

**“The Changing Face of Market Transformation”
Marriott Wardman Park Hotel • Washington, D.C. • March 29–31, 2009**

Sunday, March 29

1:00 to 5:00 pm

MT 101

Maryland B Room

"MT101" is an introductory course for those new to the field who want to learn the fundamentals of market transformation. The session will cover a range of topics including an overview of market transformation as one strategy for driving energy efficient products and services, administrative models for the delivery of market transformation programs, various program models used to serve different market segments, and program evaluation.

6:00 to 8:00 pm

Opening Reception

T.M. Ballroom South West

Monday, March 30

8:30 to 10:00 am

Plenary Session

T.M. Ballroom North East

Welcome and Introduction

Marc Hoffman, Executive Director, Consortium for Energy Efficiency

The Changing Face of Market Transformation

*Presenters: Steven Nadel, American Council for an Energy-Efficient Economy
Claire Fulenwider, Northwest Energy Efficiency Alliance*

The opening plenary will explore how the practice of market transformation is changing to meet new challenges and opportunities arising from a new political climate, the current economic uncertainty, the push to develop a green workforce, and a growing sense of urgency for addressing climate change. The field is also evolving to build on the successes of the past fifteen years. Speakers will review how internal and external forces are shaping the pursuit of energy efficiency and market transformation from a broad national perspective and with insights from the field.

10:30 am to 12:00 pm

Concurrent Sessions

Session 1A

T.M. Ballroom North

Prospects for National Energy Efficiency Legislation in 111th Congress: Is There Change a Coming?

Moderator: Suzanne Watson, American Council for an Energy-Efficient Economy

*Presenters: Jeff Genzer, General Counsel for National Association of State Energy Officials
Jennifer Schaefer, Cascade Associates*

This session features a high level discussion with in-the-know experts regarding upcoming federal energy or climate legislation. This is an opportunity to hear from those who will be in the thick of federal policy-making in the 111th Congress. Energy is a hot topic on Capitol Hill these days and energy efficiency is now getting its fair due in legislative discussions. During this session you will not only hear about upcoming energy legislation but be able to ask questions of these experts. Knowing more about potential legislative activity should allow attendees to better prepare to participate in the process when the time comes to have a voice.

*Session 1B**T.M. Ballroom East***Translating International Experience to North America***Moderator: Carol Mulholland, The Cadmus Group, Inc.**Presenters: Adam Hinge, Sustainable Energy Partnerships
Chris Calwell, Ecos Consulting, Inc.*

Program implementers and policy makers in North America are finding opportunities for new programs by looking to successful efforts abroad. How can international experience with energy efficiency be translated into the North American context? In this session, participants will hear about different programs being adapted for the North American market. Specifically, presenters will address changes required to respond to differences in market structures, program delivery mechanisms, and geographic and climatic diversity.

12:00 to 1:30 pm**Lunch***Keynote Address**T.M. Ballroom South West**The Honorable Peter Welch, United States Representative from Vermont***1:30 to 3:00 pm****Working Sessions***Whole Buildings Track**T.M. Ballroom North***B1: Benchmarking and Labeling of Commercial Buildings***Presenters: Douglas Mahone, Heschong Mahone Group, Inc.
Michel Lamanque, Natural Resources Canada**Facilitator: Henry Green, National Institute of Building Sciences*

This session will explore the potential of building benchmarking and labeling to drive market transformation in existing buildings. Using examples from California and Canada, the session will review successes, challenges, and opportunities in policy design and implementation of benchmarking and labeling initiatives. Ways to link these practices with codes and standards will be explored. The aim of the session is to generate concrete ideas for action that participants can implement in their own jurisdictions. While the presentations will focus on commercial buildings, the speakers will be prepared to discuss application to the residential sector.

Discussion Questions:

- Do we have enough evidence of effectiveness to justify widespread promotion of benchmarking and labeling?
- How are these programs being enforced?
- What policies, programs and/or activities are necessary to make benchmarking and/or labeling happen?
- What roles do different actors play in implementing effective programs (incentive program administrators, government, building industry, community groups, etc.)?
- Are these practices best coordinated at a national level, state/province or local level?

