



IEPEC Conference – Draft Agenda

August 11-13 — Conference
 August 10 — Pre-Conference Workshops
 Hyatt Regency Long Beach, California



TUESDAY MORNING, AUGUST 11

7:30–8:45 Continental Breakfast

8:00–4:00 Registration

9:00–10:30 Opening Plenary

Keynote Address by Cass R. Sunstein, founder and director of the Program on Behavioral Economics and Public Policy, as well as the Robert Walmsley University Professor at Harvard

10:30–11:00 Morning Break

11:00–12:30 Concurrent Sessions

MEASURING ENERGY SAVINGS FROM ENERGY CODE AND APPLIANCE STANDARDS

Moderator: Isaac Elencave, Midwest Energy Efficiency Alliance

Accurately quantifying code compliance (as well as changes in code compliance) continues to be a key problem. For appliance standards, the question centers on attribution of savings from federal standards to local implementing utilities. This session will explore possible solutions from the U.S. and efforts in Mexico.

Regency E & F

- [Panel Studies: Utilities C&S Federal Advocacy – Policy Considerations for Calculating Net Attributable Savings](#) - Paula Gruending, California Public Utilities Commission and Ken Keating
- [Cracking the Code: Impact Evaluation Methods of ARRA-Funded Energy Code Initiatives](#) - Jeff Perkins, ERS and Tim Pettit, DNV GL
- [How Do We Know Commercial Codes Deliver Energy Savings? Designing and Testing a New Methodology for Assessing Commercial Code Compliance](#) - Poppy Storm, Ecotope and Steve Phourides, Northwest Energy Efficiency Alliance
- [Impacts Evaluation of Appliance Energy Efficiency Standards in Mexico since 2000](#) - Michael McNeil, Lawrence Berkeley National Laboratory

CREATING THE FUTURE – MAKING EVALUATION COUNT

Moderator: Carol White, National Grid

Evaluation studies often get used more as doorstops than as tools for improvement. At this session, you will learn how timely and actionable evaluation results contributed to program improvements, including increased data reliability and better program designs. We also will explore how to make future evaluations more responsive to the needs of program implementers and policy makers.

Regency B

- [When Failure Can Be a Resounding Success: The Demonstration Project](#) - Arlis Reynolds, Cadmus and Kim Crossman, National Grid
- [Evaluation and Regulatory Teamwork: Closing the Custom M&V Gap](#) - Kris Bradley, Itron and Peter Lai, California Public Utilities Commission
- [How to Show the Implementer What to Do Next](#) - Erik Mellen, Eversource Energy and Susan Haselhorst, ERS
- [Quality is Job #1](#) - Bill Saxonis, New York State Department of Public Service

IF YOU WANT TO SEE MARKET EFFECTS, YOU HAVE TO TAKE A BREATH AND LOOK FOR THEM

Moderator: Ken Keating

The Nevius paper presents a “best practices” summary of Market Transformation implementation, while the Clendenning paper represents a major effort to identify market effects of a major ARRA-program. Lastly, the Dimetrosky paper shows how market-level research is needed to design and measure future ENERGY STAR® programs.

Regency D

- [Effective Practices for the Evaluation of Market Transformation Efforts](#) - Monica Nevius, NMR Group and Lynn Hoefgen, NMR Group
- [Evaluating the Market Effects of the Better Buildings Neighborhood Program](#) - Greg Clendenning, NMR Group and Nicole Rosenberg, NMR Group
- [Over the Hill? A Look at a Mature Mid-Stream Residential Appliance Program](#) - Scott Dimetrosky, Apex Analytics and Noah Lieb, Apex Analytics

FOR THE NUMBERS: EVALUATION METHODS**Moderator: Iris Sulyma, Research 4 Results**

This session provides detailed comparisons of current evaluation approaches, including three billing analysis approaches, engineering simulation models and billing analysis approaches, the contributions of measurement and sampling uncertainties to the overall uncertainty, and the application of three research methodologies for opt-in programs.

Regency C

- [Practical Guidance for Selecting Opt-In Research Designs: Addressing Methodological Trade-Offs and Avoiding Common Pitfalls](#) - Lucy Morris, Pacific Gas and Electric Company and Brian Arthur Smith, Pacific Gas and Electric Company
- [Comparison of Bayesian Billing Analysis to Pooled Fixed Effects and Variable-Base Degree-Day](#) - Benjamin Hannas, Ecotope
- [Cage Match or Happy Couple? Engineering Simulation Models and Billing Analysis](#) - Lauren Gage, Bonneville Power Administration
- [Measurement Uncertainty and Risk in Measurement and Verification Projects](#) - Herman Carstens, Centre for New Energy Systems, University of Pretoria and Xiaohua Xia, Centre for New Energy Systems, University of Pretoria

QUICK TAKES: TIMELY, RELIABLE NEEDS-FOCUSED EVALUATION: OBTAINING AND APPLYING DATA WITHIN A POLICY STRUCTURE THAT VALUES EVALUATION AND APPLIES THE RESULTS**Moderator: Nick Hall, Evaluation Management and Oversight Services and Jessica Burdette, Minnesota Department of Commerce**

This session is an application-based potpourri of topics important to the evolving state of the program evaluation function. Papers cover advanced data acquisition and use, approaches for assessing markets, and policy objectives, alternative approaches for independently verifying savings claims, U.S. DOE's "new" approach for program or portfolio evaluation, and the sharing of examples of how to present evaluation information and findings using streamlined user-friendly approaches.

