



**SEE Action**

STATE ENERGY EFFICIENCY ACTION NETWORK

# SEE Action Update for the State and Local Energy Advisory Board

Johanna Zetterberg  
SEE Action Network Coordinator  
March 12, 2013

# Since the last update in Oct 2012...

- Executive Group met Jan 30<sup>th</sup> (Washington DC) to review Working Group plans for this year
- New guidance documents were published
  - Energy Efficiency Program Impact Evaluation Guide
  - Guide for Regulators on Data Access and Privacy
  - Guide to the Successful Implementation of State Combined Heat and Power (CHP) Policies
- New events were held
  - MW Regulatory Policy Navigation Exercise
  - SE and NE/MA Industrial EE and CHP Regional Dialogue Meetings
- Webinars on a variety of topics



# Major Work Planned/Considered for This Year

- **Events/Trainings**
  - SE Regulatory Policy Navigation Exercise
  - Sessions at ACI Nat'l Home Performance Conference on lowering program costs and increasing productive dialogue between contractors and home performance program administrators
- **Guidance Documents**
  - Energy Audits and Retro-Commissioning Policy Design Guide
  - Regulator's Guide to Data Access for Commercial Building Benchmarking
  - Making PUC EE collaborative processes more effective
  - Roadmap for Successful Implementation of State Industrial EE Programs
  - Financing toolkits (e.g. credit enhancement strategies, on-bill repayment)
- **Other Resources**
  - Pilot high performance leasing policy in 1-3 cities
  - 2-3 regional building re-tuning train-the-trainers sessions
  - Project TBD on ratepayer-funded EE program cost-effectiveness tests
  - Framework for a performance-based commercial buildings policy
  - Framework to Determine the Potential of Behavior-Based EE
  - Persistence of Behavior-Based Residential EE Programs study
  - Concept paper on EM&V in an AMI world ("EMV 2.0")
  - Energy efficiency EM&V "resource depot"
  - Common EE program savings reporting form template



# Outreach

## Since Oct 2012

- Introduced “success stories” into newsletter
- Grew listserv from 400 to over 2,000 subscribers
- Fulfilled technical assistance requests from 2 states
- Began use of social media tools (LinkedIn, Facebook)

## Coming Soon

- Publications library widget
- Product user testimonials

**\*\*Continued coordination with “N” groups and others\*\***



# SEE Action Subcommittee of STEAB

Established by STEAB resolution in June 2012 w/ members that overlap STEAB and SEE Action: David Terry, Frank Murray, Janet Streff Vaughn Clark, John Davies

*The Sub-Committee will review outcomes from the SEE Action Network and its eight working groups and consider, discuss and debate these actions. The Sub-Committee would report directly to the STEAB and bring all recommendations pertaining to federal policy to the Board for consideration.*



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# Background Slides



**SEE Action**  
STATE ENERGY EFFICIENCY ACTION NETWORK

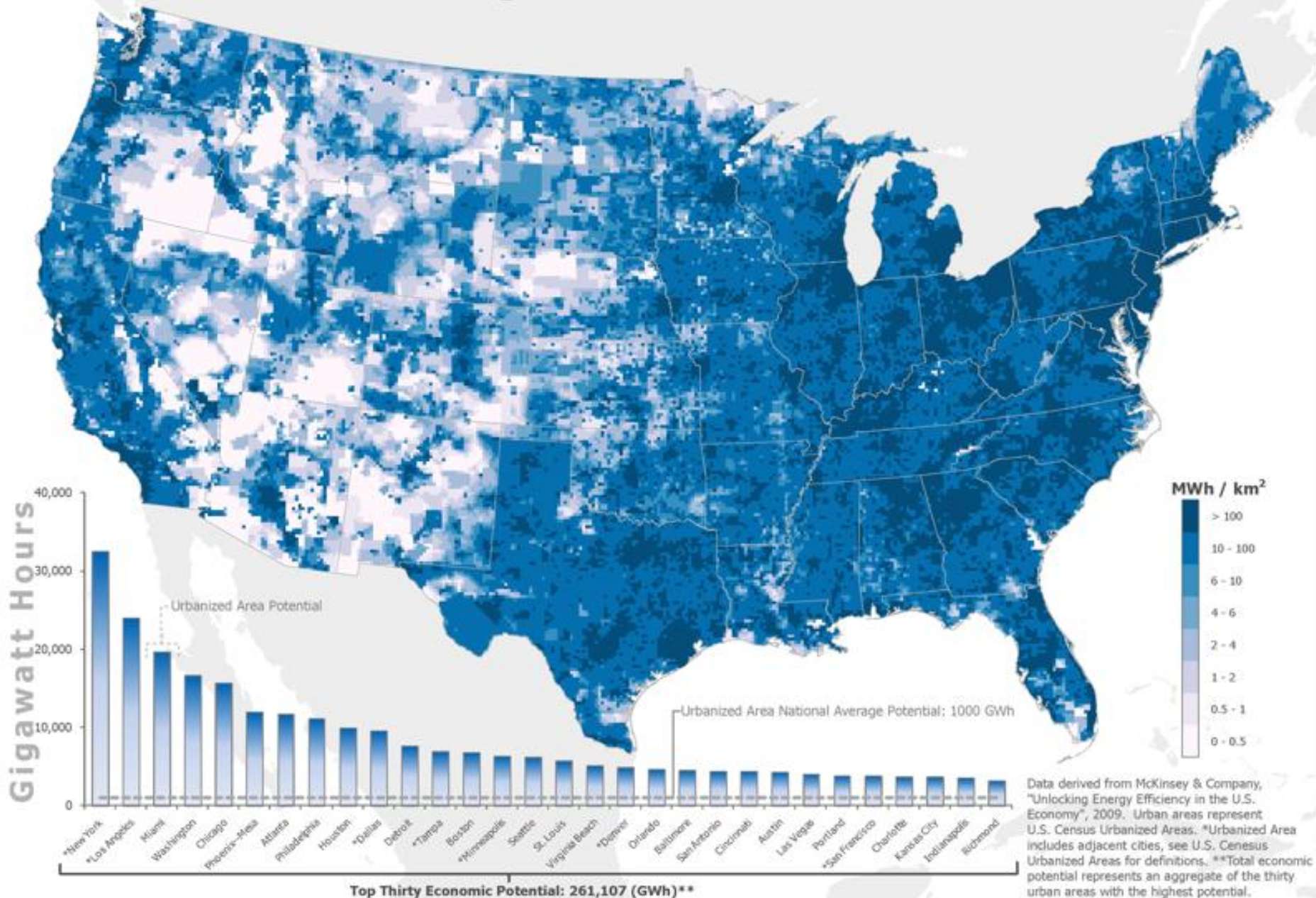
[www.seeaction.energy.gov](http://www.seeaction.energy.gov)