*Technologies Track**T.M. Ballroom East***T1: Solid State Lighting: State of the Technology, Products, and Programs**

*Presenters: Linda Sandahl, Pacific Northwest National Laboratory
Mark McClear, Cree, Inc.*

*Discussants: Gabe Arnold, Vermont Energy Investment Corporation
David Alexander, Pacific Gas & Electric Company
Liesel Schulte, Wisconsin Focus on Energy*

Facilitator: Rebecca Foster, Consortium for Energy Efficiency

In the rapidly changing world of residential and commercial lighting, Solid State Lighting (SSL) is viewed as an important contributor to future energy savings. Over the past few years, both the efficiency program industry and the lighting industry have been gaining familiarity with the technology. Important advances in 2008 included the completion of key test procedures, the launch of the first efficiency programs for SSL, and several important developments related to ENERGY STAR. During this session, attendees will be exposed to resources they can use to follow the progress of SSL in the years ahead, hear a manufacturer's take on the applications and products that have fared well in recent third-party testing and demonstration projects, and learn how leading energy efficiency programs are incorporating SSL into their residential and commercial lighting efforts.

Discussion Questions:

- What applications are an "efficiency win" with SSL in the near term? Why?
- How can efficiency programs keep up to date with advances in SSL technology?
- How are efficiency programs supporting SSL now? How are they planning to adapt their programs as this fast-moving product category changes?

*Industrial Programs Track**Harding***I1: Industrial Decision-Making on Energy Efficiency Investments**

*Presenters: Michael Parr, Dupont
Raymond Monroe, Steel Founders' Society of America*

Facilitator: Daniel Trombley, American Council for an Energy-Efficient Economy

In the last few months, the economy has seen unprecedented contraction and great degrees of variability and thus uncertainty. The outlook for the next year is similarly grim. In this environment, industrial companies have reacted to sharp decreases in consumer demand by closing factories, laying off workers, and drastically reducing their overall levels of production. These companies are doing the exact opposite of investing in their firms: they are divesting. How, then, can industrial energy efficiency programs stimulate investment in the sector and achieve any savings? We'll explore two aspects of this question: stimulating investments through external economic incentives and programs; and identifying those companies that now own factories with unusual amounts of downtime, who therefore have the ability to take advantage of that downtime to invest in needed efficiency improvements now.

Discussion Questions:

- How are companies prioritizing capital investments? What metrics are they using? How are these different from metrics used six months or a year ago?
- Lack of access to capital is currently a big challenge. What is the possible impact (or lack thereof) of tax incentive or rebate programs, given that they don't fundamentally address the full financing challenge? Are they rendered moot in the current environment?
- How can publicly funded energy efficiency programs best facilitate the implementation of manufacturing investments in the current environment?

P1: Growth in Gas Programs

Presenters: **Courtney Brown**, American Gas Association
 Bruce Johnson, National Grid

Facilitator: **Kara Rodgers**, Consortium for Energy Efficiency

Since 2006, budgets for gas efficiency programs in North America have doubled, through expansion of existing programs and the entry of new programs. Along with the rapid growth have come changes in the nature of regulations concerning gas programs and in our expectations of what gas efficiency programs can deliver. In this session, presenters will address recent gas efficiency program efforts, successes, and remaining challenges. Discussion will focus on the future of gas efficiency and how to continue expanding programs.

Discussion Questions:

- How are programs expanding in response to increased budget and higher savings targets?
- What does an increased emphasis on renewable energy mean for natural gas utilities?
- How do gas and electricity efficiency programs interact? What happens when it's a single fuel utility?
- What does it take to get a new program off the ground?
- How is regulation changing and affecting programs?

