



**Better Buildings Residential Network
Peer Exchange Call Series:
*Past as Prologue – Results from Low-Income
Residential Energy Efficiency Programs***

March 1, 2018

Call Slides and Discussion Summary

Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Polls
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - **Maritza Estremera**, Program Administrator, The United Illuminating Company – *Network Member*
 - **Maida Coleman**, Commissioner, Missouri Public Service Commission
 - **Ravi Malhotra**, Founder and President, International Center for Appropriate and Sustainable Technology (ICAST) – *Network Member*
- Open Discussion, Closing Poll, and Announcements

Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- Solution Center guided tours

Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year

Upcoming calls:

- March 8: [Working with Diverse Communities](#)
- March 15: [The Increasing Connection Between Energy Efficiency and Real Estate](#)
- March 22: [Power Up: Residential Energy Efficiency and Resiliency](#)

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call

For more information or to join, for no cost, email

bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join

Maritza Estremera
Program Administrator
The United Illuminating Company





Home Energy Solutions- Income Eligible

Maritza Estremera
March 1, 2018



Energize Connecticut Background

- Energize Connecticut is a statewide initiative which helps consumers reduce their energy bills, save money, and reduce their carbon footprint.
- Funded by charge on electric and gas bills
- Regulated by Department of Energy & Environmental Protection
- Programs are developed and delivered by the electric/gas utilities
- Statewide residential, commercial, community and energy education programs and incentives



Home Energy Solutions- Income Eligible

- Direct install weatherization program, no cost for income eligible customers
- Available for single family, 2-4 units and multi family properties
- Services include:
 - Safety testing on heating, cooling, and water heater systems
 - Blower door guided air sealing
 - HVAC flow tests and duct sealing
 - LED lighting upgrades
 - Water saving measures
 - Premise may receive service once every 36 months

Family Size	Maximum Annual Income
1	Under \$34,366.28
2	Under \$44,940.52
3	Under \$55,514.76
4	Under \$66,089.00
5	Under \$76,663.24
6	Under \$87,237.48
7	Under \$89,220.15
8	Under \$91,202.82