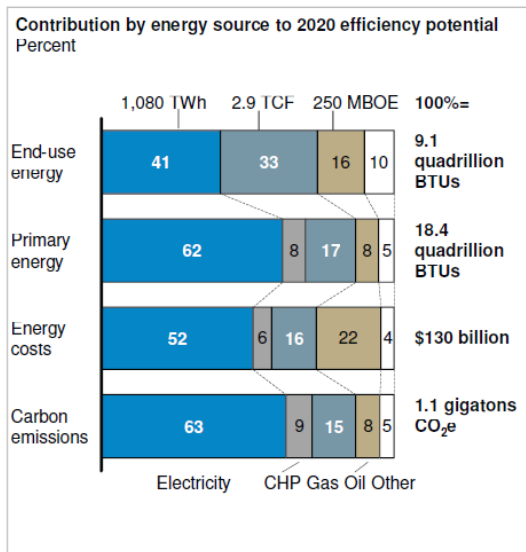
# Electricity Energy Efficiency

## Total Economic Potential Savings - 2020

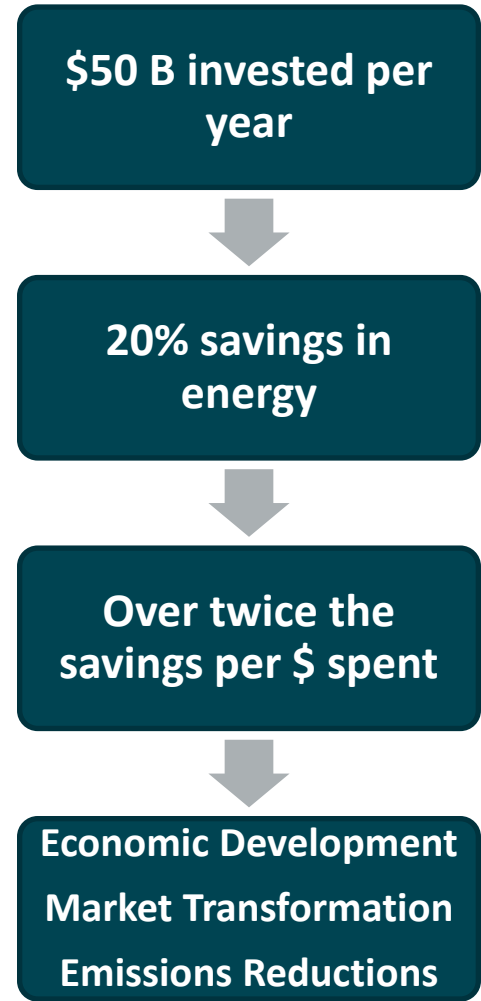
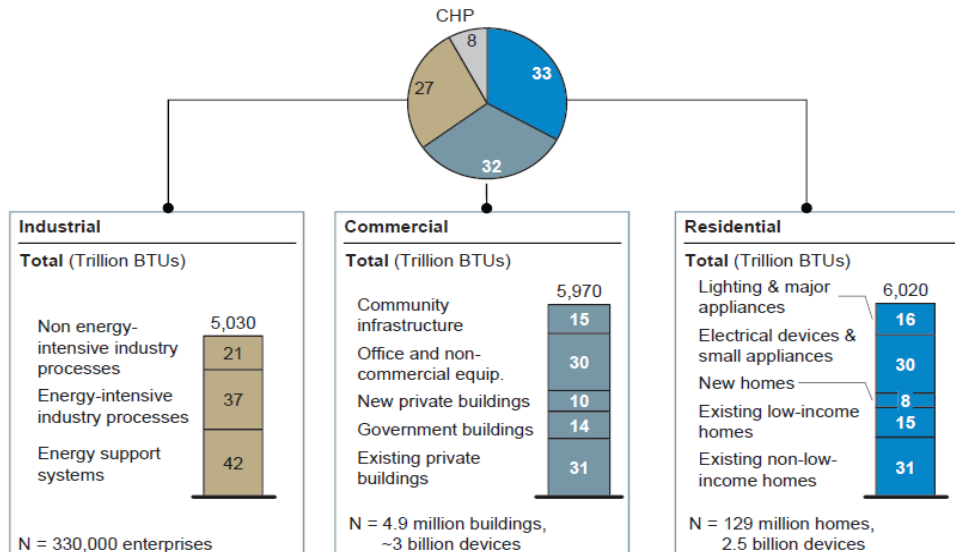
Date: 06-21-2010; Map Authors: Anthony Lopez & Seung-Jae Lee  
 Map produced by NREL for the U.S. Department of Energy



