky Mountain Institute
Trends and Opportunities in Home Energy Upgrades

Rachel Gold, Rocky Mountain Institute
February 18, 2016
DOE Better Buildings Residential Network
Organizing Focus: the Customers
RE+ Workshop

- November 2015 in Washington, DC
- **Organizing question:** How can we unlock the residential energy market so that the majority of existing single-family homes in the U.S. get energy upgrades in the next 15 years?
Trend: Consumer Demand Gap Between Unmet Needs and Action

- Energy efficiency is the **#1 unmet need** in homes
- But, the rate of home energy upgrades is **decreasing**

Source: Demand Institute

![Chart showing satisfaction gap](chart.png)

"Is very energy efficient with low monthly utility costs"

- 71% think it's important
- 35% satisfied with current home

Satisfaction Gap: 36%

"Which of the following have you done to improve EE in your place of living?"

- **2012**
  - Turn off lights, TVs, appliances when not in use
  - Looking for the ENERGY STAR label when replacing appliances
  - Reducing hot water use with shorter showers or cold water washer cycles

Source: Harris Poll
National Engagement Campaign

Workshop Results

Workshop group
• created **plan to create and distribute a compelling national engagement campaign** that accelerates and scales the uptake of energy upgrades in U.S. homes

RMI
• Developing campaign with Edelman and Shelton Group
• Designed to support broader goal to make energy upgrades the **expected and aspired-to standard in our homes**

Getting Involved

We’ll be looking for partners to get involved **in supporting the production, testing, and distribution** of the message.

If you're interested in being part the campaign, **contact Doug Miller at RMI**
Trend: Value Increasingly Visible, but Needs Translation for Market Actors

- New willingness of market actors to share information about energy upgrades
- Increasing evidence that energy upgrades improve asset value and reduce default rates
Finance the Future Campaign

Workshop Results

Workshop group
• Identified “silver bullet” opportunity to comment on FHFA “Duty to Serve” rule

If successful, home energy use would be incorporated in underwriting practices, which could
• 1) mitigate default and collateral risk and
• 2) improve access to higher quality building stock for low-moderate income homeowners

Getting Involved

RMI in partnership with the Institute for Market Transformation (IMT) and Natural Resources Defense Council (NRDC) is providing organizations with materials and "talking points" to enable them to comment during the public comment period.

If you’re interested in commenting before the March 17th deadline, contact financethefuture@rmi.org
Thank you!

For more, check out: http://www.rmi.org/residentialenergyplus
Presentation Highlights: Rocky Mountain Institute

- **Bridging the gap:** Customers indicate that energy efficiency (EE) is important and that they are unsatisfied with the efficiency of their homes, but the number of upgrades is decreasing in many places. There is an unmet need to bridge the demand gap.

- **Behavioral economics** can be leveraged to address the gap, for example creating social pressure for EE.

- **Market actors**, such as real estate agents and appraisal professionals, can help increase the visibility of EE upgrades by sharing information.

- **Energy upgrades improve asset values** and default rates; studies uphold this, but people don’t consider that when they buy homes.

- **Equipment manufacturers** can help by producing more efficient equipment and customizing messaging to sell EE.

- **Real estate community** is helping through realtor/appraiser education to help homeowners understand the value of EE.
Mike Rogers
President
OmStout Consulting
Looking out at Home Energy Upgrades

What’s coming down the pike that impacts your efforts to improve the efficiency of America’s homes.
Gasoline in the U.S. is the cheapest it's been since 2010. Gas has dropped more than $1 per gallon from this year’s high and in some cities a gallon costs less than $2.

Electricity Price Poll

• How much do YOU pay per kWh for electricity?
  – Less than $0.16/kWh – 58%
  – $0.16/kWh to $0.23/kWh – 26%
  – More than $0.23/kWh – 2%
  – Not sure / I don’t know – 14%
People don’t want heating fuel or coolant, people want cold beer and hot showers.

—Amory Lovins
Focus on What People Care About

• Comfort
• Health
• Convenience
• Cool
PACE!
PACE Defined (at least in CA)

- Property tax assessment
- Maximum lien-to-value of 15%
- 5-25 year terms
- $5,000 - $200,000!
- Interest rates: around 6-8% +/-
- Plus closing costs
Residential PACE

61,000 Projects
$1.4B Volume

18 States w/ enabling legislation (residential)

Source: PACE Nation
Homes with PACE Improvements sell for higher prices than homes without upgrades.

