



Session 1A**Energy Efficiency as a Distributed Energy Resource: Implications for Program Design, Customer Engagement, National Platforms, and EM&V**Moderator: **John Taylor**, Consortium for Energy EfficiencySpeakers: **TBD**, Smart Electric Power Alliance

As voluntary efficiency programs are called upon to deliver a wider array of goals (including grid benefits), the deployment of distributed energy generation, storage, demand response, and energy efficiency programs are increasingly coordinated. In response, program administrators are addressing these objectives through new delivery models, customer engagement, marketing (i.e., ENERGY STAR®), and methods for evaluation program impacts. In the private sector, manufacturers are increasingly developing products that deliver an integrated value proposition consistent with the objectives of IDSM. This session will explore enhancements to current market transformation programs through the eyes of the utility program administrators as well as water heating and HVAC industry stakeholders.

Session 1B**Transforming Utility Energy Efficiency Strategies through Regulatory Reform**Moderator: **Maggie Molina**, American Council for an Energy-Efficient EconomySpeakers: **Vicki Kuo**, ConEd**JR Tolbert**, Advanced Energy Economy**Dian Grueneich**, Stanford University, Precourt Energy Efficiency Center *[invited]*

This session will examine recent examples of state utility regulatory reform such as energy efficiency targets, business models, and other practices. Speakers will provide insight into their past experiences and new opportunities for successful deployment of energy efficiency programs through regulatory reform.

**12:00 pm - 1:15 pm****LUNCH & KEYNOTE**Keynote Speaker: **Suzanne Shelton**, President and CEO of Shelton Group**1:30 pm - 3:00 pm****BREAKOUT SESSIONS**Track A: MT in Residential**A1: Making Quality Installation Mainstream**Moderator: **Harvey Sachs**, American Council for an Energy-Efficient EconomySpeakers: **Jonathan Passe**, EPA ENERGY STAR®**Glenn Hourahan**, Air Conditioning Contractors of America**John Taylor**, Consortium for Energy Efficiency

The typical residential HVAC installation delivers 25% - 30% less performance than expected from its federal ratings. The most important difference between lab-certified vs. field performance is poor installation. Our objectives are to summarize the technical and program state-of-the art for QI, and discuss ways to make QI mainstream.

*Track B: MT in Commercial*

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**B1: Mapping the Path to a Systems-Efficient Market**Moderator: **Kelly Speakes-Backman**, Alliance to Save EnergySpeakers: **Itzhak Maor**, Johnson Controls  
**Pete Horton**, Legrand

Many building energy experts believe that improving the efficiency of the building systems is increasingly necessary to achieve cost-effective energy savings within the built environment. A systems approach considers the interactions of components within and among various building systems, as well as among multiple buildings, and between the building and the electric grid. The Systems Efficiency Initiative (SEI)—a collaboration of more than 50 entities involved in building research, design, construction, operation, and policy—is developing a *Systems Efficiency Roadmap* for moving the market toward a systems focus. This session will provide a discussion of the key findings from the Roadmap development process, with emphasis on opportunities for improving the energy efficiency of systems *within* a building. Topics will include strategies for saving energy from HVAC, lighting systems, and multi-system integration, to miscellaneous electric loads. In addition, the discussion will address the potential for direct current (DC) power distribution systems to increase energy efficiency in buildings, and the potential transition paths to building DC networks. The panelists will discuss specific recommendations for actions by both government and private sector actors to promote the transition to a systems focus, as well as opportunities for collaboration.

*Track C: Evaluation, Measurement, and Verification*

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**C1: Energy Savings Plus: Examining the Non-Energy Benefits of Energy Efficiency**Moderator: **Marty Kushler**, American Council for an Energy-Efficient EconomySpeakers: **Lisa A. Skumatz**, Skumatz Economic Research Associates  
**Jonathan Wilson**, National Center for Healthy Housing  
**Robin LeBaron**, Pearl Certification

Energy efficiency measures and programs often produce benefits beyond the direct energy savings. In this session, leading experts will discuss those benefits, and how they can be considered in assessing the cost-effectiveness of energy efficiency.

*Track D: Program Approaches*

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**D1: Paving the Way with Pay for Performance**Moderator: **Emily Levin**, Vermont Energy Investment CorporationSpeakers: **Evelyn Lundhild**, Independent Electricity System Operator  
**Raghusimha Sudhakara**, ConEdison  
**Julia Szinai**, University of California, Berkeley  
**TBD**, Lawrence Berkeley National Laboratory

Most energy efficiency programs offer prescriptive rebates and incentives to promote smarter energy use through measures like efficient appliances and weatherization. A new analysis published by NRDC and VEIC finds that pay-for-performance (P4P) may encourage additional energy savings. Broadly speaking, these programs track and reward energy savings as they occur, usually by examining data from a building's energy meters – as opposed to the more common approach of estimating savings in advance of installation and offering rebates and incentives upfront.