E1: Aligning Climate Change and Energy Conservation & Efficiency Objectives in a Cap & Trade World

Presenters: **Christopher James**, Synapse Energy Economics, Inc.
 Jeff Schlegel, Independent Consultant

Facilitator: **Dan York**, American Council for an Energy-Efficient Economy

A greenhouse gas (GHG) cap & trade mechanism, if properly designed, can provide a price signal to consumers of carbon-based energy and spur investments in energy efficiency and conservation. A stringent cap that produces a high price for carbon would largely address the carbon externality problem. But additional market interventions will still be necessary to address other market barriers, such as split incentives and lack of information. Given that energy efficiency is a low cost carbon abatement resource, the overall cost of abatement will be higher than necessary if market barriers lead to continued underinvestment in energy efficiency. Complementary energy efficiency policies and programs will be needed to address these barriers and reduce the overall cost of reducing GHG emissions. This session will review important issues of how the appropriate design and implementation of a cap & trade mechanism, using the Regional Greenhouse Gas Initiative (RGGI) as an example, may expand the funding for as well as change the focus of future energy conservation and efficiency programs.

Discussion Questions:

- Will a GHG cap & trade mechanism reduce the need for certain energy efficiency policies and programs?
- Will a cap & trade mechanism help provide new net revenues for expanded energy efficiency efforts or be used to replace existing Public Benefit Fund charges?
- Will a cap & trade mechanism alter the mix of market transformation versus resource acquisition programs?
- Will a cap & trade mechanism create a difference in Measurement & Evaluation (M&E) requirements than applied to existing energy efficiency programs?

3:30 to 5:00 pm

Working Sessions

*Whole Buildings Track**T.M. Ballroom North***B2: Strategies for Deep Building Retrofit Savings**

Panelists: *Steve Cowell, Conservation Services Group*
 Linda Wigington, Affordable Comfort, Inc.
 Holly Andreozzi, Clean Energy Solutions
 Merrian Fuller, UC Berkeley
 Gil Sperling, U.S. Dept. of Energy

Facilitator: *Blair Hamilton, Vermont Energy Investment Corporation*

Achieving our climate goals and the economic benefits of energy efficiency will require a deep retrofit of much of our existing building stock. Current programs and strategies are not on the path towards comprehensive and deep building retrofit savings. Panelists will offer their proposals for the programmatic and financing strategies that they see as most promising, including tax assessment financing, on-bill financing, direct installation, and performance-based incentives.

Discussion Questions:

- What strategies or combination of strategies are the most promising to achieve massive, deep residential building retrofit savings?
- What mechanisms can assure comprehensive retrofit when homes use multiple fuels, including unregulated fuels?
- How can mechanisms assure deep savings retrofits?
- To what extent can we rely on paying for retrofits out of energy cost savings?
- To what extent and through what mechanisms can private capital be utilized?
- What is the role of the Federal government in overcoming the barriers to massive, deep retrofit?

*Technologies Track**T.M. Ballroom East***T2: Evolving Program Approaches and Technologies in Consumer Electronics: Challenges and Opportunities in Residential and Business Sectors**

Presenters: *Rafael Friedmann, Pacific Gas and Electric Company*
 Kari Reid, BC Hydro

Facilitator: *Margie Lynch, Consortium for Energy Efficiency*

Over the past year, the first significant market transformation initiatives targeting consumer electronics have entered the market. This session will present two program models representing different strategies and product targets and discuss the preliminary lessons learned. The first presenter will discuss a program using midstream (retailer) and upstream (manufacturer) incentives to target televisions, computers, and displays in the residential and commercial markets. The second will present a set-top box program specifically targeting cable and satellite service providers.

Discussion Questions:

- What has been the most successful strategy employed by each program?
- What has been the biggest challenge to each program and what steps are being taken to overcome it?
- What lessons might other efficiency programs take from the early experiences of these two programs?

