



**Better Buildings Residential  
Network Peer Exchange Call  
Series: *Shark Tank: Residential  
Energy Efficiency Edition***

December 3, 2015



*Call Slides and Discussion Summary*



# Call Participants: Residential Network Members

- Brooklyn Green Home Solutions
- Center for Energy and Environment (CEE)
- City and County of Denver
- Cool Choices
- Home Energy Affordability Loan (HEAL) Program
- Home Energy Analytics, Inc.
- Honeywell International, Inc.
- International Center for Appropriate & Sustainable Technology (ICAST)
- Midwest Energy Efficiency Alliance (MEEA)
- Milwaukee Energy Efficiency
- NeighborWorks of Western Vermont
- New York State Energy Research and Development Authority (NYSERDA)
- Performance Systems Development (PSD)
- Pure Eco Environmental Solutions
- ResiSpeak
- Wisconsin Energy Conservation Corporation (WECC)

# Call Participants: Non-Members

- AC Home Performance Inc.
- BC Housing
- BlueGreen Alliance
- Cascade Natural Gas Corporation
- Center for EcoTechnology, Inc.
- City of Ann Arbor
- City of Minneapolis
- CLEAResult
- Energy Programs Consortium
- Franklin Energy Services
- greeNEWit
- Holy Cross Energy
- La Plata Electric Association
- National Renewable Energy Laboratory (NREL)
- Navigant Consulting
- Next Step Living
- PG&E
- Snohomish County PUD
- Southern Energy Management
- V3 Power LLC

# Agenda

- Introduction and Better Buildings Residential Network Overview
- Call Format
- Get to Know the Sharks
  - Ludy Biddle, Executive Director, NeighborWorks of Western Vermont (*Network Member*)
  - Keith Canfield, Director, Corporate Sustainability, Clinton Climate Initiative
- Contestants:
  - Kathy Kuntz, Executive Director, Cool Choices (*Network Member*)
  - Steve Schmidt, Founder & COO, Home Energy Analytics (*Network Member*)
  - Molly Graham, Program Associate, Midwest Energy Efficiency Alliance (*Network Member*)
- Audience Poll--Vote on the Pitches
- Shark Ranking and Advice
- Closing Polls and Wrap-up

# 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

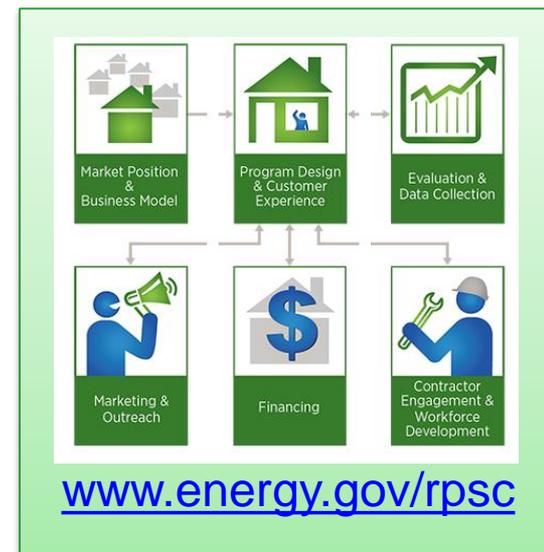
**Commitment:** Provide DOE with annual number of residential upgrades, and information about associated benefits.

*For more information or to join, email [bbresidentialnetwork@ee.doe.gov](mailto:bbresidentialnetwork@ee.doe.gov)*

# Related Resources in the Residential Program Solution Center

Explore innovative ideas for advancing residential energy efficiency:

- How [innovative home tours helped homeowners understand energy savings in CA](#).
- [Capturing Energy Efficiency in Residential Real Estate Transactions](#).
- BBRN [social media toolkit](#) can be used to help residential energy efficiency programs learn to engage potential customers.



While you are there, see the latest [Proven Practices](#) post on [Information Technology \(IT\) Systems](#).