Regency A

- [Steady Hand at the Wheel: Using an Incremental, Systematic Approach to Promote an Evaluation Culture in a Federal Organization](#) - Yaw Agyeman, Lawrence Berkeley National Laboratory
- [Development of Order-Independent Waterfall Graphics to Enable Comprehensive Understanding of Impact Evaluation Results](#) - Robert Kasman, Pacific Gas and Electric Company and Adam Scheer, Pacific Gas and Electric Company
- [Understanding Your Customers: The Effects of Seasonality on Energy Savings on Cape Cod and Martha's Vineyard](#) - Jake Millette, Opinion Dynamics and Martin Poirier, Dunsky Energy Consulting
- [Vacation Destination Nantucket – No Walk in the Park When You Are on an Island: Conducting Residential Metering Study and Site Visits on Nantucket Island](#) - Jeff Cropp, Cadmus and Aquila Velonis, Cadmus
- [From Before to BECAR: How Comprehensive Reviews Improve a Portfolio](#) - Bing Tso, SBW Consulting and Bill Hopkins, Puget Sound Energy
- [International Database of Efficient Appliances \(IDEA\): A Novel Tool for Efficiency Program Development and Evaluation](#) - Brian Gerke, Lawrence Berkeley National Laboratory and Michael McNeil, Lawrence Berkeley National Laboratory
- [Potential Studies – Aligning Achievable Potential with Local Market Conditions and Policy or Planning Objectives through an Innovative Approach to Economic Screening](#) - Jim Herndon, Nexant and David Jacot, Los Angeles Department of Water and Power

12:30–1:30 Lunch Break**TUESDAY AFTERNOON, AUGUST 11****1:30–3:00 Concurrent Sessions****EVALUATING THE DEMAND AND ENERGY IMPACTS OF STATIC AND DYNAMIC TIME-BASED PRICING FOR RESIDENTIAL CUSTOMERS: THREE CASE STUDIES****Moderator: Steven Braithwait, Christensen Associates Energy Consulting**

This session covers three different aspects of residential time-based pricing: impacts of full-scale time-of-use pricing in Ontario, findings from a well-designed smart-pricing pilot at SMUD, and customer response to a number of high-price events during the cold winter of 2013/2014.

Regency D

- [Final Results from SMUD's SmartPricing Options Pilot](#) - Stephen George, Nexant and Nate Toyama, SMUD
- [Analysis of Ontario's Full Scale Roll-out of TOU Rates](#) - Neil Lessem, The Brattle Group and Ahmad Faruqi, The Brattle Group
- [Baby, It's Cold Outside: 2014 Polar Vortex Impacts on Residential Dynamic Electricity Pricing Programs](#) - David Becker, Elevate Energy

Regency E & F	<p><u>AGGREGATED PROGRAM IMPACTS (FROM THE TOP DOWN)</u></p>
	<p>Moderator: Elizabeth Titus, Northeast Energy Efficiency Partnerships</p> <p><i>This session looks at the promise, insights, and challenges associated with looking at aggregated energy efficiency program data – both with state-level macroeconomic modeling and with a national database.</i></p> <ul style="list-style-type: none"> • Making Sense of 1,000 Program Results: How are DSM Programs Really Performing? - Rachel Reiss Buckley, E Source and Mark Brown, QuadROI • Rolling Up IOU Account-Level Data to Measure Savings from the Top-Down - Noel Stevens, DNV GL and Monica Cohen, Columbia Gas of Massachusetts • The View from the Top: Top-Down Estimation of Program Savings Using Utility-Level Data in Massachusetts - Ferit Ucar, Environmental Defense Fund and Noel Stevens, DNV GL
Regency A	<p><u>IT'S FOUNDATIONAL: DEVELOPING AND IMPLEMENTING AMAZING BASELINE STUDIES</u></p>
	<p>Moderator: Allison Mace, Bonneville Power Administration</p> <p><i>Across the nation, research warriors are making phone calls, visiting homes and businesses, and characterizing energy efficiency practices and technologies. In this session, we will share stories about baseline studies occurring across the nation from lighting to HVAC installation practices. Come and hear your peers describe methods, outcomes, and lessons learned relating to baseline studies.</i></p> <ul style="list-style-type: none"> • Swimming Against the Tide—Gauging HVAC Quality Installation and Quality Maintenance Program Efforts to Establish a Foothold in the Market - Rohit Vaidya, NMR Group • A Guiding Light for Market Effects Research: Lessons Learned from LED Baseline Development across Multiple Regions - Kristina Kelly, DNV GL and Mitch Rosenberg, DNV GL
Regency C	<p><u>THE SECRET OF MY SUCCESS: INSIGHTS GAINED THROUGH METRICS</u></p>
	<p>Moderator: Riley Hastings, Eversource Energy</p> <p><i>This session features two different studies that used data-driven approaches to measure success in residential retrofit programs. Each of these studies used metrics in an innovative way to provide insights into best practices and successful program design.</i></p> <ul style="list-style-type: none"> • What Have We Learned about Success and Its Drivers in Comprehensive Residential Upgrade Programs? - Marjorie McRae, Research Into Action and Jordan Folks, Research Into Action • Benchmarking and Best Practices Research: Making it Real - Joseph Forcillo, Consumers Energy and Jill Steiner, Cadmus
Regency B	<p>PANEL: CAN WE CREATE A REGULATORY FRAMEWORK THAT ENCOURAGES MARKET EFFECTS?</p>
	<p>Moderator: Robert Wirtshafter, Wirtshafter Associates</p> <p><i>In most states, current regulatory/legislative treatment restricts the pursuit of market transforming energy efficiency activities. A recent White Paper by Ralph Prael and Ken Keating lays out a framework of policy changes that “would help guide California towards successfully utilizing energy efficiency market transformation as a tool to advance its energy efficiency and greenhouse gas (GHG) goals.” This panel will discuss these policies, looking at specific recommendations and how they would need to be applied in practice. A particular focus of this panel will be whether utility companies can effectively serve as program administrators under this framework.</i></p> <p>Panelists:</p> <ul style="list-style-type: none"> • Ken Keating, Independent Consultant • Brian Arthur Smith, Pacific Gas and Electric Company • Ralph Prael, Prael & Associates • Jennifer Meissner, NYSERDA
3:00–3:45	<p>Afternoon Break</p>
3:45–5:15	<p>Concurrent Sessions</p>
Regency E & F	<p><u>MATCHING DEMAND RESPONSE WITH INCENTIVES THAT WORK. POSSIBLE?</u></p>
	<p>Moderator: Ed Thomas, PLMA</p> <p><i>Need DR to help meet supply needs? Do you know which customers to call? What can you expect about persistence in savings? What is the relationship between incentives, program changes, and DR-enabling technologies? This session covers residential and small commercial customers.</i></p> <ul style="list-style-type: none"> • The Matchmaker: Methods for Predicting Participation and Finding the Best Demand Response Programs for Customers - Alan Elliott, Opinion Dynamics and Olivia Patterson, Opinion Dynamics • The Price is Right: The Minimum Incentive Level Commercial Customers Need to Participate in Demand Response - Debbie Brannan, Navigant and Jesse Feinberg, Consolidated Edison • Residential Customers Response to Critical Peak Events of Electricity: Green Mountain Power Experience - Suman Gautam, DNV GL and Seth Blumsack, Penn State University • Evaluating a Behavioral Demand Response Trial in Japan: Evidence from a One-Year Experiment - Toshihiro Mukai, Central Research Institute of Electric Power Industry and Ken-ichiro Nishio, Central Research Institute of Electric Power Industry

