

Better Buildings Residential Network Peer Exchange Call Series: State of the Union: Best Practices from 'Most Improved' Energy Efficient States in 2016

January 19, 2017

Call Slides and Discussion Summary



### Agenda

- Agenda Review and Ground Rules
- Opening Polls
- Brief Residential Network Overview and Upcoming Call Schedule
- State Energy Efficiency Scorecard Overview
  - Weston Berg, Research Analyst, ACEEE (Network Member)
- Featured Speakers
  - Michael Stoddard, Executive Director, <u>Efficiency Maine</u> (Network member)
  - Sarah Mullkoff, Energy Program Director, Michigan Environmental Council
  - Dan Worth, Clean Energy Policy Specialist, Groundwork Center for Resilient Communities
- Discussion
  - What recent policy changes have impacted residential EE program implementation in your state?
  - What challenges or barriers have your program encountered at the state policy level for promoting residential energy efficiency? What solutions have helped mitigate these challenges?
  - What types of policies has your program or state found most effective for saving energy from the residential sector? What could your state improve on?
  - Other questions related to the State Energy Efficiency Scorecard?
- Closing Poll





### 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 <a href="mailto:bbresidentialnetwork@ee.doe.gov">bbresidentialnetwork@ee.doe.gov</a>, or go to <a href="mailto:energy.gov/eere/bbrn">energy.gov/eere/bbrn</a> and click Join





### 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:**

- February 9: Comfort and Safety: Family-Oriented Marketing
- February 16: <u>Innovative Approaches to Financing</u>
- February 23: Making an Impact: Low-Income Energy Efficiency Programs
- March 2: <u>It's a Beautiful Day in the Neighborhood: Scale Interventions</u>

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





## March Energy Madness: Join the game!

Submit your most creative residential energy-related marketing messages to: <a href="mailto:peerexchange@rossstrategic.com">peerexchange@rossstrategic.com</a>

Due date: February 17, 2017

#### **Tournament Details:**

- We will announce the Sweet 16 entering the race on the March 2 Peer Exchange call.
- Call Participants will make their picks to determine what messages are best in the 8 head-to-head match ups.
- On each following Peer Exchange Calls in March, you'll find out who has made it on to the next round and vote on your favorites.
- The winning message will be selected on the March 23 call!