“PACE Loans: Does Sale Value Reflect Improvements?”
by Laurie Goodman and Jun Zhu
Time On Market?
Will it Blow PACE up?
"I wouldn't ever do it again," Lopez said of the PACE program he used to pay for the windows.
PACE Challenge?

80 / 20 Rule

Recruitment of, engagement with, and strong participation by contractors is a hurdle
90 / 10 Rule
Contractors

• Started in 2006.
• “Acquired” Recurve installation division in 2010.
• A top contractor in PG&E’s EUC program
Contractors

• Started in 2010.
• 2013 U.S. DOE Housing Innovation Award
• 2013 HPWES Top Contractor Award
• 2013 & 2014 U.S. DOE Century Club Award
It’s not all Gloom & Doom - Training can help

• Increased sales 12% (2013 to 2014)
• Ticket sizes increased.
• Profits DOUBLED.
• Quarter over Quarter EUC submissions doubled.
Program Implications

• Brands and incentives... helpful, but not enough.
• To scale, you must understand the market, and how to profit.
• You can’t ignore the business side.
• Find and promote success.
• Work with partners to build tools needed for success.
Thank you!

Mike Rogers
OmStout Consulting
http://omstout.com

twitter: @EnerGMMatters
Doing well by doing good: Programs must work with contractors to help them incorporate EE into their business models, so that they can continue to prosper once incentives are gone.

Many contractor business models can work: Whole-home energy upgrade contractors have had success, but so have other contractors. Some contractors start from the HVAC side and grow from the ground up to address entire homes; some don’t even call themselves home performance contractors.

PACE financing does not solve the split incentive issues for multifamily properties, but the financial community is interested in PACE as an exciting part of the future of home performance.

Learn how/when PACE financing could apply in your market: See the PACEnation website.
Nate Natale
Vice President of Education and Events
Home Performance Coalition
An Introduction & Current Industry Engagement Activities

Nate Natale
February 18, 2016
DOE Better Buildings Residential Network
Aligning for Industry Growth

ACI
a division of the Home Performance Coalition

+ National Home Performance Council

= a division of the Home Performance Coalition

Home Performance Coalition
Current Activities: Innovation Forum Series

The Innovation Forum Series explores the opportunities and barriers we face as an industry interested in enhancing the performance of 130 million single and multifamily homes in the United States.

Market Innovation Forum

- Held this past December in San Francisco, CA
- 40 leaders from the manufacturing, financial, health, technology, and contracting sectors
- 4 working groups; 10 projects emerged

Special thanks to U.S. Department of Energy for its continued support of the Home Performance Coalition’s work.
Market Innovation Forum
Outcomes & Next Steps

4 Working Groups:

- Partnerships
- Contractor Business Development
- Market Creation
- Data

An Overarching Need Emerged

- A unifying marketing & communications strategy for our industry

How You Can Get Involved:

- www.homeperformance.org
- Read our “Brief Summary of the Market Innovation Forum” and “Summary and Actions We Can All Take to Scale Our Industry” documents
- Be inspired to join a working group and help us seize the day!
Presentation Highlights: Home Performance Coalition

- **Collaborative engagement** is working to help the industry to realize its full potential. Home Performance Coalition (a merger of ACI and National Home Performance Council) is working in concert with Efficiency First, BPI, and Home Energy Magazine to achieve that goal.

- **Develop a new model.** To adapt and evolve, home performance needs new tactics:
  - Reduce the “arrogance to relevance” ratio and accept that incremental improvements are a good thing, be more inclusive (bring manufacturers to the table), develop a collaboration innovation track
  - Develop digestible infographics
  - Create “one stop shopping” for home performance
  - Establish a partnership among multi-system operators
  - Centralized platform for research and aggregated data access
  - Pursue policy focus at the national level
  - Develop a unifying message to rally around
Explore planning, implementation, & evaluation strategies in the Residential Program Solution Center

- **Handbooks** - explain why and how to implement specific stages of a residential program.
- **Quick Links** - provide easy access to resources on the key issues that many programs face.
- **Proven Practices** posts - include lessons learned, examples, and helpful tips from successful programs.
  - See the latest post on [Streamlined Loans](#).