*Industrial Programs Track**Harding***I2: Identifying Emerging Trends in Industrial Programs**

Presenters: **Anna Chittum**, American Council for an Energy-Efficient Economy
 Roger Baker, ComEd

Facilitator: **Ted Jones**, Consortium for Energy Efficiency

In the rapidly changing world facing energy efficiency program administrators, the industrial sector remains an important contributor to future energy savings. Over the past few years, both efficiency and market transformation programs have been breaking new ground on program approaches and designs for the industrial sector. For instance, more program administrators are embracing programs that focus on sector-specific measures, non-electric measures, and measures that help industrial customers incorporate energy management practices to achieve continuous energy performance improvement (resulting in a consistent stream of energy savings for programs). During this session, attendees will benefit from a recent review of industrial programs, including a review of emerging trends in program design. A senior industrial program manager will describe some innovative program approaches (and results) and share his perspective on effective industrial program implementation and lessons learned.

Discussion Questions:

- What new or emerging opportunities are we seeing for industrial sector savings?
- Which savings opportunities are typically local and which are national/global?
- What outside trends should programs designers and managers pay attention to as they look to design (or revise) efficiency programs for industrial programs?
- What is driving the trends identified for industrial program designs? Are those trends local, national or international?
- What are the most common challenges program managers encounter in designing and implementing industrial efficiency programs and how can they be overcome?

*Program Strategies Track**Hoover***P2: Behavior-Related Programs: Best Practices for Program Design and Evaluation**

Presenters: **Lisa Skumatz**, Skumatz Economic Research Associates, Inc.
 Michael Sullivan, Freeman, Sullivan & Co.

Discussant: **Karen Ehrhardt-Martinez**, American Council for an Energy-Efficient Economy

Facilitator: **Monica Nevius**, Consortium for Energy Efficiency

Behavior-related programs are gaining growing recognition as an effective means of increasing energy efficiency and reducing energy consumption. However, the potential energy savings from behavior-related programs is unlikely to be fully realized unless traditional approaches to program design and evaluation are reevaluated. This session seeks to assess the common assumptions, evaluation criteria, and other factors that serve to inhibit the success of behavior-related programs and will reveal alternative approaches to behavior-related program design and evaluation.

Discussion Questions:

- Why is there a recent upsurge in the level of interest in behavior-related programs?
- What are the limitations of current evaluation methods when applied to behavior-related programs?
- What can well-designed programs and evaluations tell us about the level of energy savings attainable by, and attributable to, behavior-related programs?
- How can program design and evaluation methods be improved so as to expand the repertoire of effective programs including effective behavioral approaches?
- How should energy savings and non-energy impacts (e.g., comfort and convenience) from energy efficiency behaviors be measured and evaluated?

E2: Recent Experience in Addressing Energy Efficiency Cost Effectiveness

Presenters: **Snuller Price**, *Energy and Environmental Economics, Inc.*
 Nick Hall, *TecMarket Works*

Facilitator: **Katrina Pielli**, *U.S. Environmental Protection Agency*

The question of how cost-effectiveness is defined is a critical issue in advancing energy efficiency as a resource for meeting future energy needs. How cost-effectiveness is calculated substantially affects how much of our nation's efficiency potential will be accessed and whether consumers will benefit from resulting decreases in energy costs and environmental impact? Speakers in this session will identify and address key issues and considerations faced by state utility commissions and utilities when defining cost-effectiveness for energy efficiency and deciding which tests to use.

Discussion Questions:

- What are the five standard cost-effectiveness tests, what perspectives do they represent, and how are they calculated and applied? What are the pros and cons of each in relation to increased efficiency investment?
- How do the policy goals and circumstances of a given program and state affect the choice of cost-effectiveness tests?
- What are some guidelines and examples for policy-makers to consider when choosing which cost-effectiveness test(s) to emphasize?
- How are emerging issues (e.g., GHG reduction targets, renewable energy standards, financial incentives for efficiency, etc.) affecting the cost-effectiveness of efficiency programs?