U.S. Department of Energy **See the** <u>video</u>



Utilitywise

More information





2016 State Energy Efficiency Scorecard

ACEEE

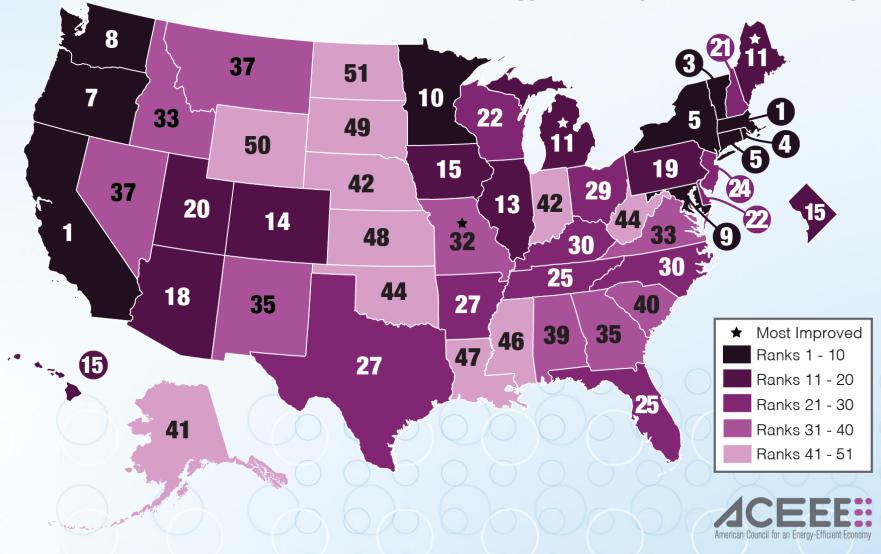




# ACEEE State Energy Efficiency Scorecard: Overview

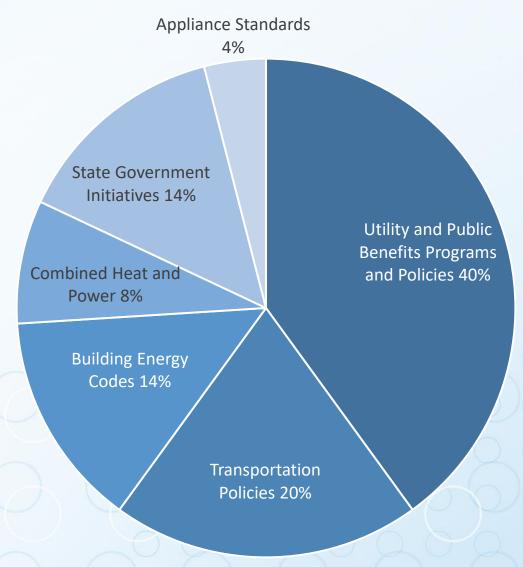
Weston Berg Research Analyst, ACEEE

#### 2016 State Energy Efficiency Scorecard Rankings





# **Policy Categories**





### **Resources & Tools**

#### 2016 State Energy Efficiency Scorecard & State Score Sheets

 http://www.aceee.org/statepolicy/scorecard

#### State Technical Assistance Toolkit

http://aceee.org/sector/state-policy/toolkit

### State & Local Policy Database

http://database.aceee.org/



Program Experience: Efficiency Maine



## The View from Maine

Michael D. Stoddard Executive Director Efficiency Maine Trust

1/19/2017

US DOE Better Buildings Webinar: "State of the Union: Best Practices from 'Most Improved' Energy Efficient States in 2016"

## Maine Demographics

- Population 1.3 million
  - +/- 550,000 year-round homes
  - 40,000 LIHEAP households
- Oldest population in U.S.
- Oldest housing stock in U.S.
- 65% of homes heated with #2 oil
- Least densely populated state east of the Mississippi River
- 41<sup>st</sup> in GDP/capita (\$41,477)



## Maine's Best Practices in Policy

- Procure "all cost-effective efficiency" for electricity and natural gas
  - Statutory directive applies to the Maine PUC, the utilities, and the Efficiency Maine Trust (program administrator)
- Regulate carbon emissions (e.g., RGGI)
  - Reinvest proceeds from the sale of carbon allowances in EE
- Let Distributed Energy Resources compete with traditional generation and T&D (e.g., ISO-NE Forward Capacity Market)
  - Reinvest proceeds in EE
- Insulate EE program funding and administration from politics

# Best Practices in Program Administration

## Two Examples:

- Low-Carbon Heating in Cold Climates
- 2. Consumer Products

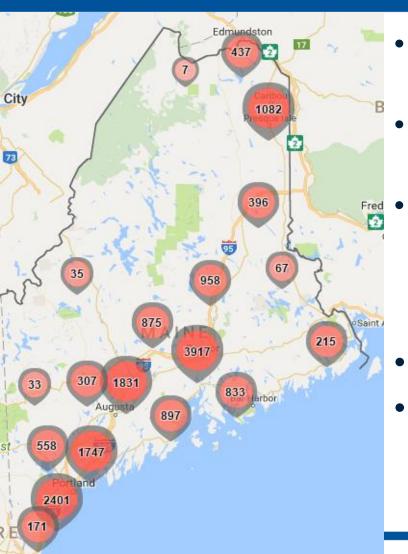
## 1. Low-Carbon Heating in Cold Climates

- Results (past 3 years)
  - 27,000 total market-based home improvement projects
  - 16,000 mini-split cold-weather heat pumps and 600 central pellet boilers
  - 5,500 energy assessments with air sealing and 3,000 attics insulated