IN THE WORLD OF BASELINE DEVELOPMENT, ONE SIZE DOES NOT FIT ALL

Moderator: Christopher Frye, Northwest Energy Efficiency Alliance

Evaluators have a variety of tools available to them in the development of baselines associated with product adoption or assessing influence of a program. This session will provide three diverse perspectives on methodological approaches to establishing baselines and measuring market effects.

- [The Oracle Peers through a Window: Using a Delphi Approach to Estimate Impacts of Windows Programs](#) - Noah Lieb, Apex Analytics and Sarah Castor, Energy Trust of Oregon
- [Watch Your Next Step – Continuing Change in the Northwest New Homes Market](#) - John Boroski, Evergreen Economics and Anu Teja, Northwest Energy Efficiency Alliance
- [The Humpty Dumpty of Heating: Piecing Together an Understanding of Ductless Mini-Split Heat Pump Usage in the Northeast](#) - Danielle Vitoff, Navigant and Matt Nelson, Eversource Energy

Regency A

SHEDDING LIGHT ON HOURS OF USE

Moderator: Scott Dimetrosky, Apex Analytics

This session presents results from a number of recent residential and commercial lighting studies that leveraged large sample sizes and rigorous statistical analysis to develop hours-of-use and peak coincidence factors. Authors will highlight their research methods and findings, providing useful information to evaluators and program implementers interested in estimating savings from lighting programs.

- [Getting Over the Hump: Leveraging Multi-Year, Site-Specific Impact Evaluation to Derive C&I Lighting Parameters](#) - Heather Lisle, Navigant and Ryan Powanda, Navigant
- [A Lighting Study to Stand the Test of Time: Exploring the Results of a Residential Lighting Designed to Produce Lasting Data](#) - David Barclay, NMR Group and Ralph Prah, Prah Associates
- [Are You Turned On? A Hierarchical Modeling Approach for Estimating Lighting Hours of Use](#) - Lisa Wilson-Wright, NMR Group and Andrew Correia, SessionM

Regency B

COMMERCIAL AND INDUSTRIAL EVALUATION TECHNIQUES

Moderator: Dick Spellman, GDS Associates, Inc.

This session provides lively presentations on state-of-the art techniques for assessing the gross and net impacts and effectiveness of commercial and industrial sector energy efficiency programs. Evaluation approaches will be discussed for prescriptive and custom programs, large-scale industrial custom energy-efficiency projects, and strategic energy-management programs.

- [Telling the “Story” of Program Influence for Custom Programs in California](#) - Jennifer Fagan, Itron and Michael Rufo, Itron
- [Standard Approach to Non-Standard Industrial Projects](#) - Kevin Warren, Warren Energy Engineering and Carter Membrino, Warren Energy Engineering
- [Improvements in SEM Program Impact Evaluation Methods: Lessons Learned from Several Recent Projects](#) - Heidi Ochsner, Cadmus

Regency C

NEW MARKETS FOR HEAT PUMPS?

Moderator: Taghi Alereza, ADM Associates

Heat pumps, initially designed for mild climates, are now being used in cold climates. But do they work? This session looks at higher SEER, variable refrigerant flow, and ductless installations, providing evaluation of results for applications of such new technologies.

- [The Next New Thing—Is It Really That Good?](#) - John Proctor, Proctor Engineering
- [A Ductless Heat Pump in Every Pot... or Home?](#) - Justin Spencer, Navigant

Regency D

5:15–6:30

Free time for Networking and Poster Preparation

6:30–8:00

EVENING POSTER SESSION & NETWORKING RECEPTION

WEDNESDAY MORNING, AUGUST 12

7:00–8:00	Continental Breakfast & Registration	Sponsored by DNV GL
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8:00–4:00	Registration
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8:00–9:45	Concurrent Sessions
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HIGHER STAKES AND MORE COMPLEX PROGRAMS: ENHANCING THE EVALUATION PROCESS

Moderator: Carla Frisch, U.S. Department of Energy

Increased investments in energy efficiency programs come with new expectations and scrutiny. Evaluators are increasingly charged with conducting evaluations that support broad policy goals—like GHG emission reductions—while continuing to find innovative ways to stretch evaluation dollars and increase the accuracy of saving estimates.

Regency E & F

- [How Much Evaluation Is Enough?](#) - Marc Collins, Itron
- [To Do or Not to Do Redux: Triggering an Impact Evaluation](#) - Susan Haselhorst, ERS and Erik Mellen, Eversource Energy
- [Administering, Managing and Overseeing Large-Scale Portfolio Evaluations – Formulas for Success](#) - Nick Hall, Evaluation Management and Oversight Services
- [What's in Your EM&V Genome? Improving Transparency and the Understanding of EM&V Practices through Standardized Reporting](#) - Julie Michals, Northeast Energy Efficiency Partnerships

LOW-INCOME PROGRAMS: USING EM&V TO INFORM PROGRAM DESIGN, DELIVERY, AND FUTURE POTENTIAL

Moderator: Laura Schauer, ILLUME Advising

This session will present four diverse papers that focus on one common theme: targeting, reaching, and serving the eligible low-income population. The presentations will also highlight how program data analysis and evaluation results informed important program design and policy decisions.