6:00 to 8:00 pm**Cocktail Reception**
*Sponsored by ICF Consulting**T.M. Ballroom South West*

Tuesday, March 31**8:30 to 10:00 am****Concurrent Sessions***Session 2A**T.M. Ballroom North***Regional Roundup: Regional Perspectives on the Changing Face of Market Transformation***Moderator: Marc Hoffman, Consortium for Energy Efficiency*

*Presenters: Bruce Johnson, National Grid
Gene Rodrigues, Southern California Edison
Claire Fulenwider, Northwest Energy Efficiency Alliance
Debra Sundin, Xcel Energy*

This session will bring together representative program administrators from four regions to share how emerging national and state policies are having an impact on market transformation efforts in their region. The moderator will provide an update on all the regions' budgets and status of efficiency program efforts. Each presenter will identify for their region current trends in program direction in response to the increased policy interest in energy and the environment. In particular, each presenter will focus on market transformation opportunities that his or her region has prioritized that cross regions and require more than a single region's investment. The discussion will explore how all regions might work together in their pursuit.

*Session 2B**T.M. Ballroom East***Push and Pull: Improving Building Energy Codes in the U.S. and Canada as a Driver of Market Transformation***Moderator: David Conover, Pacific Northwest National Laboratory*

*Presenters: Allen Lee, The Cadmus Group, Inc.
Julia McNally, Ontario Power Authority
Jim O'Reilly, Northeast Energy Efficiency Partnerships*

This session will provide overviews of building energy code practices in Canada and the U.S. and it will discuss key tools that can be used to help utilities and others stakeholders lock in efficient building practices. The Canadian review will include a look at the building energy code development process in Canada and description of the process and product of the long-term (20-Year) planning effort in Ontario, Canada that addresses building codes and other regulatory tools that advance energy efficiency in the province. The U.S. review will examine the building energy code development process in the U.S. and the development of National Action Plan for Energy Efficiency Guidebook for utilities and program administrators to advance codes as a demand-side management strategy. Finally, there will be a review of what the next model codes – both commercial and residential – will need to address, including lessons from the recent IECC code update and a presentation of the model code developed by NEEP as a regional tool.

10:30 am to 12:00 pm**Concurrent Sessions***Session 3A**T.M. Ballroom North***Institutionalizing Institutional Energy Efficiency Financing***Moderator: Phil Degens, Energy Trust of Oregon*

*Presenters: Donald Gilligan, National Association of Energy Services Companies
Neil Zabler, Catalyst Financial Group, Inc.
Theresa Sifuentes, Texas State Energy Conservation Office*

Successful financing initiatives play a critical role in improving efficiency in state and local governments' institutional buildings market. Presenters in this session will discuss the results of recent studies in the area of energy performance contracts and utility-driven efficiency programs aimed at these markets. Challenges to financing these projects due to

legislative, administrative, and other barriers will be discussed as well as strategies for surmounting these barriers. The design of financial offerings and available financial tools for this market will also be addressed. Texas' two decades of experience in and learning from managing a revolving loan fund financing energy efficiency projects in this market will be shared. How the wide range of financing options have been leveraged by ESCOs, state and local governments, utilities, and other market actors to widen the impacts of energy efficiency projects and programs will be discussed, as will the impact of the American Recovery and Reinvestment Act.

*Session 3B**T.M. Ballroom East***Emerging Technologies: Program and Market Perspectives**

Moderator: Thomas Ledyard, KEMA, Inc.

*Presenters: Stephen Grover, ECONorthwest
Isaac Chan, U.S. Department of Energy
Kathy Loftus, Whole Foods Market, Inc.*

The need for energy efficiency resources is increasing along with increasing energy demand (in the U.S. and the world). As energy efficiency programs targeted to specific technologies and approaches prove successful, we must identify additional technological advancements to further increase efficiency. This involves promoting research and development of these technologies, identifying their potential for energy savings, and promoting their adoption in the marketplace. This session will discuss current efforts at identifying, selecting, and promoting the use of energy-efficient emerging technologies.