#### Key Features

- Assist in making a robust marketplace
  - Provide multiple online tools at <a href="www.efficiencymaine.com/at-home/">www.efficiencymaine.com/at-home/</a>
  - Use targeted marketing with Google Ad Words and social media
  - · Build success stories and real results
  - Require customer skin in the game
- Make it accessible for customers and contractors
  - Reduce administrative hurdles -- e.g., use prescriptive rebates
  - Focus on ubiquitous, lower-cost opportunities e.g., air sealing
  - Avoid promoting gold-plated solutions
  - Provide opportunities across all fuels
  - Accommodate middle-class customers' preference for phased approach
  - Provide modest, unsecured loans with longer terms

## Cold-Weather Mini-Split Heat Pumps



- 16,000 installations in the past 3 calendar years.
- Excellent distribution across the state, including rural areas
- Excellent performance using HSPF 12 standard (10 for multi)
  - despite temps regularly below 0 degrees F.
- Enhanced rebates for Low Income
- Transforming the market:
  - Seeing 25-30% reduction in installed price since program inception

### 2. Consumer Products

#### Results

- 2-3 million bulbs/year for the past 5 years
  - Approx. 50% penetration of residential sockets
- 2,300 heat pump water heaters/year for the past 3 years
  - Approx. 14% market penetration for electric water heating

#### Key Features

- For Lost Opportunity, low-interest commodities (e.g. bulbs, electric water heaters)
  - Price is more impactful than education
  - Ease-of-participation is key (Markdowns beat instant rebates which beat mail-in rebates)
- Low price starts a chain reaction
  - Off-shelf merchandising
  - Signage
  - Inventory
  - Store personnel attention



## Thank you!

www.efficiencymaine.com



Program Experience:
Michigan Environmental Council



# Better Buildings Residential Network Peer Exchange: MICHIGAN

Sarah Mullkoff Michigan Environmental Council January 19<sup>th</sup>, 2017



# Michigan's Scorecard

Utility & Public Benefits Programs and Policies	Transport- ation Policies	Building Codes Points	Combine d Heat and Power	State Govern- ment Initiatives	Appliance efficiency standards	Total Score
10.5/ 20	4/10	6.5/7	1.5/4	4.5/7	0/2	27/50

## Biggest Improvements

#### BUILDING CODES

Adoption of 2015 Michigan Residential Code

#### FINANCIAL INCENTIVES

### Leading efforts from:

- PACE Programs
  - Industrial and commercial financing for over \$250,000
- Michigan Saves
  - Green bank type of Michigan financing program for energy efficiency and residential energy improvements

## Improvements in Building Codes

- Michigan had been practicing under 2009 building code standards until recently
- The 2015 Part 10. Michigan Energy Code was filed with the Secretary of State on October 9, 2015, and becomes effective on February 8, 2016.
- Department of Licensing and Regulatory Affairs (LARA) held a public hearing on Oct 25<sup>th</sup>, 2016 taking comment on section 10A- Michigan Energy Code
- Part 10a will be effective 120 days after filing with the Secretary of State

## Improvements in Building Codes

- ▶ 1) Requires air leakage testing of building thermal envelope. Takes away the claim of craftsmanship.
- Now required that houses are more air tight, 4 or less Air Changes per Hour (ACH)
- Mechanical ventilation is required. HVAC contractors know the best ventilation is filtered and controlled via mechanical means.