The Solution Center is continually updated to support residential energy efficiency programs—[member ideas are wanted!](#)

# Residential Program Solution Center Navigational Example

## Better Building Search

EERE » BTO » Better Building

Solution Center Home

About

Handbook Index

Quick Links

Proven Practices

Energy Data Facts

Glossary

BROWSE BY:

Program Components

Program Design

Phases

Content Types

ADMIN MENU

Content Manager

Add Content

User Data

 Better Building

U.S. DEPARTMENT OF ENERGY

## Search

Enter your keywords

home tours

Search

## Search results

### [Energy Upgrade California - Post Home Tour](#)

Author: Energy Upgrade California

Publication Date: 2011

*Survey form used by Energy Upgrade California to gauge homeowner interest in obtaining further information about*

### [Innovative Home Tours Help Homeowners Upgrade](#)

Author: U.S. Department of Energy

Publication Date: 2012

*Story on how California homeowners are learning about energy efficiency demonstration homes.*

### [Proven Practices: Host in-Home Events to Jump-Start Outreach](#)

*Most residential energy efficiency programs eventually find themselves asking, how can we jump-start our outreach to get better results? Successful programs across the United States have used in-home events to showcase completed projects and actual results—especially the homes of trusted neighbors and friends—allows potential customers to see and hear firsthand from satisfied customers.*

### [Make upgrade benefits visible by showcasing](#)

*This is a Tip for Success*

## CURRENT SEARCH

Search found 4 items

### Proven Practices: Host in-Home Events to Jump-Start Outreach

Posted on July 21, 2015

Most residential energy efficiency programs eventually find themselves asking, **how can we jump-start our outreach to get better results?** Successful programs across the United States have used in-home events to make upgrade benefits visible by [showcasing completed projects and actual results](#). Attending tours of upgraded homes—especially the homes of trusted neighbors and friends—allows potential customers to see and hear firsthand from satisfied customers, talk directly to the contractors who performed the work, and ask questions or sign up with program staff to start the upgrade process.

A few proven practices to making upgrade benefits visible include:

#### Show How Assessments Work

Energy Impact Illinois used “house parties” to build momentum for energy assessments and upgrades by leveraging the credibility of trusted neighbors who hosted contractors to show guests where energy was being wasted and explain ways to improve comfort while saving energy. Discover how [Energy Impact Illinois Learned That Parties Sell Upgrades](#).

#### Hold House Tours

NOLA WISE (New Orleans, Louisiana Worthwhile Investments Save Energy) gave open house tours in the upgraded homes of happy clients. Signs throughout the house and the upgrade contractor highlighted the work that was completed and the associated energy savings.

#### Invite the Whole Neighborhood

In Jacksonville, Florida, Shop Smart with JEA fostered community awareness with the Home Energy Makeover: Block Party. Homeowners who contracted with a local energy professional to receive a home energy assessment offered to host block parties for their neighbors, and the energy professional reviewed the assessment and upgrade process, discussed rebate options, and answered questions from friends and neighbors who attended the parties.

#### Make Efficiency Personal

The California Center for Sustainable Energy (CCSE) provided demonstration tours in homes that completed upgrades in Chula Vista, California. Potential customers could learn about their neighbors’ experiences, ask questions of the home performance professionals who installed the upgrades, and sign up for an energy assessment of their own home for less than \$50.

#### Tell Me More

Discover more residential energy efficiency outreach tips by visiting the [Marketing & Outreach – Develop](#)



[California \(2\)](#)

# Shark Tank!



# Shark Tank Format

- Each contestant will give a 3 minute pitch
- Sharks will ask questions
- Audience will ask questions—please chat them in via the “Questions” box

After all of the pitches...

- Audience will rank pitches via poll
- Sharks will give their ranking, explanation, and advice

# Getting to Know the Sharks



Ludy Biddle  
Executive Director, NeighborWorks of Western Vermont



Keith Canfield  
Director, Corporate Sustainability, Clinton Climate Initiative

# Pitch 1: Community-led strategies for encouraging resident sustainability



Kathy Kuntz, Executive Director, Cool Choices

Expand and Deepen Engagement  
-More Participation  
-More Savings per Participant

Kathy Kuntz  
Cool Choices



# It's Not Me, It's You



# A Fun, Social and Easy Approach

- Record actions, earn points
- Make sustainability visible
- Generate data
  - Actions taken
  - Additional opportunities



- *Builds momentum*
- *Drives participation in other programs*





# Mobilizing Whole Communities

## Game Results | Green Madison Online Sustainability Game

November 23, 2015

**What a game! Congratulations on your sustainable actions!**

Over the last 8 weeks, Madisonians from across the city and over 40 organizations have taken part in the Cool Choices online sustainability game. Here are the results of the game, **special recognitions** and **grand prize winners**.