12:00 to 1:00 pm**Lunch***T.M. Ballroom South West***1:00 to 2:30 pm****Working Sessions***Whole Buildings Track**Marriott Balcony C***B3: Energy Savings in Commercial Office Real Estate: Catalytic Efficiency Program Approaches & Emerging Opportunities**

*Presenters: Kimberlie Lenihan, New York State Energy Research & Development Authority
Doug Avery, Southern California Edison*

Facilitator: Jason Erwin, Consortium for Energy Efficiency

Complex management, decision-making structures, and diverse leasing arrangements create a difficult environment for energy efficiency program administrators trying to engage commercial real estate (CRE) office owners. While challenges remain, several programs are using sector-focused strategies to overcome some of the traditional challenges to promoting energy efficiency in this market. This session will review office programs that are gaining traction, key strategies, and results to date. In addition, the session will give insight into new efforts that may help to shape future office program offerings.

Discussion Questions:

- What have been the keys to success in securing CRE owner engagement in the program?
- What strategies have been successful in driving ongoing energy performance tracking, management, and improvement?
- Once we have customer engagement, how do we drive system-level improvements? What are the necessary and sufficient market and technical conditions that would bring about market transformation?
- How might new efforts like Office of the Future meet some of the identified challenges for program administrators or other market stakeholders? What are the gaps?
- What aspects should we collectively work on as the efficiency program community?

*Technologies Track**Marriott Balcony D***T3: ENERGY STAR Water Heating: Technologies, Context, and Programs**

Presenters: **Harvey Sachs**, American Council for an Energy-Efficient Economy
Kara Rodgers, Consortium for Energy Efficiency

Facilitator: **Ben Taube**, Southeast Energy Efficiency Alliance

The ENERGY STAR Residential Water Heater program was launched January 1, 2009. It emphasizes advanced gas water heaters, heat pump water heaters (HPWH), and solar water heaters, all of which have very limited market shares today. Major manufacturers have announced new products (e.g., HPWH) in response to this new ENERGY STAR program. We'll introduce the technologies, note how this program differs from other ENERGY STAR programs, and review the marketing plans of some utilities and other incentive groups.

Discussion Questions:

- How do we estimate unit energy savings for the ENERGY STAR Residential Water Heater program, given uncertainties about hot water use in general, and with different technologies in particular?
- The efficiency doubling with HPWH is much larger than the potential for improvements of gas water heaters (ca. 30%). Will this lead to fuel switching, even though the source energy requirements of condensing water heaters and heat pump water heaters are comparable?
- On the gas side, what are expectations for tank-type vs. tankless water heaters?
- How will new construction programs differ from retrofit water heater programs, given that solar and tankless have different installation requirements from tank-type?
- Will there be regional issues, both for tankless (hard water) and heat pump water heaters (non-basement installations)?

*New Directions Track**Harding***N3: Innovative Community-Based Energy Solutions: Going Deeper**

Presenters: **Susan Haselhorst**, NSTAR
Rita Norton, Rita Norton & Associates

Facilitator: **Mark Cherniack**, New Buildings Institute

Cities are pushing sustainability and energy efficiency—a recent survey revealed that nearly 9 in 10 cities will require city capital projects to achieve green building standards; 56% have a policy in place, and 31% anticipate adopting one within a year (U.S. Conference of Mayors). This session will discuss the newest strategies developed by local governments or within local communities to push for deeper energy savings. These strategies may have regulatory structures, innovative financing elements, and or local/network social marketing strategies.

Discussion Questions:

- What do we know about the success of new community-based strategies in encouraging broader participation and/or deeper savings?
- How can community-based efforts leverage DSM programs and vice versa?
- What are the elements of successful community strategies?
- What roles can utilities play in supporting community actions?

P3: Market Transformation in Multi-Family and Mixed Use Building Types

Presenters: **Lucas Falk**, *New York State Energy Research & Development Authority*
Ken Tiedemann, *BC Hydro*
Paul Berkowitz, *Conservation Services Group*

Facilitator: **Michelle Levy**, *Northwest Energy Efficiency Alliance*

Although modern urban planning increasingly utilizes multi-family/mixed use buildings to promote dense, walkable, sustainable communities, energy efficiency and market transformation (MT) efforts for this building type face unique challenges. Among these challenges is the fact that mixed use developments often find themselves “homeless” with respect to energy efficiency programs, as they do not cleanly meet the definition of residential or commercial projects. This session will explore the challenges associated with market transformation in multi-family/mixed use buildings, review current programs and initiatives, share early lessons on what’s working/what’s not working, and discuss where MT is headed in this market.