Go Deeper with Additional Improvements

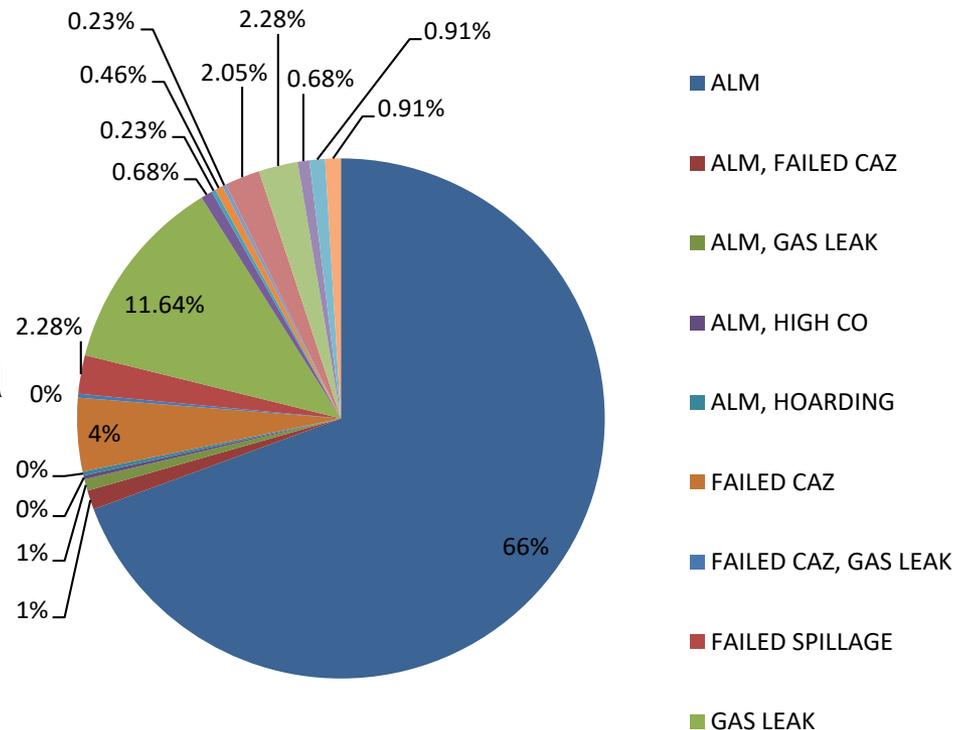
- Rebates/Incentives

- Insulation
- Central AC
- Air source heat pumps
- Ductless heat pumps
- Wi-Fi Thermostats
- Windows
- Appliances
- Furnaces
- Natural gas boilers
- Natural gas boiler water rest control
- Boiler circulator pump
- Natural gas tankless water heaters
- Heat pump water heaters

Health and Safety Program Challenges and Opportunities

- H&S is a barrier to Weatherization
- Unsafe conditions
- Costly repairs
- Less costly issues may be addressed via Home Energy Solutions-Income Eligible

UI 2017 HES-IE Barriers to Blower Guided Air Sealing



Barriers Currently Addressed in Program

- Certain barriers are addressed in program based on cost effectiveness
 - Clean, Tune and Test
 - Furnace Repairs
 - Water Heater Tune Up



HES-IE Partners



The **COMMUNITY** Foundation for Greater New Haven
NOW MORE THAN EVER

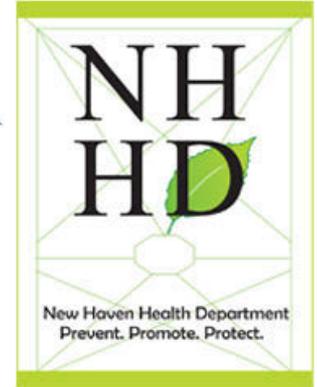
Yale
NewHaven
Health
Bridgeport
Hospital



Neighborhood Housing Services of New Haven



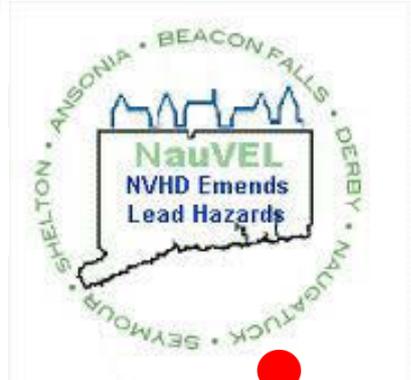
Weatherization
Works



Yale
NewHaven
Health
Yale New Haven
Hospital



BRIDGEPORT
NEIGHBORHOOD
TRUST



CHRISTIAN COMMUNITY COMMISSION, INC.



CONNECTICUT
GREEN BANK SM

Operation Fuel, Inc.
WE'RE ALL PART OF THE OPERATION.



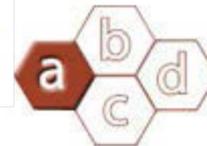
OPERATION
HOPE

The
WorkPlace
»» Think it forward.



Connecticut Children's
MEDICAL CENTER

energize **CT**SM
CONNECTICUT



Action for Bridgeport
Community Development, Inc.



Program Marketing

- Financial hardship mailers
- Census tract canvassing
- Partner referrals
- Clean Energy Communities (CEC) initiatives



2017 Program Performance

Company	Budget (\$)	Annual Savings Achieved	Lifetime Savings Achieved	Customers Served
United Illuminating	\$3,919,129	3,764,571 kWh	28,124,645 kWh	3,544
Southern Connecticut Gas	\$2,123,695	228,895 ccf	4,940,997 ccf	1,319
Connecticut Natural Gas	\$4,299,167	473,135 ccf	9,848,543 ccf	4,433

Contact Information

Maritza Estremera
HES-IE Program Administrator
UIL Holdings Corporation

Presentation Highlights: The United Illuminating Company

- **Close the energy cost disparity between market rate and low-income residents by offering a suite of upgrade rebates and incentives.**
 - Share additional rebates to incentivize a variety of improvements above and beyond your core energy-efficiency offerings, like insulation and window upgrades.
- **Resolve health and safety issues that may be a barrier to implementing energy-efficiency upgrades.**
 - Energy-efficiency upgrade activities may disturb asbestos, and therefore asbestos must be remediated prior to energy upgrades.
 - Consider diversifying the services you provide to low-income customers and partner with a variety of health and safety providers to deliver multiple benefits.
- **Cost share with other service providers to leverage your impact.**
 - Cost-sharing with other service providers can be win-win and a way to deliver multiple services to residents (e.g., mold or lead remediation).
- **Education is important to ensure the greatest energy savings.**
 - Incorporate a “kitchen table” discussion with residents to go over tips for leveraging energy-efficiency upgrades to drive further savings.