# Cost-Effective Energy Efficiency Potential

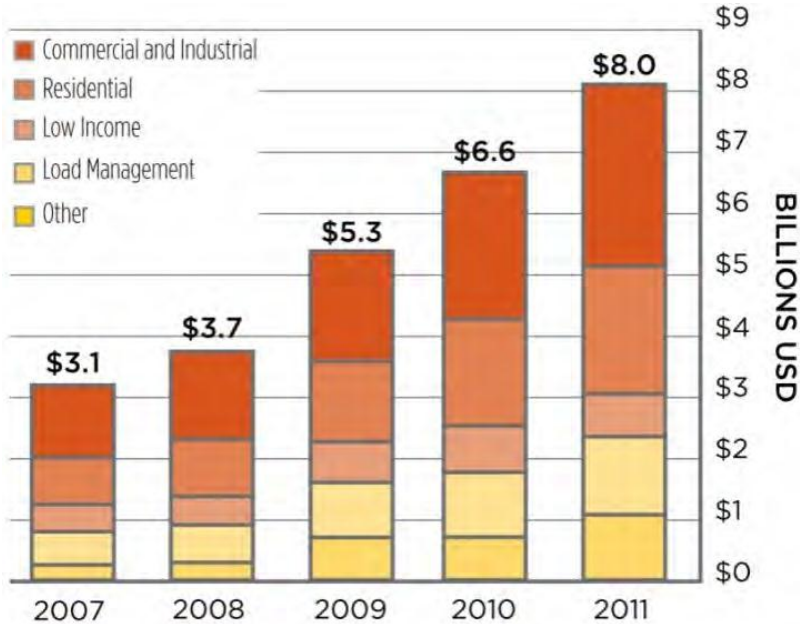


Percent, 100% = 18,410 trillion BTUs of primary energy





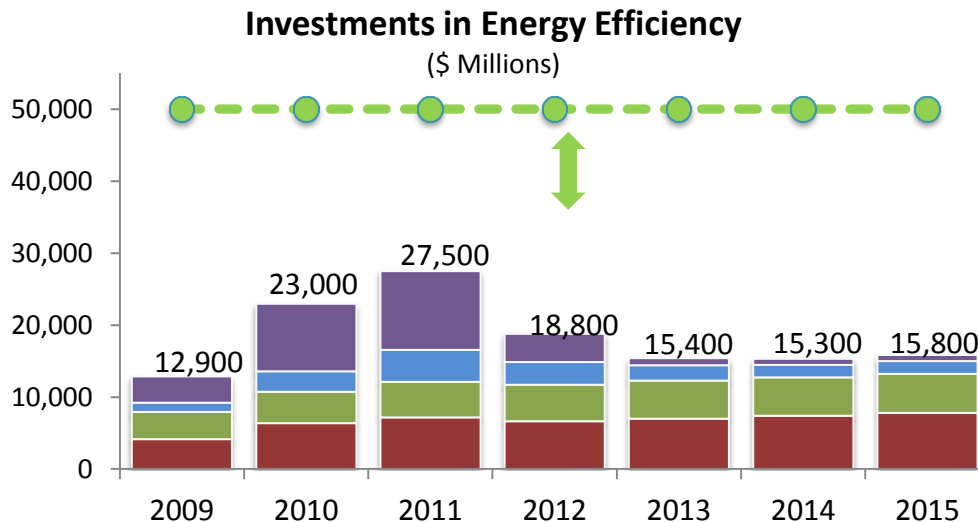
# Current Investment in Cost-Effective EE



## Ratepayer funded investment

- Grown to **\$8 B/year** in 2011, more than 2.5x investment 4 years ago

Source: CEE Annual Industry Report  
March 2012



## Ratepayer + private + consumer + federal investment

- Well below **\$50B/year**

- Federal including ARRA
- Consumer Programmatic Share
- Utility Ratepayer Programs
- Private (ESCO & other)

Source: McKinsey Global Energy and Materials (2009),  
*Unlocking Energy Efficiency in the U.S. Economy*

# Achieving the Potential

- EE remains one of the most cost effective<sup>1</sup> ways to address challenges
  - High consumer energy prices
  - Fuel price volatility
  - Transmission and distribution infrastructure expansion costs
  - Localized system reliability
  - Environmental and public health costs of GHGs and air pollution
  - National energy security and independence
- Cost-effective EE can play a significant role in meeting energy requirements and save hundreds of millions of dollars<sup>2</sup>
  - \$50B/year<sup>2</sup> cost-effective investment potential
- ***Key Point: Under-investment in energy efficiency given cost-effectiveness of resource***

<sup>1</sup>Average cost of efficiency savings ~ 4.6 cents per kWh including participant costs. ACEEE, *Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved Through Utility-Sector Energy Efficiency Programs*

<sup>2</sup>McKinsey, *Unlocking EE in the US Economy*



# About SEE Action

- Network of 200+ leaders and professionals, led by state and local policymakers, bringing energy efficiency to scale
- Support on energy efficiency policy and program decision making for:
  - Utility regulators, utilities and consumer advocates
  - Legislators, governors, mayors, county officials
  - Air and energy office directors, and others
- Facilitated by DOE and EPA; successor to the National Action Plan for Energy Efficiency



*The SEE Action Network is active in the largest areas of challenge and opportunity to advance energy efficiency*



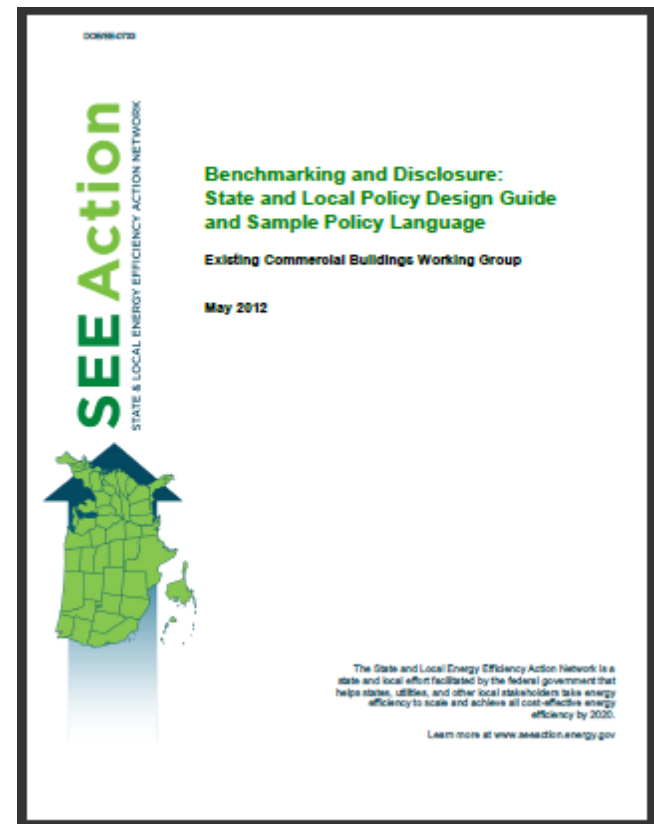
# What SEE Action Does

Offers *investment-grade decision support* for state and local policy makers.

Provides *solution pathways through market and policy barriers* to greater investment in cost-effective energy efficiency.

- Guidance Documents
- Trainings
- Peer-to-peer dialogue
- Technical Assistance

**Goal:** All cost-effective energy efficiency by 2020



# Decision Makers and Key Stakeholders

## **Associations of state policy makers and their members, including:**

- National Association of Regulatory Utility Commissioners (NARUC)
- National Conference of State Legislatures (NCSL)
- National Governors Association (NGA)
- National Association of State Energy Officials (NASEO)
- National Association of State Utility Consumer Advocates (NASUCA)
- National Association of Clean Air Agencies (NACAA)