Regency D

- [There Is No Such Thing As a Free Lunch: Insights on Low-Income Customers' Willingness to Participate in a "No Cost" Direct Install Program](#) - Carol Edwards, Southern California Edison and Tami Rasmussen, Evergreen Economics
- [Barriers and Solutions to Achieving Potential Savings in Whole-House Low-Income Weatherization Programs](#) - Jacqueline Berger, APPRISE
- [Goodbye Warm Front: Evaluating the Delivery of Energy Efficiency Retrofits in Low-Income Homes in England from 2005 to 2012](#) - Ian Hamilton, University College London and Paolo Agnolucci, University College London
- [Getting Our Ducts in a Row: Using Evaluation Results to Create a Statewide Weatherization Program](#) - Katherine Johnson, Johnson Consulting Group and Matt Klucher, Arkansas Public Service Commission

COMMERCIAL EQUIPMENT SELF-REPORTS DON'T ADD UP: EMPIRICAL EVIDENCE AND IMPLICATIONS

Moderator: Bobbi Tannenbaum, BTan Consulting

This session covers 5 studies that compared self-reports equipment to on-site data collection. The results highlight the limitations of self-reports and identify situations where they are more or less accurate. Is inaccurate data better than no data?

Regency C

- [Survey Data vs. Energy Audits: Comparing Two Forms of Data Collection in the Commercial Buildings Energy Consumption Survey](#) - Bill McNary, U.S. Energy Information Administration and Carolyn Hronis, U.S. Energy Information Administration
- [Don't Phone It In – On-Sites are Necessary: Self-Report vs. On-Site Data Collection](#) - Priya Sathe, Itron and Lisa Paulo, California Public Utilities Commission
- [The Surveys Are In! A Comparison of Three Commercial Market Share Data Collection Methods](#) - Samantha Cole, Itron and Priya Sathe, Itron

QUICK TAKES: BEHAVIOR & DATA

Moderator: Tim Guiterman, EnergySavvy and Michael Li, U.S. Department of Energy

This session provides fresh insights into: methods to deploy behavioral programs, tools to assess behavioral interventions, using data to better understand what drives customer engagement, measuring the performance of program marketing activities, and recruitment techniques for hard-to-reach customers.

Regency A

- [Exploring Deep Savings: A Toolkit for Assessing Behavior-Based Energy Interventions](#) - Beth Karlin, Univeristy of California, Irvine and Miriam Fischlein, Southern California Edison
- [Timing, Longevity, Depth: Investigating Customer Engagement in Residential Behavior Programs](#) - Shannon Kahl, ILLUME Advising and Jan Cook, Accelerated Innovations
- [Moving the Needle: Measuring the Performance of an Energy Program Promotional Campaign](#) - Paul Schwarz, Research Into Action and Mersiha McClaren, Research Into Action
- [Engaging Hard-to-Reach Program Participants: A Data-Based Comparison Across Recruitment Techniques](#) - Taylor Moseley, ADM Associates

PANEL: EVALUATION AND THE NEW VISION FOR DISTRIBUTED ENERGY RESOURCES**Moderator: Jane Peters, Research Into Action**

Evaluators need a crystal ball to help prepare for the new world first beginning to emerge in California, Massachusetts, and New York: Will the new world of evaluation be measurement & verification (M&V) 2.0? Will it be a world of randomized control trials? Will Greenhouse gas measurement be more important than kWh and kW measurement? Will finance programs need baseline measurements or not? Who will care whether a program is effective? What are the key evaluation issues? Who will be asking for evaluations?

Program administrators, implementers, and members of the regulatory world will address these questions and present some initial thoughts on the role and need for evaluations in this new world. The tension lies in the unknown that evaluators, regulators, and program administrators face in this new world. The additional tension is that these different groups are certain to feel that there are aspects of evaluation that are and are not needed. It will be enlightening for the entire community to hear some of the initial considerations on how evaluation will be treated in the future.

Panelists:

- [Michael Ihesiaba, ConEd of New York](#)
- [Shahanna Samiullah, Southern California Edison](#)
- [Melissa Culbertson, CLEARResult](#)
- [Bill Saxonis, New York Department of Public Service](#)

9:45–10:15 Morning Break**10:15–11:45 Concurrent Sessions****NEW CONSTRUCTION PROGRAMS: REAL WORLD CONSIDERATIONS FOR PERFORMING EVALUATIONS****Moderator: David Weitz, CLEARResult**

This session offers three perspectives on issues of obtaining and cost-effectively using data to perform evaluations on new construction projects, including: finding the right participants for determining baseline studies; techniques for evaluation modeling in the absence of original design models; new approaches to determining impact of nonparticipants and spillover; and the impact on timing how soon after occupancy an evaluation should be performed.

- [Real Life Options for New Construction Evaluation](#) - Carter Membrino, Warren Energy Engineering and Kevin Warren, Warren Energy Engineering
- [Optimizing the Post-Occupancy Evaluation Timeline for Commercial New Construction Simulation Modeling](#) - Jeff Cropp, Cadmus and Rasika Savkar, Cadmus
- [New Construction Multifamily Building Recruitment—A “Full Contact” Game!](#) - Pamela Rathbun, Tetra Tech

RESIDENTIAL HEATING & COOLING**Moderator: Jeff Ihnen, Michaels Energy Group**

This session features four residential HVAC papers. The first paper features establishing market baselines and impacts for gas fireplace programs; the second features disaggregation techniques for a comprehensive O&M program; and the last two cover new equipment installation best practices.