### Game Impacts & Stats

**850+ Signed Up to Play**



**41,445 Cool Choices**

**\$245,855 Saved**

(Savings from brand new actions alone = \$148,300+)



**1,669,762 lbs CO2 Avoided**

(Reductions are equivalent to 661 car trips from LA to NYC)

- 40+ business partners
- 171 teams
- Chamber of Commerce support for 2016 game





**designCraft Advertising**

8 mins · 🌐

designCraft Advertising came in 30th place out of 171 teams in Green Madison's Fall 2015 Cool Choices game. We plan to be #1 in the rematch this Spring.



## Game Results | Green Madison Online Sustainability Game - Green Madison

What a game! Congratulations on your sustainable actions! Over the last 8 weeks, Madisonians from across the city and over 40 organizations have taken part in the Cool Choices online sustainability game. Here are the results of the game, special recognitions and grand prize winner...

[GREENMADISON.ORG](http://GREENMADISON.ORG)



# Pitch Highlights: Cool Choices

- Cool Choices is an online sustainability game where participants earn points for making sustainable choices and changes in their lives.
- 9 out of 10 households assume they are either average or above average for energy conservation. The game provides a form of “social proof” to motivate people to live more sustainably by comparing their usage to others.
- The game also generates data that helps programs target outreach to participants.
- It is currently played in different offices, but was also piloted at the community level in Madison, WI.

# Q&A: Cool Choices (slide 1 of 2)

## **Is Cool Choices replicable? Have you expanded the idea in other markets and across demographics?**

- People are playing Cool Choices in a wide variety of businesses from law firms to manufacturing facilities where people on the ground floor are participating. One participating company has 40 facilities nationwide and employees play nationally.

## **How do you quantify the game's impact on behavior?**

- Individuals claim points for activities, like lowering the temperature of a water heater, Cool Choices then follows up to ask what kind of water heater it is (gas or electric) and estimates the savings based on a calculation.

## **Can you talk about your average participants; do the actions result in long-term behavioral change?**

- We think about persistence at the measured, behavioral level. For example, adjusting the temperature of a water heater likely means that a participant won't touch it again after the game is over, so the energy savings will last. For other behaviors, like eco-driving, most participants lose that behavior in 6 months.

## **What are the barriers for scaling?**

- The program works most effectively when there's a collaboration between HR and sustainability departments, but that's rare in the corporate world. With more Millennials in the workforce, more employees want their companies to support sustainability, creating more opportunity.

# Q&A: Cool Choices (slide 2 of 2)

## **What percentage of employees at a workplace generally participate?**

- On average, 40% of employees participate, but there's a lot of variance. In some offices 70-80% of employees participate. Manufacturing can have over 50% participation, including factory floor staff. We've found that public agencies are the most difficult to get high rates of participation. The general trend is the program can double the percentage of employees who participate in a corporate wellness program.

## **How are you funded?**

- Companies pay for Cool Choices.

## **The kinds of actions participants take seem to be lighter touch, are there ways to encourage people to do deeper upgrades of homes (insulation, duct sealing, etc.)?**

- We think about actions as a journey. Simple actions can put people on a path to take on deeper measures and can identify them as good candidates for energy efficiency programs. Bonus points are given for larger projects. Additionally, renters can earn points for talking to their landlords about upgrades and passing their landlords name onto program partners.

## **Does social proof drive action or could sharing people's household data of how they stack up relative to their neighbors be similarly motivating?**

- There's a need to demonstrate that you are taking sustainable actions, that makes it more real and personal than just household energy use data.