This session will review the recent analysis on P4P programs and highlight individual case studies of current approaches in the market. Speakers will share their experience to date, lessons learned, and insights with respect to future policy recommendations.

**3:00 - 3:30 pm****NETWORKING BREAK**

**3:30 – 5:00 pm****BREAKOUT SESSIONS***Track A: MT in Residential***A2: Transforming Consumer Product Markets with Market Data: Cutting Edge Applications**Moderator: **Jennifer Amann**, American Council for an Energy-Efficient EconomySpeaker: **Anne Arquit Niederberger**, Enervee**Martha Brook**, California Energy Commission *[invited]***Lisa Davidson**, San Diego Gas & Electric *[invited]***Cristina Coltro**, ConEd *[invited]***Paul Campbell**, Sears *[invited]*

Advanced market intelligence is helping overcome the lack of consumer transparency on energy efficiency while new data sources are providing improved insights into consumer behavior. Cutting edge programs combine product market insights with carefully-designed behavioral interventions to align with and even shape how people shop for consumer products including appliances and electronics. In this session, a panel of speakers will address advances in market intelligence, emerging tools and platforms, and ways that programs and policymakers are leveraging intelligence and behavioral insights to transform markets.

*Track B: MT in Commercial***B2: Zero Energy Roadmaps: How to Chart the Path to Success**Moderator: **Amy Cortese**, New Buildings InstituteSpeaker: **David Epley**, District of Columbia**Fran Boucher** or **Laura Rodormer**, National Grid

Many communities with aggressive climate goals are establishing roadmaps to zero net energy (ZNE) buildings. These plans start with big, bold goals, a strong baseline energy code, a roadmap for energy code adoption over several cycles and a regulatory framework for achieving ZNE. Some methods include outcome-based approaches that address individual building types or third party zero energy certification equivalent pathways. To bolster these efforts, utilities are providing financial incentives through ZNE pilot programs paired with market education highlighting keys to successful design, construction and operations as well as strategies for increasing code compliance. This session will explore a variety of practices and approaches that utilities and policy makers are using to transform the market to ZNE.

*Track C: Evaluation, Measurement, and Verification***C2: Turning Policy Data into Actionable Information: How Local Governments' Efforts are Creating New Markets**Moderator: **Erin Beddingfield**, Institute for Market TransformationSpeakers: **Ali Levine**, New York City Mayor's Office of Sustainability**Rupal Prasad**, City of Philadelphia, Mayor's Office of Sustainability**Hewson Baltzell**, Helios Exchange

As local benchmarking and transparency ordinances are adopted in jurisdictions nationwide, there is an ever-growing dataset on the characteristics and energy use of buildings covered by these laws. Local governments, utilities, and private companies are tackling the question of what to do with this information, and how to use it to help building owners make energy efficiency a priority in their buildings. This session will explore how city governments are using the city-gathered information to help bring private-sector solutions to building owners, thereby expanding market share for private vendors.

Speakers will discuss their experience dealing with various challenges in the use of whole-building energy data to help their constituents and customers factor energy consumption into their choices at the building level. Panelists include experts in city

government who are using benchmarking data, combined with other data sources, to help building owners in their cities make energy efficiency decisions. This session will also include an expert from a software company that uses a broad range of data to help its customers comply with local laws, and make their buildings more energy efficient.

*Track D: Program Approaches*

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**D2: Bringing Low-Income Programs to Scale**

Moderator: **Lauren Ross**, American Council for an Energy-Efficient Economy

Speakers: **Tasha Perreault**, Eversource *[invited]*

**Maritza Estremera**, United Illuminating *[invited]*

**Valeria Bullock**, PECO *[invited]*

Low-income and multifamily households are often underserved when it comes to investments in energy efficiency, yet increasing evidence suggests that these households live in less efficient housing and face disproportionately higher energy costs. Customer-funded energy efficiency programs can be important pathways for increasing the efficiency of this housing stock. These programs are well-positioned to work alongside other state and local programs and partners to deliver effective energy saving measures and services that best meet the unique needs of the sector. The best strategies for taking low-income energy efficiency to scale will involve coordination, collaboration, and flexibility, presenting a host of opportunities and challenges along the way. This panel will address innovative strategies for utility-led low-income energy efficiency programs including maximizing program dollars, leveraging other local and state funding, and offering flexibility in program design and delivery.