- [Data – Kindling for Fire\(places\): Using Data to Inform Program Design for High Efficiency Gas Fireplaces](#) - Erika Kociolek, Energy Trust of Oregon and Phil Degens, Energy Trust of Oregon
- [Impacts of the OPA HVAC Installation Optimization Training Program on Realized Energy Efficiency of Retrofit AC Systems](#) - Michael Sullivan, Nexant and Kausar Afrat, Independent Electricity System Operator
- [To Condense, or Not to Condense? Installation Practices Leave Boiler Savings on the Table](#) - Laura Tabor, Navigant and Tony Larson, National Grid
- [The Coil & Blade Project: Combining Field Work and Interval Data to Measure Impacts](#) - Kelly Parmenter, Applied Energy Group and Donney Dorton, Oklahoma Gas & Electric

COMPARISON GROUPS IN BEHAVIOR, DR & EE PROGRAM EVALUATION**Moderator: Tony Larson, National Grid**

This session explores various methods for control groups and highlights their significance in evaluations. The four presentations include “synthetic” control groups methods, minimizing bias in control groups, exploring alternatives to randomized control groups, and comparing different control group methods.

- [Losing Control: What Will Happen if Randomized Controlled Trials are Phased Out of Behavioral Program Evaluation?](#) - Josh Schellenberg, Nexant and Brian Arthur Smith, Pacific Gas and Electric Company
- [Matching and VIA: Quasi-Experimental Methods in a World of Imperfect Data](#) - Eileen Hannigan, ILLUME Advising and Jan Cook, Accelerated Innovations
- [Matching for DR and EE Impacts](#) - Seth Wayland, Opinion Dynamics

Regency B

Regency C

Regency D

Regency E & F

QUICK TAKES: BRIGHT INSIGHTS: LIGHTING IMPACT MEASUREMENT AND PROGRAM EFFECTIVENESS

Moderator: Jennifer Meissner, New York State Energy Research and Development Authority and Glenn Reed, Energy Futures

While efficient lighting continues to be a core component of nearly all residential and nonresidential efficiency portfolios, tracking and evaluating these savings will become increasingly challenging due to a variety of factors, including rapidly changing technologies and product pricing, standards impacts, and alternative program designs. This session provides “quick takes” on six diverse lighting topics ranging from residential hours of use metering to a study of urban canyon effects to alternative approaches to measure lighting savings in nonresidential buildings.

Regency A

- [Market Lift: The Enigma of Incentive Program Redesign](#) - Michael Strom, NMR Group and Matthew Nelson, Eversource Energy
- [What Light through Yonder Window Breaks? Methods to Study the Effects of Urban Canyons on Lighting Usage](#) - Scott Walker, NMR Group and Victoria Engel-Fowles, New York State Energy Research and Development Authority
- [Updated National Lighting Usage Estimates Incorporating Two New Regional Metering Studies](#) - Will Gifford, DNV GL and Michael Poplawski, Pacific Northwest National Laboratory
- [Getting Your Energy Savings Out of Storage](#) - Chad Telarico, DNV GL and William Blake, National Grid
- [Are the Lights Really ON? Leveraging a Cost Effective Approach to Estimate Lighting Usage in Nonresidential Buildings](#) - David Gonzales, Itron and Brian McAuley, Itron
- [The Keystone of Energy Efficiency: New Approaches to Data Analysis Methods in a Mid-Atlantic State](#) - Salil Gogte, Nexant

PANEL: SURVIVAL OF THE FITTEST: DATA ANALYTICS AND EVALUATION

Moderator: Carmen Best, California Public Utilities Commission

Forbes released a top 10 list of energy data analytics firms to watch in 2015. These firms are major players in the energy efficiency space promising to deliver accurate and timely performance feedback to customers, utilities, and regulators. Will these new actors obviate the need for “traditional” evaluation? Or will evaluation evolve and adapt in this new market paradigm?

This panel will explore the tension between the products, services, and capabilities of data analytics and traditional evaluation firms: where they meet (complement each other), where they compete (overlap), and what the future may look like (will they both survive—how will they need to change/adapt?). Panelists include representatives from a large and a small evaluation firm, and executives from 2 of the top 10 data analytics firms, and the client (regulatory/policy) perspective.

Panelists:

- Tim Guiterman, EnergySavvy
- [Ryan Bliss, Research into Action](#)
- Dan Violette, Navigant
- Ken Kolkebeck, First Fuel

Regency B

11:45–1:00 Lunch Break

WEDNESDAY AFTERNOON, AUGUST 12

1:00–2:30 Concurrent Sessions

METHODS, METERS, AND MODELS: INNOVATIVE APPROACHES TO ESTIMATING SAVINGS

Moderator: Phil Bosco, Independent Electricity System Operator

The increasing granularity and availability of data are enabling evaluators to employ innovative approaches for estimating savings. This session will take you on a journey from addressing study design and methods, then to utilizing advanced metering infrastructure (AMI) and sub-metering on smaller projects, and conclude with enhancing billing regression models using AMI data.

Regency C

- [DR Impact Evaluation – Which Design and Analysis Method Is Right for What?](#) - Craig Williamson, Applied Energy Group and Kelly Marrin, Applied Energy Group
- [Getting Everyone to “Yes”: Putting Efficiency Into Efficiency Programs by Standardizing Meter Data Analysis](#) - Ethan Goldman, Vermont Energy Investment Corporation
- [Is More Always Better? A Comparison of Billing Regression Results Using Monthly, Daily and Hourly AMI Data](#) - Stephen Grover, Evergreen Economics and John Cornwell, Evergreen Economics

WILL THE REAL BASELINE PLEASE STAND UP!

Moderator: Robert Kasman, Pacific Gas and Electric Company

When it comes to estimating savings, baselines are half the story. But determining appropriate baselines has become increasingly challenging with widely varying practices and policies. This session seeks to clarify baseline setting practices, and offers examples of newly developed baseline methods utilizing billing and interval data.