Maida Coleman
Commissioner
Missouri Public Service Commission



Past as Prologue – Results from Low-Income Residential Energy Efficiency Programs

Presentation by Maida J. Coleman
Commissioner
Missouri Public Service Commission

Missouri Public Service Commission

- Ensure that Missourians receive safe and reliable utility services at just, reasonable and affordable rates
- Regulates investor-owned electric, natural gas, steam, water and sewer utilities in Missouri
- Limited authority to direct utilities to implement low-income energy efficiency programs



KCP&L Low-Income Income-Eligible Weatherization

- Program enables qualifying customers to receive FREE efficient upgrades to their homes.
- Best practices
 - Use creative messaging and marketing to niche customers
 - Leverage data and use social media and email to target customers with messages that resonate
 - Remove barriers to entry
 - Make it easy for customers to understand the program and to participate

KCP&L Income-Eligible Home Energy Report

- KCP&L's Home Energy Report helps all customers, including those living in lower income households, manage and reduce their energy use by providing education on how their homes are using energy, and how their energy use is compared to other similar homes.
- Best practices
 - Develop messaging that is clear and makes sense to the audience
 - Provide personalized tips to help them take immediate action towards saving money and energy
 - Leverage reports to also provide information on other free offerings, like the Low Income Weatherization program

KCP&L Income Eligible Multi-Family Program

KCP&L's Income-eligible multi-family program offers rebate incentives for residential homeowners and renters that are below 200% of the Federal poverty level and reside in multi-family housing as well as multi-family buildings.

The program includes 2 Tiers:

- **Tier 1. Multi-Family Units.** Direct installation of low-cost measures for income-eligible homeowners and renters in multi-family housing, at no cost to the participant. The measures installed include: faucet aerator, low-flow showerhead, advanced power strip, hot water pipe insulation and CFL/LEDs.
- **Tier 2. Multi-Family Common Areas.** Installation of custom lighting measures in multi-family common areas, at \$0.28/kWh saved per participant.



KCP&L Income Eligible Multi-Family Food Pantry Distribution Channel

- KCP&L's Income-eligible multi-family program provides high efficiency LED bulbs for distribution through over 200 local food pantries.
- Through calendar year 2017, over 280,000 bulbs were distributed serving over 35,000 families.
- Pantry participants were provided with high quality ENERGY STAR® LED Bulbs.
- All bulbs are rated for 25,000 hours, 9 watt- 800 lumen

KCPL and Harvesters hand out light bulbs to people struggling with basic needs

POSTED 4:58 PM, NOVEMBER 8, 2017, BY FOX 4 NEWSROOM



KANSAS CITY, Mo. — KCPL and Harvesters are partnering for the fourth time to distribute light bulbs. 'The Harvesters Pantries' targets families who need help with basic needs, including utilities and food.





Ameren Missouri Low-Income Weatherization Assistance Program

- Ameren Missouri contributes to the Department of Energy (DOE) to administer weatherization program for customers.
 - \$1.2M annually for electric customers
 - \$263K annually for gas customers
 - 518 homes weatherized in 2017

Measures Include
Reducing Air Infiltration
Increasing Insulation in walls, attics, and floor foundations
Heating and Cooling Repair or Replacement
Refrigerator Replacement
Lighting Replacements



Ameren Missouri Community Savers (Multifamily Low-Income) Program

- The Community Savers program provides direct installs of energy efficiency measures in low-income multifamily housing.
- The program also offers rebate incentives to multifamily building managers and owners for common area and whole building efficiency improvements.
- \$10.75M budget over three years
- Since 2010
 - Over 40K customers served
 - 40M kWh saved
 - ~500K measures installed