# Improvements in Financial Incentives (State Government)

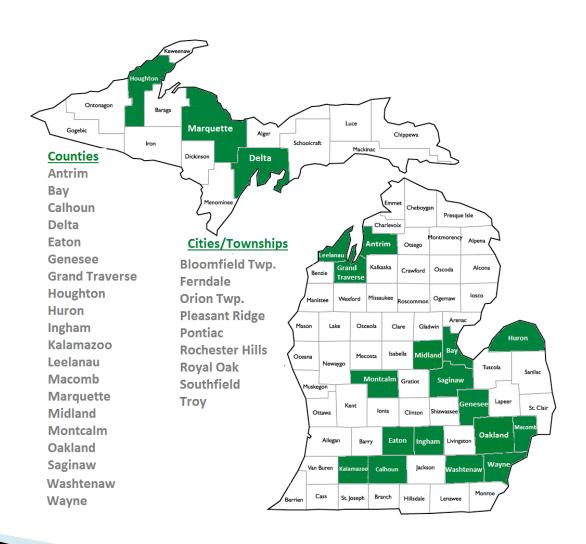
Michigan participates in the following programs:

- Conservation Building Retrofit Program
- Event Sponsorship Programs
- Small Business Pollution Prevention (P2) Loan Programs
- Energy Efficiency and Renewables for Small Businesses
- LED Street Lighting
- Loan Loss Reserve

## **PACE Programs**

- Michigan's PACE statute (PA 270 of 2010): "energy efficiency improvements" finance able under the Act as "equipment, devices, or materials intended to decrease energy consumption."
- PACE provides ways for industrial, commercial, and even some residential properties to finance clean energy projects that cost over \$250,000.

# PACE communities in Michigan



# PACE Programs



- Case study #1: MAE/MPSC first Lean & Green MI PACE project; first PACE project by a govt agency leasing a private building in USA.
- Case study #2: Powers Distributing first PACE project in Oakland County and first by a beer distributor in USA.
- Case study #3: Cambridge Court rural apartments in West Michigan; first multifamily PACE project in MI; first PACE project in West MI; first USDA consent for PACE project in USA.

# Michigan's New Energy Legislation Public Acts 341 and 342 of 2016



## State Energy Legislation Public Acts 341 – 342 of 2016

- ► ENERGY EFFICIENCY → ENERGY WASTE REDUCTION
- Maintains annual energy efficiency resource standard of 1% for electric savings, and .75% for Natural Gas
- Terminates program in 2021
- Both Natural Gas and Electric, spending cap is removed
- Reconciliation program if utilities over spend, then may recover costs through rate base

# Public Acts 341 and 341 Energy Waste Reduction

- ► Tiered Incentive program Energy Savings between 1%-1.25%
  - The shared savings incentive shall be 25% of the net benefits related to energy waste reduction
  - A shared savings mechanism authorized under this subsection shall not exceed 15% of the electric utility's expenditures implementing energy waste reduction programs for the calendar year.

#### Energy Savings between 1.25%–1.5%

The shared savings incentive shall be 25% of the net benefits related to energy waste reduction

 A shared savings mechanism authorized under this subsection shall not exceed 15% of the electric utility's expenditures implementing energy waste reduction programs for the calendar year.

#### Energy Savings between 1.5%– 2%

- 20% incentives for savings greater than 2%
  - Source: PA 341 Section 6x p. 24

# State Energy Legislation Public Acts 341 and 341 of 2016

- Renewable energy standard revisions The bill was amended to include the following provisions:
  - Requirement that the facility contribute to meeting the local capacity requirement
- The standard rises to 12.5% by 2019 and 15% by 2021
- Definitions allow for new municipal solid waste and advanced pyrolysis
- Offers voluntary renewable energy programs to customers

# State Energy Legislation Public Acts 341 – 342 of 2016

- Net Metering- language was added that allows new customers to be controlled in the current net metering program (terms not changed for 10 years), until such time the Commission makes a determination regarding amending the program to add a new grid access charge
- Utility Consumer Participation Board UCPB grants will be available for CON and IRP proceedings

# State Energy Legislation Public Acts 341 – 342 of 2016

- Integrated Resource Planning
  - require each regulated utility to file an integrated resource plan by the end of 2018 and every five years thereafter
- Certificate of Necessity Process
- Shortens Rate Case window from 12 months to 10 months
- Maintains Retail Electric Choice at 10%