Discussion Questions:

- What are the unique challenges associated with MT in multi-family/mixed use buildings?
- What is the current state of energy efficiency in these buildings? How big is the opportunity?
- What strategies are working and not working?

E3: Residential Energy Use Feedback

Presenters: **Jennifer Robinson**, *Electric Power Research Institute*
Antje Siems, *Opinion Dynamics*

Facilitator: **Elizabeth Titus**, *Northeast Energy Efficiency Partnerships*

Interest in the potential of residential energy use feedback to encourage energy efficiency behaviors and reduce household energy consumption is growing. Pilot programs incorporating a range of different feedback mechanisms and technologies have been undertaken, with initial results available for many. In this session, presenters will summarize the findings of a comprehensive review of the early research and recent pilot programs and present more detailed discussion of the results of a specific utility pilot program. Promising approaches will be identified along with further research needs, and recommendations will be given for those considering implementation of programs designed to influence energy consumption behaviour.

Discussion Questions:

- What can we learn from recent pilots about how willing residential customers are to make lifestyle changes to reduce energy consumption?
- How long do behavioral changes last?
- Do customers find that feedback systems are useful?
- Can customers discern impacts of their actions with these feedback systems and if so, what impacts do they think they are making?
- What is the difference between perceived and actual impact?

2:45 to 4:15 pm

Working Sessions

*Whole Buildings Track**Marriott Balcony C***B4: Perspectives on Building Code Improvement**

Presenters: **Stan Price**, Putnam Price Group, Inc.
 Vernon A. Woodworth, Sullivan Code Group

Facilitator: **Allen Lee**, The Cadmus Group, Inc.

This session will assess the opportunity for savings from building energy codes based upon experiences in different states and/or fields with the various issues surrounding building energy codes, including code development and adoption, compliance, and enforcement. Perspectives will be offered from three groups of stakeholders: the professional design/development community, code officials, and utility administrators of ratepayer-funded energy efficiency programs. Topics discussed will include: policies for engaging utilities on building energy codes by allowing claimed savings as part of their regulatory framework; the lessons learned from an innovative state program to implement specialized third-party code inspections; and experiences from the architecture/engineering professions regarding code compliance and enforcement.

Discussion Questions:

What are the obstacles that are being experienced in states outside of California to finding the appropriate role for utilities and other program administrators in being partners in code programs, be they training, technical support or beyond-code new construction programs?

- What lessons can be learned from California in addressing these issues?
- Should states pursue the option instituted as a pilot in Washington State to make energy code inspection a specialized function, ala concrete, wiring or plumbing inspections, paid for out of building permit fees?
- What are pros and cons of this approach?
- What do professionals in the building community – architects, engineers, builders – see as the biggest obstacles to increasing knowledge of or adherence to building energy code among their ranks?
- What are some strategies to overcome those obstacles?

*Technologies Track**Marriott Balcony D***T4: ENERGY STAR HVAC Quality Installation Program: Update on Progress to Date, Success of Programs, and Next Steps**

Presenters: **Raymono Isaac**, Isaac Heating and Cooling
 Ted Leopkey, U.S. Environmental Protection Agency
 Paul Kyllo, Southern California Edison

Facilitator: **John Taylor**, Consortium for Energy Efficiency

This session will highlight lessons learned during the first 15 months of the ENERGY STAR QI Program, paying particular attention to program requirements, the role of sponsors, and the relationship with Home Performance with ENERGY STAR and the ENERGY STAR New Homes Program. Presenters will also discuss cost-effective verification using the ACCA QI Verification Protocols and HVAC contractor quality assurance programs. What characteristics of the HVAC contractor business model focus on quality and efficiency and what strategies are being used to encourage adoption of that model? Finally, other relevant national initiatives to promote quality installations will be addressed.