Installed Since 2010	
Lights	> 400,000
Heating and Cooling Tune Ups	>20,000
Refrigerators	>10,000
Window ACs	>3,000
Programmable T-stats	>24,000
Heating and Cooling System Replacements	27



Ameren Missouri Heat Up St. Louis Winterizing Utility Forum

We Make A Difference Together



Presentation Highlights: Missouri Public Service Commission

- **Use creative marketing and messaging to low-income customers, including on-bill messaging and promotions** to attract customers based on what you know about their income eligibility.
 - KCP&L offers an online form for residents to sign up and connect to relevant public agencies; the site garners 5-10 inquires per day.
 - Develop and maintain strong relationships with community partners to identify families and communicate your offerings.
- **Host an annual utility forum to engage residents and market your services.**
 - Ameren Missouri hosts an annual event that allows residents to apply onsite for energy efficiency services and receive education on energy efficiency and weatherization. Over 4,000 residents participated in last year's day-long event.
- **Working with landlords can be an important component of bringing energy efficiency to low-income residents.**
 - Many low-income residents live in multifamily rental units, so it's important to develop a strategy to reach and incentivize landlords to conduct upgrades they otherwise might find cost prohibitive.

Ravi Malhotra

Founder and President

International Center for Appropriate and
Sustainable Technology (ICAST)



Results from LI EE Programs

Ravi Malhotra
President, ICAST and TBL Fund



International Center for Appropriate & Sustainable Technology

ICAST

International Center for Appropriate and Sustainable Technology



- 501C3 nonprofit spin-off from Univ. of Colorado, Boulder
- Mission: Provide economic, environmental, and social benefits to underserved communities
- Approach: Develop and Implement **market-based solutions** that are scalable
- Focus: Intersection of Clean Energy, Affordable Housing and Community Development



Multifamily (MF) Housing

- ❖ ~1/3rd of residential market
 - 2/3rd of MF properties occupied by LI residents
 - Subsidized Affordable – HUD, LIHTC, USDA-RD
 - Market Rate incl. NOAHs
- ❖ MF is an underserved / untapped market
 - Commercial Property but Residential Use
 - Complex Ownership / Management Structure
 - Split-Incentive hurdle – Investor, Developer, Agency, Tenants, Property Manager



HUD Best Practices



1. Education and technical assistance:

- Helps EE be viewed more favorably and effected more readily

2. Coordinate regulatory agencies:

- Ensure communication between different sectors of gov.t

3. Provide subsidies as needed:

- Incorporate grants from state, federal and private sources

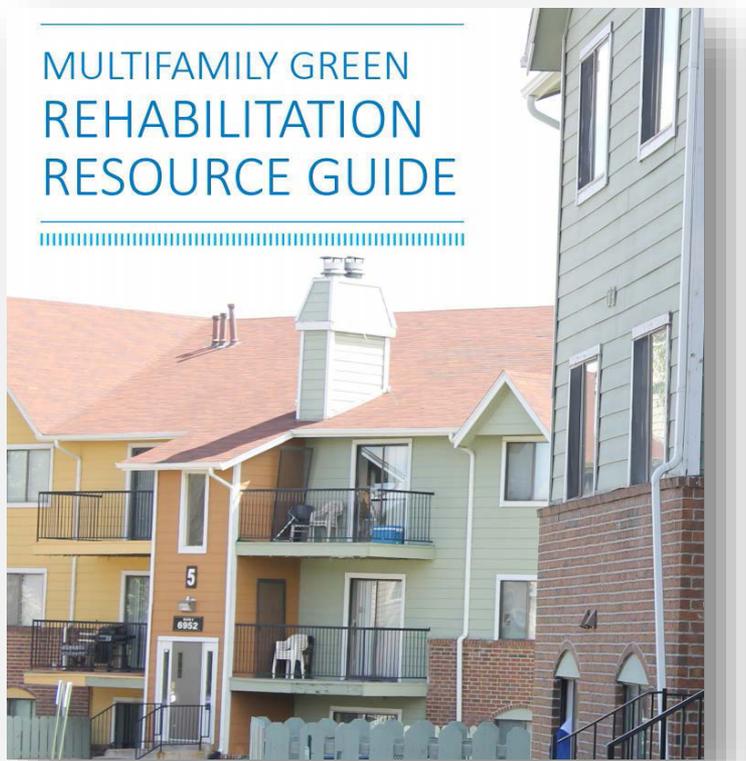
4. Effect selective rehab:

- Fix what is fixable, replace what is broken, only add to reduce costs for energy and O&M

5. Use creative/layered financing:

- Utilize all available and appropriate sources of funding

Market Research



1. Market Need
2. Barriers to Green Rehab
3. Solutions to the Green Rehab Gap
4. Industry Best Practices
5. One-Stop-Shop Useful Resources

ICAST Program



One-Stop-Shop

- ✓ **Make it hassle-free**
 - Oversees entire green rehab
- ✓ **Provide relevant information**
 - Cost effective ECMs
- ✓ **Access to financing options**
 - Rebates, Incentives, Grants
 - Debt or Off-Balance Sheet (EPC, PACE, PFS)



Results



Green Rehab for Multifamily

1. 5,000 LMI households in 2018
2. \$25 Million of direct project investments
3. Avg. 20%+ savings
4. 740 direct and in-direct jobs created
5. 10,000 tons of Carbon reduction
6. \$2 Million/Year of utility cost savings



Lessons Learned



1. DI or free services are not always a lead-in to deep retrofits
2. Cost-effectiveness of services is critical for MFAH clients
3. Ability to leverage multiple services allows service providers to serve small MFAH properties
4. Deep Retrofits are primarily tied to Major Rehab
5. PACE, EPC, Solar PPA and other off-balance sheet projects are challenging for the MFAH market





Questions?

Thank you!

Ravi Malhotra
Founder and President, ICAST
www.icastusa.org



Presentation Highlights: ICAST

- **Upgrades may not be a priority for owners and residents of multifamily units, it's important to make your services hassle free.**
 - “One-stop-shop” approaches to reduce barriers to participation, including information on costs and financing, can be useful.
- **Help owners and residents understand the non-energy benefits of your work.**
 - Energy upgrades at low-to-moderate income multifamily properties can bring multiple benefits to property owners and residents, including increased property values and reduced turnover in rental units.
 - Share this information to entice property owner to participate in upgrades.
- **Spend the time to become a trusted source of information, by demonstrating your ability to offer the most cost-effective solutions.**
 - Building trust takes time, patience, and education.
 - Offer customers additional help, like qualifying for the Weatherization Assistance Program or access to utility rebates.
- **Help customers move forward with upgrades quickly by providing a package deal for financing.**

Resources

- The American Council for an Energy-Efficient Economy:
 - [Making a Difference: Strategies for Successful Low-Income Energy Efficiency Programs](#)
 - [The Multifamily Energy Savings Project](#)
- ICAST:
 - [Multifamily Green Rehabilitation Resource Guide](#)
- U.S. Department of Housing and Urban Development:
 - [Best Practices for Effecting the Rehabilitation of Affordable Housing](#)

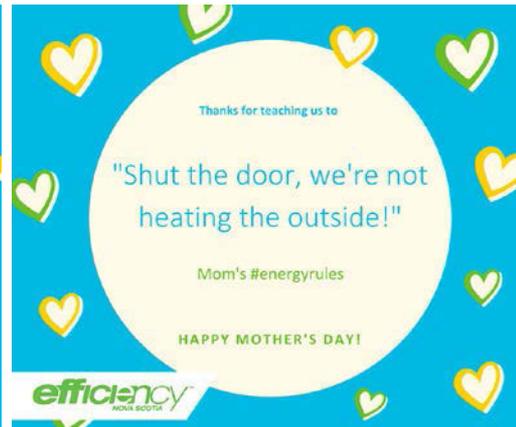
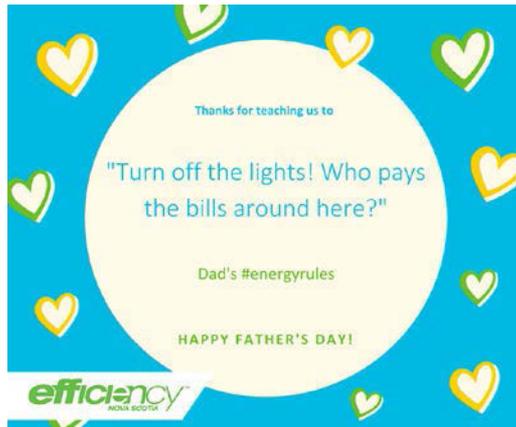
Upcoming Seasonal Messaging Opportunities

Now is the time to start planning energy efficiency messaging!