**6:00 - 8:00 pm**

**RECEPTION**

**Tuesday, April 4**

**7:00 am - 3:00 pm**

**REGISTRATION OPEN**

**7:30 - 8:30 am**

**NETWORKING BREAKFAST**

**8:30 - 10:00 am**

**PLENARY SESSION**

**Regional Roundup**

Moderator: **Hilary Forster**, Consortium for Energy Efficiency

Speakers: **Stacey Paradis**, Midwest Energy Efficiency Alliance

**Susan Stratton**, Northwest Energy Efficiency Alliance

**Marie Abdou**, National Grid

This perennial session will explore notable changes to program funding, impacts, approaches and policy across various geographies of significance throughout the US. Summary results of CEE's tenth consecutive annual budgets and impacts report for the US and Canada will be presented. Assembled panelists will include a range of perspectives including those having the full spectrum of obligation and responsibility for program administration to those advocating for favorable state and regional efficiency policies. Panelists will be asked to comment on emerging trends, recent successes and developing challenges facing their respective organizations. Attend this session to learn more about the emergence of the Program Administrator Industry, policy, and program developments.

**10:00 - 10:30 am**

**NETWORKING BREAK**

**10:30 am - 12:00 pm****CONCURRENT SESSIONS***Session 2A***What Is, Was, and Will Be: Policy Drivers for Market Transformation**

Moderator: **Lowell Ungar**, American Council for an Energy-Efficient Economy

Speakers: **Rick Murphy**, American Gas Association *[invited]*

**Cody Taylor**, U.S. Department of Energy *[invited]*

Federal and state policy remains a significant driver of market transformation. From minimum efficiency standards, to funding, support of research and development of new technologies, to tax credits and carbon reduction mandates, policymakers impact the efficiency industry in a wide variety of ways. While changes at the Federal level are likely to be highly significant, state policies will remain critical drivers despite these changes. This session will explore how federal policy might change, state policies continue to evolve, and provide tangible examples of how these policies can shape the development of new technologies that can drive market transformation.

*Session 2B***Prioritizing Emerging Technologies for Market Transformation: A Look behind the Curtain**

Moderator: **Rebecca Foster**, Vermont Energy Investment Corp

Speakers: **Amy Jiron**, U.S. Department of Energy, Building Technologies Office

**Edwin Hornquist**, Southern California Edison

**Kim Erickson**, Consortium for Energy Efficiency

Innovators are constantly dreaming up new products, systems, services, and program delivery approaches—emerging technologies (ETs)—that have the potential to achieve greater and more widespread energy savings. Recognizing this potential, many MT organizations have developed programs to support development, commercialization, and early adoption of ETs. With more ETs than resources to support them, however, these organizations are first challenged to prioritize and identify those opportunities with the greatest potential to advance their MT mission or mandate. During this session, participants will take a look behind the curtain of multiple organizations' ET programs to understand the criteria and processes used to select priority ETs for investment, as well as consider what the priorities resulting from the application of the criteria and processes represent.

**12:00 - 1:00 pm****NETWORKING LUNCH****1:15 - 2:45 pm****BREAKOUT SESSIONS***Track A: ET in Residential***A3: Next Generation Residential Retrofit Programs**

Moderator: **TBD**, U.S. Department of Energy *[invited]*

Speaker: **Gabrielle Stebbins**, Energy Futures Group

New whole-home retrofit program approaches are leveraging state and local energy policy priorities and the growing interest in healthy homes to build demand for home retrofits and deliver additional benefits. In this session, speakers will present on next generation retrofit program opportunities. Vermont's Zero Energy Now program is a comprehensive approach designed to move existing homes towards net zero energy and help the state meet its lofty goal of meeting 90% of statewide energy demand with renewable energy by 2050. Other efforts seek to integrate energy efficiency and healthy homes assessments to identify and address issues that impact home energy performance as well as occupant health.

*Track B: ET in C&I***B3: Opportunities for Advanced HVAC Systems**

Moderator: **Alanna Torres**, Consortium for Energy Efficiency

Speakers: **Ryan Kerr**, GTI  
**TBD**, Danfoss

Commercial HVAC represents 44% of total energy consumed by commercial buildings in the US. Over the last decade, there has been steady progress on improving commercial HVAC efficiency and market penetration of high efficiency equipment, but there are still further opportunities to pursue with advanced HVAC systems through market transformation efforts. In this session, participants will explore the future of advanced HVAC, including perspectives from technology research and development experts and end users/manufacturers. Specific topics include recent research and field tests on condensing gas PACs and perspectives from end users on their success with the DOE High Performance Rooftop Unit Challenge and how HVAC systems might better meet their needs in the future. Participants will discuss outstanding research needs, market barriers, and roles for market transformation programs to support development and adoption of advanced HVAC systems.

*Track C: Product Innovations***C3: A Lightning Round of Emerging Technologies**

Moderator: **Rebecca Foster**, Vermont Energy Investment Corp

Speakers: **Amy Jiron**, U.S. Department of Energy, Building Technologies Office  
**Edwin Hornquist**, Southern California Edison  
**Kim Erickson**, Consortium for Energy Efficiency

Speakers from the concurrent session on prioritizing ETs for MT will highlight the top 3 to 5 ETs that they are working on. Mapping back to the prioritization criteria discussed in the concurrent session, speakers will explain the basis for each selection and their plans for assessment or advancement.