# Pitch 2: Energy analytics to engage homeowners and identify energy efficiency upgrade opportunities



Steve Schmidt, Founder and Chief Operating Officer, Home Energy Analytics

# EE Options: The big 3



## 1. Building



## 2. Stuff



## 3. Behavior



*Challenge: Which to target for each home?*

# One size doesn't fit all

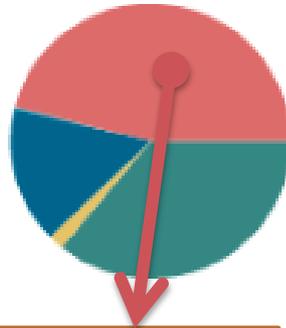


\$1,924/year

Same bill

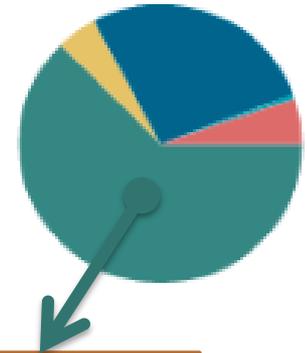
\$1927/year

Winter Heating	\$885	46%
Summer Cooling	\$4	0%
Variable	\$308	16%
Recurring	\$35	2%
Base	\$692	36%



Heating Efficiency: **13** BTU/sf/hdd  
EE Focus: **Building**

Winter Heating	\$100	5%
Summer Cooling	\$8	0%
Variable	\$522	27%
Recurring	\$90	5%
Base	\$1,207	62%



Electric base load: **375** watts  
EE Focus: **Stuff**

# HEA enables tailored EE

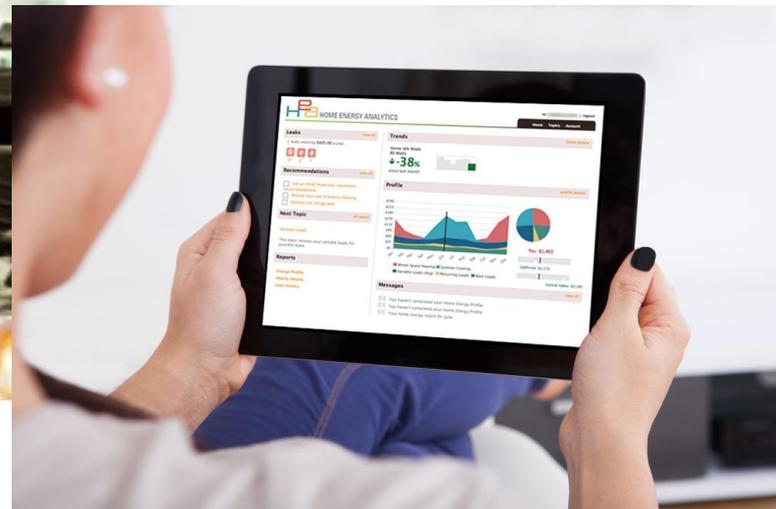


- **\$20** per home analyzed (qTTY 1,000)
  - Compare to \$500/home for onsite HVAC audits
- Residents educated, and make simple changes
  - Measured savings to date **>12%** (great bang for the buck)
- Use analysis results for your tailored programs



*Diagnose a car*

*Diagnose a home*



# Pitch Highlights: Home Energy Analytics

- Home Energy Analytics analyzes a home's energy use from Smart Home data to produce a detailed energy profile across five different categories that educate homeowners about where their energy use is going and the best opportunities to save energy or install upgrades.
- The analysis compares the energy use to neighbors in equivalent houses.
- Homeowners who completed the online assessment measured a 12% savings on average.
- The idea behind the analysis is that two houses with the same energy use might need a different focus for reducing energy.
  - For example, one home may have large energy draws from plug loads, where the inefficiencies in another home may be from the HVAC system.
  - Energy programs need to target the right intervention for each home.

# Q&A: Home Energy Analytics (slide 1 of 2)

## How accurate is your algorithm?

- We started by instrumenting a dozen homes to model where the energy was going to produce the algorithm. The algorithm does not take into account granular data and only uses data that is available, so rather than point to the usage of a particular device in the home, it tracks hourly usage from categories of energy use.

## How is it funded?

- The analysis is often paid by a partner, such as a utility or municipality. Five California counties have funded the program, which means it is free for residents of those counties. A barrier is that residents generally don't sign up individually and pay the \$20 fee even if the data could provide opportunities for savings up to \$100-200/year.