## **Associations of local policy makers and their members, including:**

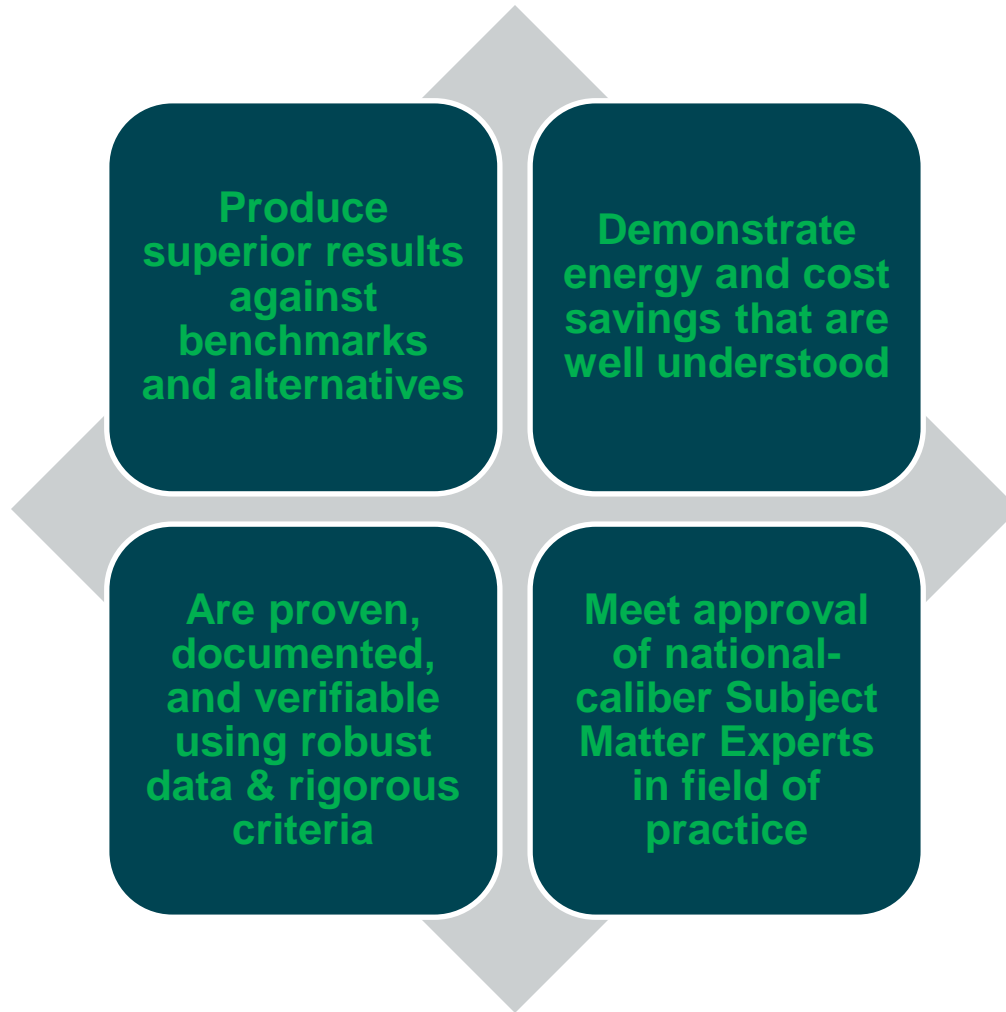
- US Conference of Mayors (USCM)
- National League of Cities (NLC)
- National Association of Counties (NACo)

## **Associations of electricity and natural gas providers, including:**

- Edison Electric Institute (EEI)
- Institute for Electric Efficiency (IEE)
- American Gas Association (AGA)
- American Public Power Association (APPA)
- National Rural Electric Cooperative Association (NRECA)



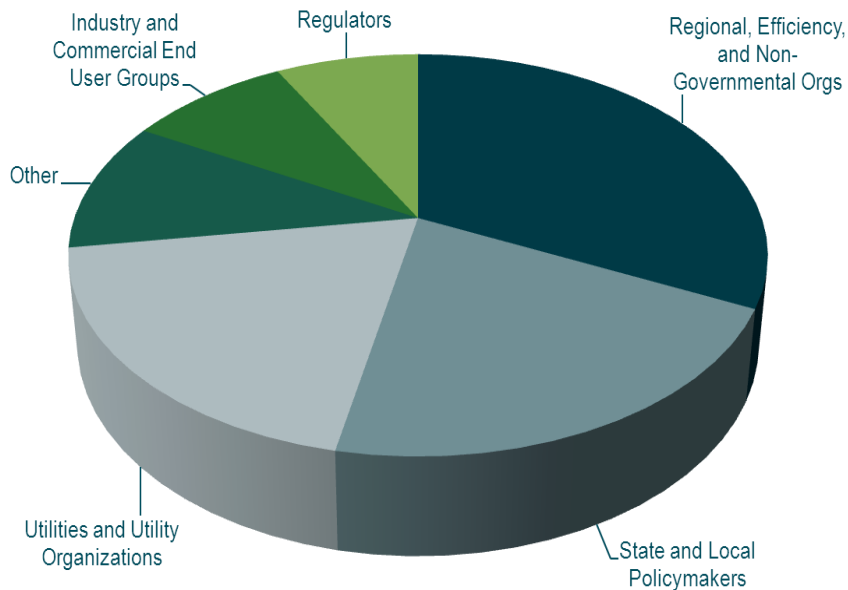
# “Decision Grade”





# Network Membership and Structure

*Over 200 professionals  
representing over 130  
organizations*



## Executive Group

- Provides visionary leadership, strategic direction, and drive to meet goals

## Working Group Co-Chairs

- Oversee development and dissemination of information resources for state/local leaders

## Working Group Members

- Provide technical expertise to ensure quality; help shape Working Group goals & activities