Regency E & F

- [Ew, Gross! Cleaning Up Gross Baselines](#) - Michael Rufo, Itron
- [Baseline or Bust: Calculating Savings for a Residential Heating Equipment Program](#) - Kathryn Parlin, West Hill Energy and Computing and Tami Buhr, Opinion Dynamics
- [M&V Shootout: Setting the Stage for Testing the Performance of New Energy Baseline Models](#) - Jessica Granderson, Lawrence Berkeley National Laboratory and Samir Touzani, Lawrence Berkeley National Laboratory

POT O' GOLD? EXAMINING THE INFLUENCE OF FINANCING INCENTIVES**Moderator: Jeremy Newberger, National Grid**

As financing programs expand and Green Bank-type concepts sprout up like wildflowers, this timely session explores methodological approaches to assessing the impact of financing. With money flowing from different sources, special attention is given to the question of attribution.

Regency D

- [Impact Evaluation of Financing Programs](#) - Emily Martin Fadrhonc, Lawrence Berkeley National Laboratory and Chris Kramer, Energy Futures Group
- [Show Me the Attribution: Recommended Methods for Estimating Impacts for Finance Programs](#) - Jeevika Galhotra, Opinion Dynamics and Katherine Randazzo, Opinion Dynamics
- [Who Dunit? Determining Savings Attribution When Both Rebates and Financing Are Available](#) - Stephen Grover, Evergreen Economics and Jenny Fraser, Evergreen Economics
- [The Impact of On-Bill Programs on Loan Performance: Evidence from the Green Jobs, Green New York Program](#) - Jeff Deason, Goldman School of Public Policy at University of California, Berkeley

QUICK TAKES: TACKLING RESIDENTIAL SURVEY AND DATA COLLECTION CHALLENGES**Moderator: Ingo Bensch, Evergreen Economics and Ellen Steiner, EMI Consulting**

Collecting information from representative samples of households is getting more challenging. The traditional telephone survey is capturing smaller shares of the population. This session explores innovations in energy-related data collection from consumers that evaluators and researchers are applying and testing to keep up with societal and technological trends.

Regency A

- [Alternate Endings – A Tale of Two Surveys and Priming, Order Effect, and Other Biases](#) - Gomathi Sadhasivan, DNV GL and Richard Barnes, DNV GL
- [How Abraham Lincoln Can Improve Your Survey: The Costs and Implications of Offering an Incentive and Mixed-Mode Survey](#) - Alyssa Na'im, NMR Group and Pamela Rathbun, Tetra Tech
- [Conducting Evaluation in an Era of Declining Telephone Survey Response Rates](#) - Tami Buhr, Opinion Dynamics and Hannah Arnold, Opinion Dynamics
- [Want Better Response Rates? Go Mobile! Best Practices for the Mobile Era](#) - Kaitlin Andryauskas, Opinion Dynamics and Emma DeCotis, Opinion Dynamics
- [Survey "Selfies" – Does My Home's Energy Picture Really Look that Good?](#) - Carley Murray, New York State Energy Research and Development Authority and Pamela Rathbun, Tetra Tech
- [Observing Where the Rubber Meets the Road: Integrating Mystery Shopping and Ride-Alongs into Process Evaluations](#) - Doré Mangan, Research Into Action and Zachary Hathaway, Research Into Action

PANEL: STATES AND REGIONS PREPARE FOR THE CLEAN POWER PLAN**Moderator: Steve Schiller, Lawrence Berkeley National Laboratory**

Last June, EPA put forward a draft rule to cut carbon pollution from existing power plants. Known as the Clean Power Plan, the rule provides states flexibility in how they will meet carbon emission reduction goals, including allowing energy efficiency to deliver reductions. This session takes an up-to-the-minute look at how states and regions are gearing up to respond.

Regency B

Panelists

- Ken Colburn, Regulatory Assistance Project
- Kevin Cooney, Navigant Consulting
- Hossein Haeri, Cadmus Group
- Deborah Reynolds, Washington Utilities and Transportation Commission
- David Rosenheim, The Climate Registry

2:30–3:15**Afternoon Break****3:15–4:45****Concurrent Sessions****TACKLING THE QUESTION OF EQUITY: WHO BENEFITS FROM EFFICIENCY INVESTMENTS?****Moderator: Jack Mayernik, National Renewable Energy Laboratory**

Who benefits from energy efficiency investments? This session explores this question by examining the economic effects of these investments on job creation, wage growth, and emissions reduction. Innovative techniques address the assessment of opportunity costs, externalities, and the counterfactual.

Regency D

- [Any Which Way the Wind Blows: Estimating Air Emissions Externality Costs](#) - Joe Loper, Itron and Lucas Scheidler, Itron
- [Assessing the Economic Impacts of Publicly-Funded Investments in Energy Efficiency Programs](#) - Tyler Browne, Cadmus
- [Better Buildings, Better Economy: An Economic Impact Analysis of a Federal Retrofit Program](#) - Matthew Koson, Evergreen Economics and Stephen Grover, Evergreen Economics

DATA, DATA EVERYWHERE: MAKING PROGRAMS AND EVALUATIONS BETTER WITH TONS OF DATA**Moderator: Lauren Gage, Bonneville Power Administration**

Regency C

Big Data is here! This session focuses on how the energy efficiency industry can use the massive amounts of data that are rapidly becoming available to us. Through AMI meters, the Internet of Things, and Web-crawler applications, we now potentially have massive amounts of data at low cost. How can we use these data to effectively evaluate and design programs? Come and learn from your peers who have collected and analyzed these data.