*Track D: Industry and Infrastructure***D3: Transforming Business Practices in Buildings and Industry**

Moderator: **Jess Burgess**, Consortium for Energy Efficiency

Speakers: **Greg Baker**, Vermont Energy Investment Corporation  
**Jay Wrobel**, Department of Energy, Advanced Manufacturing Office *[invited]*  
**Walt Tunnessen**, EPA ENERGY STAR® *[invited]*

Strategic energy management (SEM) programs have demonstrated that buildings and industry can improve their energy performance by 5-15 percent without significant capital investment, through business, operations, and maintenance practice changes. To date, energy efficiency programs have served more than 750 industrial sites and a growing number of buildings with strategic energy management implementation and support. But in order to address the massive energy and cost savings opportunity across the industrial and buildings sectors, the private market must begin to demand and deliver SEM services on a much greater scale than we observe today.

**2:45 - 3:00 pm**

**NETWORKING BREAK**

**3:00 - 4:30 pm**

**WORKING SESSIONS**

*Track A: ET in Residential*

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**A4: HEMS: the Market Transformation Potential of a Broader Ecosyst-HEM**

Moderator: **Lieko Earle**, National Renewable Energy Laboratory *[invited]*

Speakers: **Dave Wells**, Bidgely

**Joel Gilbert** or **Susan Gilbert**, Apogee *[invited]*

**Seth Frader-Thompson** or **Matthew Johnson**, EnergyHub *[invited]*

**Isaac Sanz**, Insteon *[invited]*

**Dave Oberholzer**, **Eric Stern**, or **Robert King**, WeatherBug Home *[invited]*

This lightning round session will be comprised of home energy management system (HEMS) providers who will speak to their vision of the HEMS future, offering the audience various perspectives about the market transformation potential of HEMS beyond connected thermostats.

*Track B: ET in C&I*

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**B4: Making the Case for Controls Technologies in C&I**

Moderator: **David Dobratz**, Eversource

Speakers: **Gerard Darville**, Lutron Electronics

**Michael Doty**, Eversource

**TBD**, Ameresco

Three key panelists will discuss how to integrate new and disruptive energy technologies into their core business. The goal will be to gain perspective from the manufacturer, implementer and utility involved in the product development and delivery cycle. The utility will examine how to create incentives and assign savings for new technologies. The implementer will discuss how to market new technology through the product lifecycle and manage workforce education when integrating new technologies. The manufacturer will provide insight not only from the R&D and market value perspective, but also from the perspective of US manufacturing in a global economy.

*Track C: Product Innovations*

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**C4: Window Shopping: Fenestration Options and Applications**

Moderator: **Alice Rosenberg**, Consortium for Energy Efficiency

Speakers: **Steve Selkowitz**, Lawrence Berkeley National Laboratory

**Jenna Pugliese**, Efficiency Vermont

**Sarah Widder** or **Katie Cort**, Pacific Northwest National Laboratory

**Doug Anderson**, U.S. Environmental Protection Agency *[invited]*

**TBD**, Attachments Energy Rating Council

Windows account for roughly 30 percent of a home's heating and cooling energy needs. The opportunity to save energy by addressing the fenestration in residential buildings is a large one, especially for the vast quantity of older housing stock across the country. This session will focus on a myriad of applications and approaches that can be implemented to address cost effective savings. Technologies and products include: triple-glaze windows, blinds, cellular shades, roller shades, low-e storm windows, interior storm windows, and glass inserts.



*Track D: Industry and Infrastructure*

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**D4: Leveraging Efficiency and Capital to Reduce Infrastructure Costs**Moderator: **Chris Kramer**, Energy Futures GroupSpeakers: **Keith Welks**, Pennsylvania Deputy State Treasurer**Jesse Feinberg**, ConEd**Carol Vargas**, American Society of Civil Engineers *[invited]*

The investments needed to improve our infrastructure continue to increase well beyond available funding. How do we close the infrastructure gap? Targeted energy efficiency and demand response may provide one important answer: if existing wires and substations are well equipped to handle customer demand 99 percent of the time, it may make more sense to simply reduce peak demand during the remaining few hours of the year, rather than spend millions of dollars on capacity upgrades. Clean water infrastructure funds have also recognized the benefits of efficiency, helping channel private capital into efficiency programs that concurrently reduce water contaminants. This panel will bring together leading infrastructure advocates with energy efficiency and clean water programs to explore how such ideas can be expanded to lower infrastructure investment costs going forward.

**4:30 pm****SYMPOSIUM ADJOURNS**

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