May 4
**National
Renewal Day**

May 5
Cinco de Mayo

May 13 & June 17
**Mother's Day &
Father's Day**



**Energy Upgrade
California**

[Tweet](#): Oh hey, it's [#NationalRenewalDay](#)! Today let's begin a new cycle. A cold one, that is. Make the switch for some cool savings.

Efficiency Nova Scotia

Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.



<https://rpssc.energy.gov>

Addenda: Attendee Information and Poll Results

Call Attendee Locations



Call Attendees: Network Members (1 of 2)

- American Council for an Energy-Efficient Economy (ACEEE)
- Arlington County Government
- Austin Energy
- BC Hydro
- Boulder County
- Center for Energy and Environment
- Center for Sustainable Energy
- CLEAResult
- Cleveland Public Power
- Conservation Consultants, Inc. (CCI)
- County of San Luis Obispo
- Efficiency Maine
- Elevate Energy
- EnergySavvy
- Enhabit
- International Center for Appropriate and Sustainable Technology (ICAST)
- Maryland Energy Administration (MEA)

Call Attendees: Network Members (2 of 2)

- National Housing Trust/Enterprise
- NeighborWorks of Western Vermont
- Rocky Mountain Institute
- Texas Energy Poverty Research Institute
- TRC Energy Services
- United Illuminating Company
- Vermont Energy Investment Corporation (VEIC)
- Wisconsin Energy Conservation Corporation (WECC)

Call Attendees: Non-Members (1 of 3)

- ABCD, Inc.
- Ameren Missouri
- Appalachian Voices
- Arizona State University
- Association of CA Community & Energy Services
- California Public Utilities Commission
- CenterPoint Energy
- City of Yuma
- Coconino County
- Conservation Connection Consulting
- Corporation for Ohio Appalachian Development
- Enbridge Gas Distribution Inc.
- Energetics
- Energy Outreach Colorado
- Environmental Design / Build
- Florida Department of Agriculture and Consumer Services
- FortisBC
- Greater Minnesota Housing Fund
- Habitat Studio & Workshop Ltd.

Call Attendees: Non-Members (2 of 3)

- Hilco Electric Cooperative, Inc.
- ICF
- Kansas City Power and Light Company
- KEEL Energy
- Lockheed Martin
- Madison Gas & Electric
- Mercy Housing Management Group
- Missouri Public Service Commission
- National Fenestration Rating Council
- National Grid (NY)
- Navigant
- Nest
- NYC Housing Preservation & Development
- Pasadena Water and Power
- Pennsylvania Public Utility Commission
- Positive & Productive Innovations
- Proctor Engineering
- San Francisco 2030 District

Call Attendees: Non-Members (3 of 3)

- Snohomish County Public Utility District
- Solar Habitats, LLC.
- Southern Energy Management
- Southwest Energy Efficiency Project
- StopWaste
- The SLAM Collaborative
- US Department of Housing and Urban Development
- US Department of Veterans Affairs
- Waite & Associates
- Washington River Protection Solutions
- White Oak Power LLC

Opening Poll

- Which best describes your organization's familiarity or experience with energy efficiency in low-income communities?
 - Very experienced/familiar – **48%**
 - Some experience/familiarity – **40%**
 - Limited experience/familiarity – **8%**
 - Not applicable – **3%**
 - No experience/familiarity – **0%**

Closing Poll

- **After today's call, what will you do?**
 - Seek out additional information on one or more of the ideas – **67%**
 - Consider implementing one or more of the ideas discussed – **22%**
 - Other (please explain) – **7%**
 - Make no changes to your current approach – **4%**