- [The Promised Land: Making Use of Data from Smart Meters](#) - Al Bartsch, West Hill Energy and Computing
- [Real Time Monitoring and the Internet of Things: Reshaping How We Collect Data](#) - Kevin Price, Evergreen Economics and David Thayer, Pacific Gas and Electric Company
- [Leveraging Big Data to Develop Next Generation Energy Efficiency Programs and Energy Regulations](#) - Michael McGaraghan, Energy Solutions and Daniel Young, Energy Solutions

EVALUATION'S KNOTTIEST PROBLEMS: MEASURING SPILLOVER AND CODES SAVINGS**Moderator: Douglas Mahone, TRC Energy Solutions**

Regency E & F

Evaluators are developing methods to address two of the difficult, yet holy grails of energy efficiency: the spillover from efficiency programs, and the savings from codes and standards. Spillover requires sorting out complex interactions between program influences, natural market effects, and multiple actors. They require careful calculation to avoid double counting savings. Additionally, both face high hurdles of proof from skeptics who question whether the savings are "real."

- [101 Sources of Spillover: An Analysis of Unclaimed Savings at the Portfolio Level](#) - Antje Flanders, Opinion Dynamics
- [Spillover – Worth Crying Over: An Innovative Methodology for Quantifying Non-Participant Spillover in California](#) - Chris Murphy, Itron and Dan Buch, California Public Utilities Commission, Energy Division
- [Cracking the Code: An Approach to Estimating Savings from Energy Codes](#) - Jonathan Strahl, Navigant

QUICK TAKES: A RANDOM WALK DOWN MEASURE AND TECHNOLOGY LANE**Moderator: Scott Pigg, Seventhwave**

Regency A

This session showcases the high-impact contributions that evaluation teams have made to commissioning protocols, cold weather heat pumps, energy/water conservation, weatherization program design, appliance recycling, direct install refrigeration, and a midstream pilot targeting set-top boxes.

- [Heat Pumps Are Like Bulletproof Vests and Other Lessons Learned from a Pilot Evaluation](#) - Jeremy Kraft, EMI Consulting and Ellen Steiner, EMI Consulting
- [Warming Up to Direct Install Refrigeration Measures](#) - Carlyn Aarish, Cadmus and Elizabeth Titus, Northeast Energy Efficiency Partnerships
- [Third Party Verification of a Non-Regionally Specific Appliance Recycling Model Using On-Site Metering](#) - Pace Goodman, Navigant Consulting, Inc. and Rosanna Jimenez, Consolidated Edison, Inc.
- [Sealing the Gaps: A Case Study in Proactive Weatherization Program Design](#) - Adam Thomas, ADM Associates and Brian Harold, ADM Associates
- [Flushing Away Our Resources: A Closer Look at Toilets and Energy Conservation](#) - Steven Keates, ADM Associates and Trisha Ruby, Truckee Donner Public Utility District
- [Challenges in Evaluating Monitoring-Based Commissioning Programs in California](#) - Amit Kanungo, DNV GL and Fred Coito, DNV GL
- [Not so Intractable After All? Lessons from a Midstream Energy Efficiency Pilot Targeting Set-Top Boxes](#) - Alexandra Dunn, Research Into Action and Miriam Fischlein, Southern California Edison

PANEL: CATCH OF THE DAY: EVALUATOR CERTIFICATION**Moderator: Monica Nevius, NMR Group**

Regency B

Is certification for the energy-efficiency program evaluation profession inevitable? Is it a wise or bad idea? What details could make it succeed or fail? Panelists involved in the issue, or that expect to be affected by it, will represent a variety of perspectives on this topic.

Panelists

- Michael Li, U.S. Department of Energy
- Anne Dougherty, Illume Advising
- Mimi Goldberg, DNV GL
- Hossein Haeri, The Cadmus Group
- Jeremy Newberger, National Grid
- Ed Colston, Tennessee Valley Authority

5:15–7:30

Special Event: Rainbow Harbor Cruise

THURSDAY MORNING, AUGUST 13

7:00–8:00 Continental Breakfast & Registration

8:00–9:45 Concurrent Sessions

BEYOND ENERGY SAVINGS, LEVERAGING NON-ENERGY BENEFITS**Moderator: Charles Michaelis, Databuild Research & Solutions**

You will hear the latest on how non-energy benefits are being measured and used in cost-effectiveness tests, along with examples where the value of non-energy benefits has been used to demonstrate the true value of energy efficiency programs.

Regency E & F

- [NEBs: The Latest in Results, Applications, and Best Practices for State Cost-Effectiveness Tests](#) - Lisa Skumatz, Skumatz Economic Research Associates
- [Non-Energy Impacts Provide Powerful Marketing Tools for Energy Efficiency Programs](#) - Marie Abdou, National Grid and Noel Stevens, DNV GL
- [The Million Metric Ton Question: Estimating National Carbon Impacts from State-Level Programs](#) - Kristina Kelly, DNV GL and Tim Pettit, DNV GL
- [Water Saving Devices Save More Energy Than You Think](#) - Kelly Parmenter, Applied Energy Group and Donney Dorton, Oklahoma Gas & Electric

BEHAVIOR CHANGE IN HOMES, BUSINESSES, AND SCHOOLS**Moderator: Edward Vine, Lawrence Berkeley National Laboratory/California Institute for Energy and Environment**

The evaluation of behavior change in homes and businesses currently uses different interventions – social networking, two-way communication technologies web portals, energy reports, real-time feedback, social norms, and gamification.

Regency B

- [Getting Energy Use Down to a \(Social\) Science: Combining Behavior Insights and Connected Technologies](#) - Kira Ashby, Consortium for Energy Efficiency
- [Energy Savings from Connected Thermostats: Issues, Challenges, and Results](#) - Michael Blasnik, Nest Labs
- [Assessing the Potential of Social Networks as a Means for Information Diffusion: Weatherization Experiences](#) - Beth Hawkins, Oak Ridge National Laboratory and Erin Rose, Oak Ridge National Laboratory
- [Energy Impact from Gamification-Induced Behavior Change](#) - Ingo Bensch, Evergreen Economics

NON-RESIDENTIAL LIGHTING: PAST, PRESENT, AND FUTURE**Moderator: Jenna Canseco, DNV GL**

This session will explore the markets for LED lamps, linear fluorescent T8s, and T12s in multiple jurisdictions as well how these markets have been affected by federal legislation.