Program Experience:
Groundwork Center for Resilient
Communities





### 2017 Michigan Energy Efficiency Update

A Michigan Case Study

## State Programs: MI Public Service Commission

- 2016 Energy Optimization Report Highlights
  - \$262M to operate. \$1.08B lifecycle savings (4.35)
  - \$13.55 per MWh (versus \$56.40 for natural gas)
  - 121% Electric Targets & 117% of Natural Gas Targets
  - 1.1 million MWh & 4.58 million Mcf
- Office Hosts Energy Optimization Collaborative
- Energy Optimization Report Link: http://www.michigan.gov/documents/mpsc/2016\_Energy\_Optimization\_Report\_to\_the\_Legislature\_with\_Appendix\_Nov\_30\_543919\_7.pdf

# State Programs: Michigan Agency for Energy

- The Michigan Agency for Energy held a summit on street lighting and schools with various stakeholders to build momentum.
- The Michigan Agency for Energy has supported community energy managers in several small cities to drive energy efficiency work.

## State Programs: Governor's Office

 Governor is so supportive of highlighting energy efficiency work that he has committed to the third year of Governor's Energy Efficiency Awards

### Innovations: On Bill Financing

- Legislation was passed at the end of 2014 to authorize on-bill programs in municipalities. City of Holland, Holland BPW, and Michigan Saves launched the Holland on-bill program in October of this year.
- Legislation now extended to regulated utilities with the new energy bill.
- While we already had a very strong financing program with Michigan Saves for residential, commercial and public sector, and with commercial PACE, we can now add another financing tool to the toolbox for those utilities that want to offer residential on-bill programs.

### Michigan Saves

 Michigan Saves - the leading energy finance group in Michigan - has seen double digit annual growth in their residential and commercial loan programs

### Traverse City Case Study

- Traverse City just committed to 100% of its municipal operations coming from renewables by 2020. This will have a heavy ESCO analysis & EE component
- Keen Technical Solutions: \$132M savings to date
- TC Saves & Shines: 750 homes assessed
- Working with MI Saves, PACE, SEEDS, contractors



# Dan Worth Clean Energy Policy Specialist

## Best Practices: Influencing State and Local Policy

- Identify simple, vivid statistics that quickly demonstrate the impact of your program:
  - For every \$1 spent, the Michigan Public Service Commission produced \$4.35 in savings. This key talking point was used by program administrators across the state to influence policymakers.
- Create broad, diverse coalitions to promote energy efficiency by identifying middle ground and shared values.
  - Messaging program goals around energy "waste reduction" helped generate buy-in from a conservative state legislature.
  - Non-traditional allies in Michigan helped secure policy wins, including businesses, the Michigan conservative energy, a Christian coalition.





## Best Practices: Community Engagement and Program Implementation

- Create targeted, community-relevant messaging to build momentum for your program:
  - Groundwork connected with residents around the value of energy independence and savings rather than restricting the conversation to the environmental impact or regulation.
- Identify key motivations and barriers. Efficiency Maine identified two important decision-making motivators: convenience and price.
  - Price: At the retail level, Efficiency Maine provided subsidies that closed the price gap between regular and efficient water heaters. Retailers were more likely to market the efficient heaters with the smaller price difference.
  - Convenience: Efficiency Maine moved upstream and made their incentives available to distributors. Now, when plumbers need to replace equipment quickly, the efficiency appliance is a competitive choice.

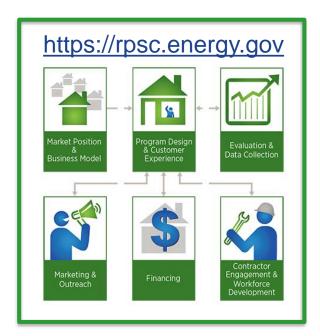




## Related Resources in the Residential Program Solution Center

### Explore resources related to best practices from energy efficient states:

- Explore best practices from programs offering financing solutions for clean energy improvements within state, local, and tribal governments.
- Learn critical <u>steps</u> for identifying and establishing contractor relationships and partnerships to improve your program's ability to effectively serve customers.
- Gain marketing and outreach insight from successful residential energy efficiency programs across the country including these <u>lessons learned</u>.