# SEE Action Leadership: Executive Group

**Dave Danielson** DOE/EERE, **Pat Hoffman** DOE/OE, **Gina McCarthy** EPA/OAR

**Al Skodowski** Transwestern

**Amy Royden-Bloom** NACAA

**Cheryl Roberto** PUC of Ohio (former)

**Chuck Gray** NARUC

**David Terry** NASEO

**Debra DeHaney-Howard** USCM

**Dian Grueneich** Dian Grueneich Consulting

**Don Gilligan** NAESCO

**Ed Wisniewski** CEE

**Gene Rodrigues** Southern California Edison

**Glen Andersen** NCSL

**Greg Bergtold** Dow Chemical Company

**Jared Lawrence** Duke Energy

**Jennifer Easler** IA Office of Consumer Advocate

**Kateri Callahan** Alliance to Save Energy

**Kit Kennedy** Natural Resources Defense Council

**Larry Downes** NJ Resources

**Len Peters** Kentucky Energy & Environment Cabinet

**Linda Breathitt** Kentucky Public Service Commission

**Lisa Jacobson** Bus. Council for Sustainable Energy

**Lisa Wood** Institute for Electric Efficiency

**Malcolm Woolf** Advanced Energy Economy

**Mary Ann Ralls** NRECA

**Paula Gant** American Gas Association

**Rebecca Craft** Consolidated Edison

**Rick Tempchin** Edison Electric Institute

**Sandra Byrd** Arkansas Electric Cooperative Corp.

**Steve Nadel** ACEEE

**Sue Gander** NGA Center for Best Practices

**Ursula Schryver** American Public Power Association



# SEE Action Leadership: Working Groups

Working Group	Co-Chairs	Staff Leads
Residential Retrofit	Susan Ackerman, OR PUC Frank Murray, NY SEO	Dale Hoffmeyer, DOE Chandler Von Schrader, EPA
Existing Commercial Buildings	Jim Gallagher, NY ISO Eric Coffman, Montgomery County MD	Cody Taylor/Amy Jiron, DOE Tracy Narel, EPA
Industrial Energy Efficiency and CHP	Todd Currier, WA SEO Joshua Epel, CO PUC	Katrina Pielli/Sandy Glatt, DOE Betsy Dutrow/Neeharika Naik-Dhungel, EPA
Evaluation, Measurement & Verification	[Vacant]	Carla Frisch/Joel Blaine, DOE Niko Dietsch, EPA
Financing Solutions	Bryan Garcia, CT Clean Energy Fund Keith Welks, PA Treasury	Rima Oueid, DOE Brian Ng, EPA
Ratepayer-Funded Efficiency	Jennifer Easler, IA Consumer Advocate [Vacant]	Katrina Pielli/Larry Mansueti, DOE Joe Bryson, EPA
Customer Information and Behavior	Vaughn Clark, OK SEO Phyllis Reha, MN PUC	Michael Li, DOE Stacy Angel, EPA



# Milestones

April 2010

- 8 Working Groups established, begin blueprint development

July 2011

- Blueprints approved by Executive Group, Year 1 work begins

July 2012

- Year 1 progress update to Executive Group  
30 publications, 50+ events, Network 200+

Jan 2013

- Year 2 plans in place; work begins



# Some Highlights of Last Year's Work

## Market/Policy Barrier

## SEE Action Knowledge Resource

Lack of consistency across state EM&V frameworks results in unnecessary costs, lack of confidence in savings, and a lower level of investment in EE than expected given the cost effectiveness of the resource.

**Model EE Program Impact Evaluation Guide and Uniform Methods Project:** Model approaches for calculating energy, demand, and emissions savings resulting from energy efficiency programs and commonly-installed measures.

Traditional utility regulation can create unintended obstacles for the utilities. Under the conventional regulatory framework, a utility's financial health can be negatively impacted when it delivers energy efficiency to its customers.

**Regulatory Policy Exercise:** An in-person, interactive, simulated real-world decision-making process for state utility regulators to explore regulatory choices for energy efficiency within the consequence-free environment of a learning exercise.

Government and commercial building managers must understand their buildings' energy performance to manage energy and costs. Building energy performance is "invisible" without access to data like a vehicle MPG rating.

**Benchmarking and Disclosure Policy Design Guide and Sample Policy Language:** A cut-and-paste guide based on existing policies for state and local governments with policy language that requires building energy performance benchmarking and the disclosure of results.

Roughly half the states have energy efficiency targets in place - a significant driver of cost-effective energy savings nationwide. Targets need to be developed with care, and many issues – such as whether utilities have an incentive to succeed – considered carefully.

**Setting Energy Savings Targets for Utilities:** Considerations for target setting including legal authority, who the targets apply to, statewide vs. utility-specific targets, target levels, how savings are to be evaluated, specific metrics and baselines to use, how much flexibility to allow, and whether to include cost caps.



# 5 Ways to Get Involved

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1. Help spread the word
2. Read and share SEE Action guidance documents
3. Join the conversation at an upcoming event
4. Join or send referrals for working groups
5. Sign up for news alerts at [www.seeaction.energy.gov](http://www.seeaction.energy.gov)





# Sign up for news alerts at [www.seeaction.energy.gov](http://www.seeaction.energy.gov)

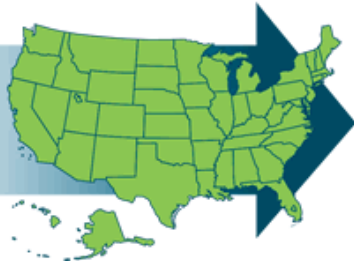
Home

About

Working Groups

Information Resources

Technical Assistance



## SEE Action

STATE & LOCAL ENERGY EFFICIENCY ACTION NETWORK

The State and Local Energy Efficiency Action Network (SEE Action) is a state- and local-led effort facilitated by the U.S. Department of Energy and the U.S. Environmental Protection Agency to take energy efficiency to scale and achieve all cost-effective energy efficiency by 2020. SEE Action offers [information resources](#) and [technical assistance](#) to state and local decision makers as they provide low-cost, reliable energy to their communities through energy efficiency.

### SEE Action Working Groups »

Existing Commercial Buildings

Industrial Energy Efficiency and Combined Heat and Power

Customer Information and Behavior

Evaluation, Measurement and Verification

Building Energy Codes

Driving Ratepayer-Funded Efficiency through Regulatory Policies

Financing Solutions

Residential Retrofit

### News »

- » [New SEE Action Resource: Evaluation, Measurement, and Verification \(EM&V\) of Residential Behavior-Based Energy Efficiency Programs](#)  
May 22, 2012
- » [New SEE Action Resource: Benchmarking and Disclosure: State and Local Policy Design Guide and Sample Policy Language](#)  
May 22, 2012

### Events »

- » [EM&V Webinar: Documenting Avoided Emissions from Energy Efficiency Programs](#)  
August 8, 2012

### Stay Updated »

- » Receive the newsletter and announcements of upcoming events and new publications from the SEE Action Network

SIGN UP



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STATE ENERGY EFFICIENCY ACTION NETWORK

[www.seeaction.energy.gov](http://www.seeaction.energy.gov)

# Thank You

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Visit [www.seeaction.energy.gov](http://www.seeaction.energy.gov)

## Contact

Johanna Zetterberg

Coordinator, SEE Action

U.S. Department of Energy

202-586-8778

[johanna.zetterberg@ee.doe.gov](mailto:johanna.zetterberg@ee.doe.gov)



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# Working Group Members, Goals and Priorities



# Customer Information and Behavior Working Group Members

## Co-Chairs

Phyllis Reha  
Minnesota Public Utilities  
Commission

Vaughn Clark  
Office of Community  
Development,  
Oklahoma Department of  
Commerce

## Federal Facilitators

Michael Li  
US DOE

Stacy Angel  
US EPA

## State, Local, and Regional Organizations

David Brightwell	Illinois Commerce Commission
Patrick Hays	North Little Rock, AR
Jennifer Hinman	Illinois Commerce Commission
Miles Keogh	National Association of Regulatory Utility Commissioners
Bridgette Remington	Vermont Public Service Board
Elizabeth Titus	Northeast Energy Efficiency Partnership
Brian Cotterill	VT Department of Public Service
Matthew Walker	VT Department of Public Service

## NGOs

Andrew Burr	Institute for Market Transformation
Susan Mazur-Stommen	American Council for an Energy-Efficient Economy
Loren Lutzenhiser	Portland State University
Mary Ann Ralls	National Rural Electric Cooperative Association
Dylan Sullivan	Natural Resources Defense Council
Carrie Armel	Stanford University
Mark Wolfe	Energy Program Consortium

## Program Administrators / Utilities

Summer Goodwin	Bonneville Power Administration
Lisa Wood/Adam Cooper	Institute for Electric Efficiency
Luke Nickerman	PG&E
Jennifer Robinson	Electric Power Research Institute
Ed Wisniewski/Kira Ashby	Consortium for Energy Efficiency
Nick Payton	OPOWER
Nikola Janjic	Vermont Energy Investment Corporation



# Priority Solutions and Actions to Achieve the Goal

By 2020, reduce residential electricity consumption by 4% by increasing customer awareness of energy use.