## What are your participation numbers?

- One town in California running the program has 10% participation. Another municipal program had 200 residents sign up in 2010 and has tracked usage for 5 years.

# Q&A: Home Energy Analytics (slide 2 of 2)

## **What do you think has prevented the uptake by individual homeowners?**

- I wish we knew! It seems like people are motivated once they learn about it and learn about what their waste is; then people start to take action. But fees are a major barrier.

## **How do you get approval to access homeowner data?**

- When a homeowner signs up, they sign off that HEA can access their utility data.

## **How do you compare houses with different features?**

- For each of the five different categories we compare homes on different factors such as the size of the house and the climate. For example, comparing houses that have pools with other houses that have pools.

# Pitch 3: Recognizing energy efficiency in home sales through upgrade certificates in the MLS



Molly Graham, Program Associate,  
Midwest Energy Efficiency Alliance



www.IllinoisHomePerformance.org

# Silver Certificate of Completion

**Home address:**

123 Sample Street  
Sample, IL 60000

**Contractor:**

ABC Green Contractor Company

**Program Provider:**

Program Provider

**Work Completed On\*:**

9/22/2015

\*Certificate issued 9/22/2015 by the Midwest Energy Efficiency Alliance (MEEA) on behalf of the Illinois Energy Office based solely on the reporting by or estimates of contractor. A minimum of 15% is required to receive a Certificate of Completion. See reverse.

**This home has achieved an estimated total energy reduction of at least 15%\* after the following home energy upgrades:**

- ✔ Air sealing performed reducing total air leakage rate by 34%
- ✔ Attic insulation improved to R-49
- ✔ R-11 insulation installed in basement

**Marion Lunn**  
Assistant Deputy Director  
Illinois Energy & Recycling Office



Home Performance with ENERGY STAR offers a comprehensive, whole-house approach to home improvement that results in better energy efficiency, greater comfort, and lower energy bills.

ENERGY STAR is a voluntary partnership sponsored by the U.S. EPA and the U.S. DOE to protect the environment through superior energy efficiency.



**Illinois**  
Department of Commerce  
& Economic Opportunity

#S-6000

# Capturing the Value

**MRED** Welcome **Laura Reedy-Stukel**  
 Midwest Real Estate Data  
 ReInventing MLS

**My MLS** **Search** **Listings** **Repe**

**Search Results - Cross Property (All)**

← List View ← Refine Criteria | One Page (Residential) - Agent

showing 1 of 1 listings



**Detail**

Address: **454 S**

Bedroom: **4**

Baths(full/half): **3/1**

Total Rms: **12**

Master Bedroom Bath:

# Fireplaces: **1**

PIN: **0611**

Spec Asmt: **No**

Type Ownership: **Fee**

Agent Owned/Interes:

Basement: **Full**

Parking Type: **Garage**

Subdivision:

Type: **2 Sto**

Style: **Georg**

Approx SF: **2094**

Exterior: **Brick**

**Additional Information**

Close X

- [connectMLS Tax \(Brief\)](#)
- [Realist Tax Report](#)
- [Realist Tax Map](#)
- [Listing & Property History](#)
- [Add To Favorites](#)
- [Floor Plan](#)
- [IHP Silver Certificate](#)
- [Air/Duct Leakage Test](#)

# Logistics

- 6 months for stakeholder group to develop certificate
- One entity to oversee certificates, 1-2 employees
- Costs ~\$3 to print and mail each certificate



# Pitch Highlights: MEEA

- The Midwest Energy Efficiency Alliance (MEEA) offers a certificate for home energy upgrades through a trusted third party-verified certification that can be uploaded on the Multiple Listing Service (MLS) to capture the value of energy retrofits in home sales.
- The certificate is branded with the Home Performance with ENERGY STAR logo and the Illinois state seal. It can provide more credibility that a particular home is different than others on the market.
- To scale up the certificate program, a stakeholder group would determine the qualifications needed to earn the certificate.
- A program would need 1-2 employees to manage the certification.
- Success of the certificate program would translate to a higher sale and/or less time on the market.