- ➤ Check out the latest <u>Proven Practices</u> post on <u>Speaking About Financing in Ways</u> That Resonate with Homeowners.
- The Solution Center is continually updated to support residential energy efficiency programs—member ideas are wanted!





#### **2017 Better Buildings Summit**

Registration is now open!



Be sure to register today for the 2017 Better Buildings Summit!



#### **Spread the word:**

#BBSummit17 registration is right around the corner. Get ready to learn about expert #EnergyEfficiency enhancements http://bit.ly/2iZCMsB





#### **GET SOCIAL WITH US**



Stay engaged and connected with the Better Buildings Residential Network and our partners from the residential and multifamily sectors!

Follow us to plug into the latest Better Buildings news and updates!

**Share with us** your top stories on how your organization is accelerating energy savings through efficiency upgrades, strategies, and investment!



**Better Buildings Twitter with #BBResNet** 



**Better Buildings LinkedIn** 

We can't wait to hear from you!

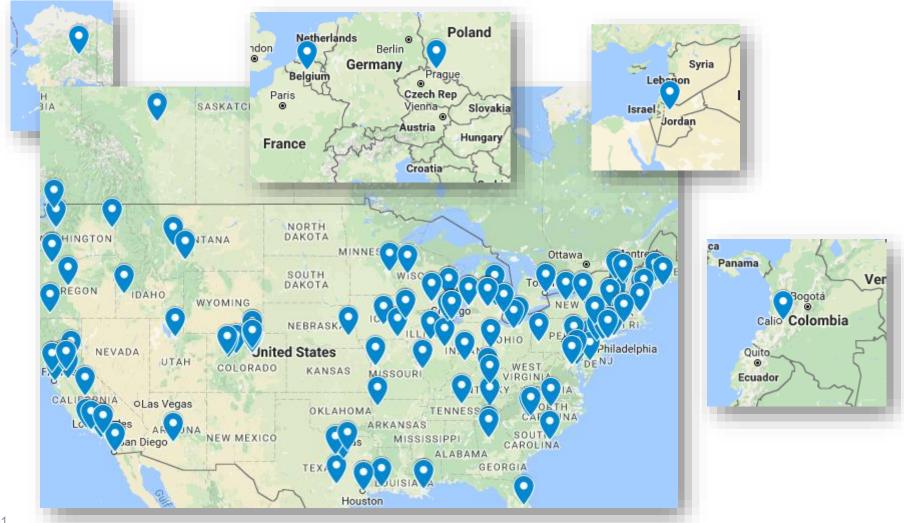




Addenda: Attendee Information and Poll Results



#### Call Attendee Locations







#### Call Attendees: Network Members (1 of 3)

- American Council for an Energy-Efficient Economy (ACEEE)
- AppleBlossom Energy Inc.
- Boulder County
- Cascadia Consulting Group
- Castle Rock Inspections
- California Energy Commission
- Center for Energy and Environment (CEE)
- Center for Sustainable Energy
- City of Bloomfield
- City of Fort Collins
- Civic Works

- CLEAResult
- Cleveland Public Power
- Cold Climate Housing Research Center
- District of Columbia
   Sustainable Energy Utility (DC SEU)
  - Earth Advantage Institute
- EcoWorks
- Efficiency Maine
  - **Efficiency Vermont**
- Elevate Energy
- Energy Efficiency Specialists
- EnergySavvy