## Three Major Work Areas

### Data Access

1. Assistance for Regulators and Policymakers
2. Appropriate Access to Utility Data
3. Data Security and Communications Standards
4. Access to Federal Energy Data

### Program Design

## Priority Solution Areas

1. Scale-Up Pilots
2. Outreach to Improve the Understanding of Programs Targeting Behavior Changes
3. Provide Information to Decision-makers
4. Highlight Model Programs
5. Support Additional Research

### Measuring Savings

1. Smart Grid Consumer Behavior Studies
2. Cost-Effectiveness of Behavior Programs
3. Methods for Measuring Savings
4. Validate Experimental Design and Other Existing Methods
5. Examine Persistence of Savings



# Driving Ratepayer-Funded Efficiency through Regulatory Policies Working Group Members

## Co-Chairs

Jennifer Easler  
Iowa Office of Consumer  
Advocate

Commissioner co-chair  
vacant as of Jan 1, 2013

## Federal Facilitators

Katrina Pielli, Larry  
Mansueti  
US DOE

Joe Bryson  
US EPA



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### Co-Chairs

Jennifer Easler	Iowa Office of Consumer Advocate
Vacant	Commissioner

### Policymakers

Ellie Friedman	Colorado Public Utilities Commission staff
Jennifer Hinman	Illinois Commerce Commission
Brian Rounds	South Dakota Public Utilities Commission
Marsha Smith	Idaho Public Utilities Commission

### Consumers

Bob Nelson	Montana Consumer Counsel
Wilson Gonzalez	Ohio Consumers' Counsel

### Practitioners/Utilities

Janet Besser	Formerly of National Grid
Rebecca Craft	Con Edison
Dena DeLucca	New Hampshire Electric Cooperative
Jared Lawrence	Duke Energy
Anne-Marie Peracchio	New Jersey Natural Gas
Diane Munns	MidAmerican Energy
Sheldon Switzer	Baltimore Gas and Electric

### Non-Government Organizations

Kit Kennedy	Natural Resources Defense Council
Derek Murrow	Environment Northeast
Steve Nadel	American Council for an Energy-Efficient Economy
John Sibley	Formerly of Southeast Energy Efficiency Alliance
Lisa Wood	Institute for Electric Efficiency

### Observing Coordination Organizations

Jeff Genzer	National Association of State Energy Officials
Don Gilligan	National Association of Energy Service Companies
Keith Dennis	National Rural Electric Cooperative Association
Miles Keogh	National Association of Regulatory Utility Commissioners
Elizabeth Noll	American Gas Association
Rick Tempchin	Edison Electric Institute
Aliza Wasserman	National Governors Association

### Working Group Advisors

Rich Sedano, Janine Migden-Ostrander	Regulatory Assistance Project
Tim Woolf	Synapse Energy Economics, Inc.



# Priority Solutions & Actions to Achieve Goals

## Goals

First 12 months: Five additional states implementing policies that motivate utilities to support energy efficiency initiatives that target all cost-effective energy efficiency.

Intermediate goal: intermediate goal to be determined within 12 months.

Long Term: All states implementing policies that motivate utilities to support energy efficiency initiatives that target all cost-effective energy efficiency.

## Sub-Goals

### Establish Foundation: Develop Materials

- Dialogue discussions to assess priority topics & gaps to fill
- Materials on priority topics, including principles / considerations for regulators & others addressing issues

### Build Capacity: Provide Technical Assistance

#### Priority Solution Areas

- Outreach to target audiences
- Peer to peer exchange: Working Group members serve as “assistance team”
- Ramp up DOE/EPA technical assistance

### Explore Additional Issues and Solutions

- Additional Dialogue discussions on:
- Next generation policies
  - Policies to support highest levels of energy efficiency achievement



# Industrial Energy Efficiency and Combined Heat and Power Working Group Members

## Co-Chairs

Todd Currier  
Washington State University  
Extension Energy Office

Joshua Epel  
Colorado Public Utilities  
Commission

## Federal Facilitators

Sandy Glatt

US DOE

Katrina Pielli

US DOE

Betsy Dutrow

US EPA

Neeharika Naik-Dhungel

US EPA

## State Programs

John Ballam	Massachusetts Department of Energy Resources
Brian Platt	New York State Energy Research and Development Authority

## Coordinating Organizations

Jessica Bridges	U.S .Clean Heat & Power Association (USCHPA)
<i>Keith Dennis</i>	<i>National Rural Electric Cooperative Association</i>
Ron Edelstein	Gas Technology Institute
<i>Julia Friedman</i>	<i>National Association of State Energy Officials (NASEO)</i>
Rich Herweck	Texas CHP Initiative
Bruce Lung	Alliance to Save Energy
Rick Marsh	Industrial Energy Efficiency Network (IEEN)
Richard Meyer	American Gas Association
Ethan Rogers	American Council for an Energy-Efficient Economy (ACEEE)
Lola Schoenrich	Midwest Governor's Association
<i>Rich Sedano</i>	<i>Regulatory Assistance Project (RAP)</i>
Becky Stanfield	Natural Resources Defense Council (NRDC)
Ed Wisniewski	Consortium for Energy Efficiency
Jay Wrobel	Midwest Energy Efficiency Alliance (MEEA)

## Research/Academia

John Cuttica	Energy Resources Center, University of Illinois - Chicago
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## Utilities

James Earley	Southern Company
Chris Goff	Southern California Gas Company

## Industry/End-User

Stephen Coppinger	CalPortland
Brad Runda	Saint -Gobain

*Italicized names indicate new members since July 2012*



# Industrial EE & CHP WG Pillars

**Achieve an average 2.5% reduction in industrial energy intensity annually through 2020; install 40 GW of new, cost-effective CHP by 2020**

## Reduce Barriers to Industrial Energy Efficiency & CHP

- 1. State, Local, & Utility Programs for Industry**  
Programs that better meet the needs of industry
- 2. State Policy Models**  
Broader adoption of model policies
- 3. National Energy Efficiency Policy**  
Enhance national policy with regard to industrial energy efficiency and CHP
- 4. Education & Outreach**  
Build corporate culture; foster greater understanding of the economic value of industrial energy efficiency and CHP

## Build the Workforce

- 5. Education & Workforce Development**  
Identify industry's needs and workforce needs; develop new programs to address needs
- 6. Develop Training & Academic Curricula**  
From the plant floor to the corporate level
- 7. Licensing & Certification Protocols**  
Certified Energy Manager (CEM); DOE Qualified Specialists; Continuous Energy Improvement, etc.