The Solution Center is continually updated to support residential energy efficiency programs—*member ideas are wanted*!}

[www.energy.gov/rpsc](http://www.energy.gov/rpsc)
Poll on Market Trends

- Which of the trends discussed today have you observed?
  - Consumers are more interested in non-energy benefits – 65%
  - Market actors more willing to share info on energy upgrades – 35%
  - Consumer demand for home energy upgrades is declining – 28%
  - Home performance contractors are going out of business – 25%
  - Other trends or comments (please explain) – 20%
Discussion Questions

- What changes or trends have you observed in the market for home energy upgrades?
  - Which have been most significant?
- What do those changes imply for different market actors – energy efficiency programs, contractors, financial industry, realtors, consumers, etc.?
- What, if anything, are you going to do differently in your energy efficiency program/business based on the changes in the industry?
- Other questions/issues related to changes in the residential energy efficiency sector?
Closing Poll #1

- After today's call, what will you do?
  - Seek out additional information on one or more of the ideas – 87%
  - Make no changes to your current approach – 6%
  - Consider implementing one or more of the ideas discussed – 0%
  - Other (please explain) – 6%
Closing Poll #2

What actions will you consider based on the opportunities you heard about today?

- Participate in Home Performance Coalition Workgroups – 57%
- Participate in engagement campaign as a testbed for messages – 39%
- Learn how/when PACE financing could apply in your market – 39%
- Comment on FHFA “Duty to Serve” rule – 18%
- Other (please explain) – 21%
What Can We Do Next?

- Participate in national engagement campaign as testbed or distribution channel for messages: contact Doug Miller at RMI.
- Learn how/when PACE financing could apply in your market: See the [PACEnation website](#).
- Comment on [FHFA Proposed “Duty to Serve” rule](#) by March 17: Contact [financethefuture@rmi.org](mailto:financethefuture@rmi.org) for talking points.
Peer Exchange Call Series

We hold one Peer Exchange call [almost] every Thursday 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:

- **March 10**: Addressing Barriers to Upgrade Projects at Affordable Multifamily Properties (201)
- **March 17**: Rainbows and Leprechauns: Finding Gold in Partnerships (101)
- **March 24**: Home Improvement Catalyst: Sequencing Upgrades and Engaging Homeowners over Time (201)
- **April 14**: Training: How to get Results - What Matters, What Doesn’t (201)
- **April 21**: Advances in Integrating Energy Efficiency into the Real Estate Market (301)
- **April 28**: Driving Change in Residential Energy Efficiency: Electric Vehicles (301)

Send call topic ideas to peerexchange@rossstrategic.com
Join us @ ACI National Home Performance 2016

Kick-off with DOE on Monday, April 4!

Home Performance with ENERGY STAR Partner Meeting, 8:30 am - 5:00 pm
including special breakout sessions:
- Home Energy Score, 1:30 - 2:50 PM
- Home Energy Information Accelerator, 3:00 - 4:20 PM
- Trade-Based Approach – DOE Home Improvement Catalyst, 3:00 - 4:20 PM

Getting Started with HPXML workshop – Monday afternoon

Meet us at many more sessions, April 5-7!

Early registration deadline: March 3.
Meet us at sessions, April 5-7!

**T, 4/5**
- Home Upgrade Program Models for Acquiring Savings in Multiple Climate Zones
- Residential Energy Labels, Why Should You Care & What Do You Do About It?

**W, 4/6**
- Showcasing Home Performance with ENERGY STAR Contractors
- Transforming the Market with HPXML: Strategies and Lessons Learned
- What Building America Learned in 4 Years About Retrofits & Staged Upgrades
- Realizing the Market Value for High Performance Homes: Reports from the Field
- Health & Home Performance: Unlocking New Funding, Marketing, & Data Value
- The Quest for Smarter Performance Measurement
- The Home Energy Data Huddle: Getting together to Build an Information Pipeline

**R, 4/7**
- Home Performance Financing Update & Options to Help Close More Jobs
- Insights from the Better Buildings Neighborhood Program Evaluation
- America’s Building Blocks to High Performance Housing

Download the full [ACI National Home Performance Conference Agenda](https://www.aci.org) for more details.
REGISTER TODAY for the BETTER BUILDINGS SUMMIT
Washington, DC · May 9-11, 2016
SAVE YOUR SPOT NOW:
https://ww2.eventrebels.com/er/Registration/StepRegInfo.jsp?ActivityID=14611&StepNumber=1

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!