#### Call Attendees: Network Members (2 of 3)

- Fujitsu General America Inc.
- Group14 Engineering Inc.
- HomeWorks Energy, Inc
- Local Energy Alliance Program
- Michigan Saves
- Mountain Association for Community Economic Development
- National Grid (Massachusetts)
- National Housing Trust/Enterprise
- NeighborWorks of Western Vermont

- New York State Energy
  Research and Development
  Authority (NYSERDA)
  - **Ouachita Electric Cooperative**
- Renovate America
- ResiSpeak
- Rocky Mountain Institute
- South Burlington Energy
  - Committee
- Southface
- The Environmental Center
- Institute for Market Transformation (IMT)





#### Call Attendees: Network Members (3 of 3)

- The Oberlin Project
- TRC Energy Services
- Wisconsin Energy
   Conservation Corporation
   (WECC)





#### Call Attendees: Non-Members (1 of 4)

- AboutSavingHeat.com
- AjO
- Alliant Energy
- Apogee Interactive
- Association for Energy Affordability
- Association of Polish Electrical
   Engineers
- Bank of Montreal
- Bay City Electric Light & Power - Service Building
- Brand Cool Marketing
- Brendle Group

- Brooklyn Green Home Solutions
   Inc
- Brooks Kushman P.C.
- Brookside Construction
- Buildings Performance Institute Europe
- Bureau of Community Action and Economic Opportunity
- Cambridge Energy Alliance
- Carolina Smart Homes
- City Dallas
- City of Bloomington
- City of Bozeman
- City of Houston





#### Call Attendees: Non-Members (2 of 4)

- City of West Hollywood
- Clean Air Partnership
- Competitive Advantage Consulting
- County of San Diego
- County of Santa Barbara
- Craft3
- CT Green Bank
- Emerson
- Energetics Incorporated
- Energy Management Services (EMS)
- Energy Smart Colorado
- Energy Wise Alliance

- Environmental and Energy Study Institute
- Eric Kjelshus Energy Heating and Cooling
- Franklin Energy Services, LLC
- GoodCents
- Green & Healthy Homes Initiative
- Green Button Alliance
- Green Money Search
- Greenergy Chicago, Inc.
- Housing Authority of the County of San Bernardino
- HILCO Electric Cooperative Inc.





#### Call Attendees: Non-Members (3 of 4)

- Holland Board of Public Works
- Holy Cross Energy
- iCast
- Idaho Economic Development Association
- Island Institute
- Local Initiatives Support Corporation
- Local Government Commission
- Massachusetts Department of Energy Resources
- Mercy Housing Management Group

- Michigan Energy Options
- Montana DEQ
- NANA Regional Corporation
- Nebraska Legislature
- Nexant
- National Renewable Energy Laboratory
- NY Homeowners Construction Company
- Off The Grid Renovations, LLC.
- OptiMiser, LLC
- Oak Ridge National Laboratory
- Pennsylvania PUC





#### Call Attendees: Non-Members (4 of 4)

- Pacific Gas and Electric Company, Energy Training Center
- PosiGen Solar
- RE/MAX
- Rothschild Doyno Collaborative
- Salcido Solutions LLC
- San Diego County
   Government
- Seattle City Light
- Solar Energy Associates of CT •
- Solar Habitats, LLC.

- Southwest Energy Efficiency Project
- State of Arizona
- Sullivan County Office of Sustainable Energy
- The Clark Group LLC
- The Energy Network
- The Renaissance Collaborative Inc.
- Tennessee Valley Authority
- V3
- Ygrene





#### Opening Poll #1

- Which of the following best describes your organization's experience with state energy efficiency policy?
  - Some experience/familiarity 43%
  - Very experienced/familiar 26%
  - Limited experience/familiarity 24%
  - No experience/familiarity 4%
  - Not applicable 0%





#### Closing Poll

- After today's call, what will you do?
  - Seek out additional information on one or more of the ideas 74%
  - Make no changes to your current approach 11%
  - Consider implementing one or more of the ideas discussed 9%
  - Other (please explain) 6%