## Promote Efficient Operations & Investment

- 8. Financing Innovation**  
Loan guarantees, energy service companies (ESCOs), etc.
- 9. Financial Incentives**  
Address industry ROI and refit cycles
- 10. Technical Solutions**  
Improve availability of energy efficiency and CHP information and tools for industry
- 11. Energy Management Programs/Continuous Energy Improvement**  
Ex: ISO 50001, Superior Energy Performance (SEP), ENERGY STAR, and others

## Move the Market

- 12. Technology Demonstration**  
Adoption of existing technologies
- 13. Rate Setting Recommendations to Support CHP**  
Offer comprehensive CHP policies
- 14. Reduce Uncertainty Related to State Interconnection**  
Harmonization across broad regions and states
- 15. Financing Reform**  
Depreciation rules



# Existing Commercial Buildings Working Group Members

## Co-Chairs

Eric Coffman  
Montgomery County, Maryland

Jim Gallagher  
New York Independent System  
Operator

## Federal Facilitators

Cody Taylor  
US DOE

Amy Jiron  
US DOE

Tracy Narel  
US EPA

## State, Local, and Regional Organizations

Glen Andersen	National Conference of State Legislatures
*Dan Bressette	Maryland Energy Administration
Alex Dews	City of Philadelphia, PA
Sandy Fazeli	National Association of State Energy Officials
*Mark Ferron	Commissioner, California Public Utilities Commission
*Matt Gray	City of Cleveland, OH
Brian Holland	ICLEI – Local Governments for Sustainability
*Barry Hooper	City & County of San Francisco, California
Ruth Horton	New York State Energy Research and Development Authority
Miles Keogh	National Association of Regulatory Utility Commissioners
Kevin McCarty	U.S. Conference of Mayors
Janet Streff	Minnesota Department of Commerce
*Elizabeth Vasatka	City of Boulder, CO

## NGOs

*Jim Barrett	Applied Solutions
*Lane Burt	U.S. Green Building Council
Jennifer Amann	American Council for an Energy Efficient Economy
Sean Denniston	New Buildings Institute
Jason Erwin	Consortium for Energy Efficiency
Jeff Harris	Alliance to Save Energy
Martha Hewett	Center for Energy and Environment
*Doug Lewin	The South-central Partnership for Energy Efficiency as a Resource
Cliff Majersik	Institute for Market Transformation
*Scott Morris	Buildings Owners and Managers Association
Elizabeth Noll	American Gas Association
Eric Oliver	Association of Energy Engineers
Carolyn Sarno	Northeast Energy Efficiency Partnerships

## Program Administrators / Utilities

Marissa Barrera	Southern California Edison
Jared Lawrence	Duke Energy
David Pospisil	Consolidated Edison

## Private Sector Companies

Dan Probst	Jones Lang LaSalle
Alecia Ward	The Weidt Group



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\*New members since July 2012

# Commercial Working Group: Priority Policy and Program Solutions

## Mid-term Goal

By 2015, reduce energy use by at least 20% in 3 billion square feet of commercial space each year through whole-building retrofits and/or operational improvements.

## Four Pillars

Drive Demand for  
Energy Efficiency

Enable Efficient  
Operations and  
Investment

Build the Workforce

Move the Market

## Priority Solution Areas

**1. Energy Benchmarking, Rating & Disclosure Policies**  
Improve information through benchmarking/disclosure

**2. Retro-commissioning (RCx) Policies**  
RCx and retrofit requirements

**3. Ratepayer-funded Programs**  
Target whole-building programs

**4. Public-private Partnerships**  
Energy challenges, recognition programs, etc.

**5. Strategic Energy Management Programs**  
Adopt comprehensive energy management programs

**6. High Performance Leasing Policies**  
Integrate efficiency in leasing practices

**7. Financing Innovation Programs**  
Credit enhancement, revolving loans, etc.

**8.1. Education & Training**  
Build training capacity

**8.2. Materials**  
Develop standardized training materials

**8.3. Certification**  
Standardize around meaningful and nationally-recognized professional certifications

**9. High Performance Procurement Policies**  
Bulk purchasing, specifications, life cycle costing, and streamlined Energy Savings Performance Contracts (ESPC)

**10. Emerging Technology Demonstration Programs**  
Through public-private partnerships, competitions, etc.



# Residential Retrofit Working Group Members

## Co-Chairs

Susan Ackerman  
Oregon PUC

Frank Murray  
NYSERDA

## Federal Facilitators

Dale Hoffmeyer  
US DOE

Chandler von Schrader  
US EPA

## State, Local, and Regional Organizations

Walt Auburn	Maryland Energy Administration
Karen Hamilton	NYSERDA
Rick Hanson	City of Jamestown Housing & Comm Dev Dept
Gerald Shechter	Kansas City Office of Environmental Quality
Theresa Spurling-Wood	Alachua County Public Schools

## NGOs & Research

William Johnson	Green America Public Private Partnership
Loren Lutzenhiser	Portland State University
Peter Mills	Consortium for Energy Efficiency
Jay Murdoch	Efficiency First
Tom Plant	Advanced Energy Economy Institute
Kevin Reilly	Laborers' International Union of North America (LIUNA)
Kara Saul Rinaldi	National Home Performance Council
Bob Scott	NASCSP
Ben Taube	Southeast Energy Efficiency Alliance (consultant to)
John Tooley	Advanced Energy

## Program Administrators / Utilities

Sandra Byrd	Arkansas Electric Cooperative Corp.
Diane Ferrington	Energy Trust of Oregon
Gavin Hastings	Arizona Public Service
Steve Saenz	Austin Energy

## Industry (commercial)

Jared Asch	BKi
Matt Golden	Efficiency.org
Warren Lupson	Air Conditioning, Heating, and Refrigeration Institute
Duncan McCulloch	Sears Home Improvements
Keith Williams	Building Services & Consulting LLC



# Residential Retrofit Priority Areas

## Goal

Significantly increase the number of comprehensive, durable, performance-based home energy upgrades (HEUs) through a robust, sustainable industry – in line with estimates for the Moderate or Aggressive scenarios