# Q&A: MEEA (slide 1 of 2)

## **Is the certificate added to MLS voluntarily by the homeowner or would this be a uniform process?**

- Ideally the certificate would auto-populate on MLS, but a program would have to initially rely on real estate agents to recognize that the home has a certificate and upload it manually on the MLS.

## **What kind of the resistance have you experienced with the certification?**

- There's a lack of knowledge in the real estate industry about what a green home means. Illinois Home Performance has started a training service for real estate agents to better understand green homes and how to talk about the certification with home owners and home buyers.

## **Who is your competition?**

- Some programs have their own certificates, but that may lead to confusion. The Illinois program incorporates multiple programs that feed into the same certificate to create a more standard platform.

## **The issues with this is it may create confusion with the homeowner. If the homeowner already has a home energy score, do they automatically qualify?**

- The certificate program lumps all of the green features in one place for any new updates they've done to the home. It is only for existing homes.

# Q&A: MEEA (slide 2 of 2)

## **Do you have data that show that the certificate or EE improvements leading to higher home sale values?**

- A study out of Berkeley of 1.6 million homes did find homes sold at a green premium. A smaller study in Oregon showed that they sold for more and faster. MEEA has only recently started analyzing data in Illinois to quantifying the impact.

## **What procedures are in place for QA?**

- There's a tiered QA process and 3% of jobs receive onsite verification through program providers. All of the jobs receive a desk review. The program has built trust in the real estate industry by reaching out to real estate associations to try to figure out their needs and offering trainings.

## **What's the total cost of the certificate? What's the lifecycle costs given the other costs of the program?**

- The total costs depends on structure. MEEA oversees the Illinois Home Performance Program and the certificates, but does not provide the rebates to homeowners. The cost of the certificate itself is pretty low and depends on volume and how many staff you need to manage the program.

# Audience Poll Results

- If you were an Executive Director and had budget to pursue one of these ideas, what would it be? (Pick-one)
  - **Steve Schmidt: Home energy analytics to identify EE opportunities—72%**
  - Kathy Kuntz: Cool choices for sustainability—17%
  - Molly Graham: Home upgrade certificates and real estate sales—11%

# Shark Ranking and Explanation

*If you were an Executive Director and had budget to pursue one of these ideas, what would it be?*



Ludy Biddle  
Executive Director, NeighborWorks of Western Vermont

**Ranked #1: Home Energy Analytics**



Keith Canfield  
Director, Corporate Sustainability, Clinton Climate Initiative

**Ranked #1: Cool Choices**

# Explanation from the Sharks



## Kathy Kuntz, Executive Director, Cool Choices

- **Ludy Biddle:** Anything you can gamify, you can win interest and educate people
- **Keith Canfield:** Attracted to Cool Choices because of the workplace approach and high levels of participation; ranked Cool Choices as #1



## Steve Schmidt, Founder and Chief Operating Officer, Home Energy Analytics

- **Ludy Biddle:** Believes educating people directly about their own homes is how programs can change the marketplace and help people make good decisions about their homes; ranked Home Energy Analytics as #1
- **Keith Canfield:** The disadvantage of HEA is it is only applicable to smart homes



## Molly Graham, Program Associate, Midwest Energy Efficiency Alliance

- **Ludy Biddle:** Likes the idea but third-party issuing and addressing resistance from relators remains a challenge
- **Keith Canfield:** The labeling concept is a good idea, but for an executive director focused on results, it would be difficult to gain traction and measure an impact

# Peer Exchange Call Series

*We hold one Peer Exchange call 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:

- **January 14:** Moving Your Ideas Out of Hibernation (201)
- **January 21:** The Energy-Water Nexus and What It Can Do for Your Residential Program (301)
- **January 28:** Where Do We Go From Here? The Changing Landscape of Residential EE (201)

*Send call topic ideas to [peerexchange@rossstrategic.com](mailto:peerexchange@rossstrategic.com)*

# Closing Poll

- After today's call, what will you do?
  - **Seek out additional information on one or more of the ideas—70%**
  - Consider implementing one or more of the ideas discussed—20%
  - Other (please explain)—7%
  - Make no changes to your current approach—0%