Discussion Questions:

- What innovative strategies have emerged to cost-effectively verify an ENERGY STAR QI?
- How successful have current programs been at securing participation by contractors?
- How can verification be structured so that it's embraced (or at least accepted) by contractors?
- How can HVAC contractors profitably adopt a business model that embraces quality/efficiency?
- How should building codes relate to the ENERGY STAR QI requirement?
- What aspects of QI can be self-policed by contractors?

N4: Workforce Training and Professional Development for the Energy Efficiency Community

Presenter: *Jane Peters, Research Into Action, Inc.*
 Gene Rodrigues, Southern California Edison

Facilitators: *Merrilee Harrigan, Alliance to Save Energy*

As pressure increases to ramp up energy efficiency activities across all sectors, demand also increases for a talented, skilled workforce in companies and at efficiency organizations across the U.S. and Canada. How will programs meet the growing need? Who will organizations like ours hire to complete the work? Will they be properly trained? These are some of the many questions we in the efficiency field face as we see the efficiency field boom. This session will also highlight developments at the Federal level that address energy efficiency workforce development and its economic stimulus implications.

Discussion Questions:

- What kind of professional development is needed for energy efficiency program staff?
- How can efforts at colleges and universities be leveraged by efficiency program organizations looking to fill their own positions?
- How can local programs leverage federal activities?

P4: Efficiency Programs – Moving Away From the Rebate Model

Presenters: *Mindy Guilfoyle, Focus on Energy*
 Rafael Friedmann, Pacific Gas & Electric Company
 Duane Larson, Pacific Gas & Electric Company

Facilitator: *Kathleen Gaffney, KEMA, Inc.*

Programs designed to achieve market transformation have evolved well beyond providing rebates for installation of energy-efficient equipment. These programs engage the marketplace with technical assistance, provide sector-based services that describe the value proposition in terms most relevant to that market sector, offer financing strategies, improve supply-chain and delivery mechanisms, and influence consumer buying behavior. This session will examine several innovative strategies and discuss how the market opportunities were identified and programs were designed to leverage resources to meet that need.

Discussion Questions:

- How are marketplace patterns and intervention opportunities identified? How is the value proposition best structured?
- What are the best ways to assemble and use advisory and stakeholder groups in designing a program?
- How long should it take for an innovative MT strategy to take hold and produce results?
- How are successes measured and savings attributed? Are the formative attributes of a successful program transferable to other regions of the country – how homogenous are the markets?
- How are market leaders engaged and allowed to pull the overall market along?
- How do you sell energy efficiency in a period of low energy prices and slack demand?

E4: Advanced Meters, Performance Monitoring, and Energy Efficiency: Energy and Demand Savings from Better Information

Presenters: *Daniel Harris, New Buildings Institute*
 John McBride, New Horizon Technologies

Facilitator: *Mark Cherniak, New Buildings Institute*

This session will discuss the latest advanced metering and energy information system (EIS) technologies and how they can improve both building energy performance and efficiency program performance. The path to achieving net-zero energy buildings will typically require buildings that are 70% to 80% more efficient than standard practice, but there is a surprisingly little hard evidence about *actual* building performance. A 2007 study of LEED buildings carried out by the New Buildings Institute showed little correlation between building design and performance. Proof of performance is critical for both identifying successful design elements and achieving the continuous efficiency improvements that can lead to net-zero buildings. The next generation of energy codes and prescriptive standards like LEED may call for a departure from standard practice regarding building performance metering. Individual systems may have to distinguish the effects of discretionary loads like plugs, processes, and tenant lights from the core and shell loads like HVAC and common area lights. Looking forward, efforts by utility companies around the country to build an advanced metering infrastructure will help to increase the number of installations of advanced meters.

Discussion Questions:

- Why should efficiency programs consider advanced metering options?
- How can the wealth of data created be analyzed and used to make decisions about what is working and what isn't to improve building performance?
- Who utilizes the data and what analysis tools are still needed?
- What do advanced meters and Energy Information Systems cost?
- What prevents owners from installing advanced metering?
- What can CEE do to promote and clarify advanced metering issues for partners?

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