## Priorities

I. Improve Residential Energy Efficiency Program Design

II. Enable Access to Capital

III. Increase the Market Value of Home Energy Upgrades

IV. Bolster Energy Efficiency Funding & Policy Support

## Priority Solution Areas

1. Improve the quality of home energy upgrade program design and implementation

2. Rigorous quality assurance standards and workforce training

3. Improve access to credit for both product and service providers

4. Improve access to financing for customers

5. Increase the value of home energy upgrades, through labeling, disclosures, education, data collection, etc.

6. Increase HEU funding from utility customers  
7. Maintain or increase taxpayer funding for state and local HEU programs  
8. Rebates and tax credits for HEUs  
9. State Clean Energy Commitments





# EM&V Working Group Members

## Co-Chairs

Pat Oshie

Washington Utilities and  
Transportation Commission

Malcolm Woolf (former)

Maryland Energy Administration

## Federal Facilitators

Carla Frisch

US DOE

Joel Blaine

US DOE

Niko Dietsch

US EPA

## State, Local, and Regional Organizations

Susan Stratton	Northwest Energy Efficiency Alliance
Jennifer Meissner	New York State Energy Research and Development Authority
Julie Michals	Northeast Energy Efficiency Partnerships
Monica Rudman	California Energy Commission
Matthew Tisdale	California Public Utilities Commission
Jay Wrobel	Midwest Energy Efficiency Alliance

## NGOs

Keith Dennis	NRECA
Julia Friedman	National Association of State Energy Officials
Don Gilligan	National Association of Energy Service Companies
Marty Kushler	American Council for an Energy Efficient Economy
Peter Miller	Natural Resource Defense Council
Elizabeth Noll	American Gas Association
Rod Sobin	Alliance to Save Energy
Ed Wisniewski	Consortium for Energy Efficiency

## Program Administrators / Utilities

Jean-Claude Van Duysen	EDF
Fred Gordon	Energy Trust of Oregon
Val Jensen	ComEd
Diane Munns/Chuck Rea	Mid American
Jeremy Newberger	National Grid
Gene Rodrigues	Southern California Edison
Cal Shirley	Puget Sound Energy





# Key Solutions & Actions to Achieve the Goal

**GOAL: Transform EM&V to yield more accurate, credible, and timely results that accelerate successful energy efficiency deployment and management**

Three Major Work Areas

**Develop a foundation for improving credibility and cross-jurisdiction comparability**

**Explore new methods to address emerging issues and technologies**

**Build capacity and increase adoption of best practices**

Priority Solution Areas

**1. Consistent savings estimates and consistent and comparable reporting**

Resource for calculations, uniform definitions and common forms

**2. Review and update EM&V resource guides**

Impact evaluation techniques explained

**3. Uniform methods and/or standards**

Set of voluntary methods/protocols

**4. Explore new technology solutions**

Use Smart Grid and AMI to measure and verify savings

**5. Innovative analysis techniques**

New methods provide more efficient EM&V and maintain rigor

**6. Resource accessibility and tool development**

National or regional databases of reports, plans, and stipulated savings values

**7. Training**

Increase the number of EM&V practitioners and their level of expertise and experience

\*EM&V is different from the other working groups; it does not focus on a sector or one issue. Hence, each of the solution pathways are highly interconnected.



# Financing Solutions Working Group Members

## Co-Chairs

Keith Welks  
Pennsylvania Treasury Dept.

Bryan Garcia  
Connecticut Clean Energy  
Finance and Investment  
Authority

## Federal Facilitators

Rima Oueid  
US DOE

Brian Ng  
US EPA

## Financial Institutions

Al Griffin	Citigroup
W. Robert Hall	Hall Associates Consulting, LLC
Peter Krajsa	AFC First Financial Corporation
<i>Bill Jenkins</i>	<i>Deutsche Bank</i>

## Industry and Commercial Groups

Don Gilligan	National Association of Energy Service Companies
Erin Hutson	Laborers' International Union
Richard Metcalf	Laborers' International Union
Stockton Williams	HR&A Advisors
<i>Yumi Yi</i>	<i>Bloomberg New Energy Finance</i>
<i>Tom Rowlands-Rees</i>	<i>Bloomberg New Energy Finance</i>
Neal Skiver	Green Campus Partners
Frank Norcross	Green Campus Partners
<i>Austin Whitman</i>	<i>M.J. Bradley &amp; Associates</i>

## Regional, Research, and Advocacy Groups

Philip Henderson	Natural Resources Defense Council
Joel Kurtzman	Milken Institute – Center for Financial Innovations
Kerry O'Neill	Clean Energy Finance Center
Robert Sahadi	Institute for Market Transformation
Mark Wolfe	Energy Programs Consortium
Mijo Vodopic	MacArthur Foundation
Stuart DeCew	Yale Center for Business and the Environment

*Working group members in italics have joined since July 2012*



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Pennsylvania Treasury Dept.

Bryan Garcia  
Connecticut Clean Energy  
Finance and Investment  
Authority

## Federal Facilitators

Rima Oueid  
US DOE

Brian Ng  
US EPA

## State Energy Officials and Policymakers

Paul Scharfenberger	Colorado Governor's Energy Office
Birud Jhivari	Massachusetts Department of Energy Resources
Jeff Pitkin	NY State Energy Research and Development Authority
David Terry	National Association of State Energy Officials
Pat Shaughnessy	Pennsylvania Treasury Department

## Utilities and Utility Associations

David Logeman	Electric Cooperatives of South Carolina
Janis Erickson	Sacramento Municipal Utility District

## Utility Commissions

Jennifer Finnigan	California Public Utilities Commission
James Gardner	Kentucky Public Service Commission
<i>Lorraine Akiba</i>	<i>Hawaii Public Utilities Commission</i>

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# Priority Solutions and Actions to Achieve Goals

## Mid-term Goal

Remove financing barriers to energy efficiency in the United States through improved financing tools and mechanisms (loans, leases, service agreements).

**Better Understand Needs of Financial Institutions and Customers**

### 1. Dialogue with Financial Institutions and Customers

Gather information from financial institutions and customers to better understand their needs relative to participating in energy efficiency lending.

**Three Pillars**  
**Develop Information Toolkits**

## Priority Solutions Areas

### 2a and 2b. Information Toolkits

Provide relevant data and analysis to utilities, government entities, and financial institutions that will fill-in knowledge gaps and information needs and allow them to create appropriate finance products.

### 2c. Toolkit Outreach and Education

Educate financial institutions, utility commissions, and other stakeholders on how to effectively leverage information and data presented in the toolkit.

**Develop New Data on Loan Performance**

### 3. Loan Data Analysis

- (a) Gather and make public (on an ongoing basis) data, including loan-level performance data, that will assist utilities, financial institutions and others to develop and offer finance products for the residential sector at attractive rates and terms.
- (b) Create online depository of loan program information.