Regency D

- [Light of the Living Dead: The Current Market for T12 Lamps in the Post-EPACT World](#) - Christopher Dyson, DNV GL and Erik Mellen, Eversource Energy
- [The First Generation of Thin is No Longer In – Knowing Your T8s](#) - Jean Shelton, Itron and Lisa Paulo, California Public Utilities Commission
- [Pop Quiz! LED Lighting Can Generate Significant Energy Savings in Nonresidential Buildings?](#) - Brian McAuley, Itron

PREDICTING BUILDING ENERGY PERFORMANCE – WE STILL HAVE A LONG WAY TO GO**Moderator: Rafael Friedmann, Pacific Gas and Electric Company**

Home and commercial building energy performance scores, and the analyses supporting these, were reviewed and found to have high levels of uncertainty and/or questionable accuracy. Ideas on how to improve current practice are offered so that the energy performance scores align better with actual performance.

Regency C

- [Energy Trust of Oregon 2009-2011 New Homes Billing Analysis: Comparison of Modeled vs. Actual Energy Usage](#) - Dan Rubado, Energy Trust of Oregon
- [Sources of Error in Home Energy Use Calculations: Evaluation in Real-World Laboratory Homes](#) - Abram Conant, Proctor Engineering Group and John Proctor, Proctor Engineering Group
- [Results of Validation Tests Applied to Seven ENERGY STAR Building Models](#) - John Scofield, Oberlin College

QUICK TAKES: EVALUATING EMERGING TECHNOLOGIES**Moderator: Linda Dethman, Research Into Action and Phil Degens, Energy Trust of Oregon***This session will cover the evaluation of emerging technology pilots, as well as some newer technologies and services. Highlights of the broad range of methods used, evaluation challenges, and evaluation results will be presented.*

Regency A

- [Introducing...Emerging Technologies! Evaluation of Vendor Partner Solicitation Efforts](#) - Martha Thompson, Evergreen Economics and Tami Rasmussen, Evergreen Economics
- [Innovative Austin Energy WiFi Thermostat Program Evaluation](#) - Joseph Lopes, DNV GL and John Trowbridge, Austin Energy
- [I'll Gladly Pay You Tomorrow for an Energy Upgrade Today: Integrating Financing into Residential Upgrade Programs](#) - Joe Van Clock, Research Into Action and Marjorie McRae, Research Into Action
- [Window Attachments: The Next Big Energy-Savings Measure?](#) - Stephen Bickel, D+R International and Emily Phan-Gruber, D+R International
- [Pilot Study for a Thermostatic Shower Restriction Valve](#) - Joseph D'Acquisto, PPL Electric Utilities and Anders Wood, Cadmus
- [Dimming Ballasts: As Good As We Think?](#) - Dave Bisbee, Sacramento Municipal Utility District and John Caffrey, ADM Associates
- [Filling the Measure Pipeline: An Examination of Six Utilities' Emerging Technology Measure Development Processes](#) - John Cornwell, Evergreen Economics and Martha Thompson, Evergreen Economics

9:45–10:00 Morning Break**10:00–11:30 Concurrent Sessions****REAL TIME EVALUATION: OPPORTUNITIES AND TRADE-OFFS****Moderator: Caroline Chen, StatWizards***If real-time evaluation can be easily done, why isn't it a reality today? What are the opportunities and trade-offs of doing real-time evaluation? More importantly, what skills, resources, and expectations are needed to overcome today's inertia?*

Regency D

- [Leaving the Rearview Mirror Behind: Assessing the Effectiveness of a Concurrent Impact Evaluation Process](#) - Betsy Ricker, ERS and Cheryl Glanton, New York State Energy Research and Development Authority
- [Strategic Uses of Ongoing Fast Feedback Customer Satisfaction Studies](#) - Jill Steiner, Cadmus and Joseph Forcillo, Consumers Energy
- [Learning from Public Health: Embedded Evaluation and Its Applications to Energy Efficiency](#) - Courtney Henderson, ILLUME Advising

LIGHTING IN A BOTTLE: EXPLORING RESIDENTIAL LIGHTING MARKETS**Moderator: Matthew Nelson, Eversource Energy***This session tracks the evolution of lighting markets, including a discrepancy of buy-down prices of bulbs across markets, a multi-year panel study of lighting habits of customers, and a macro look at effectiveness and trends in the lighting programs using retail sales data from 44 states.*

Regency C

- [What's the Point \(of Sale\)? Program Activity Impacts Efficient Bulb Sales – Proof Across 44 States and Five Years](#) - Chris Russell, NMR Group and Michael Strom, NMR Group
- [More Bulb for the Buck? Verifying Ratepayer Value in an Upstream Lighting Program](#) - Natalie Bodington, Cadmus and Eric Rambo, Cadmus
- [We Know What You Did Last Summer: Revelations of a Lighting Panel Study](#) - David Barclay, NMR Group and Matthew Nelson, Eversource Energy

STORAGE, CVR, AND CHP BLURRING THE LINES OF SUPPLY AND DEMAND**Moderator: Maureen McNamara, U.S. Environmental Protection Agency***The first ever evaluation of behind the meter advanced energy storage projects will be covered, along with a comparison of two methods for validating energy savings from Conservation Voltage Reduction and a look at retirement rates for Combined Heat and Power projects.*

Regency B

- [Conservation Voltage Reduction – On the Other Side of the Meter: An Evaluation Case Study](#) - Paul Higgins, Navigant and Frank Stern, Navigant
- [The Calm Before the Storage Tsunami: Lessons Learned from Evaluating California's First Behind-the-Meter Advanced Energy Storage Project](#) - William Marin, Itron and Stephan Barsun, Itron
- [Understanding Early Retirement of Combined Heat and Power \(CHP\) Systems: Going Beyond First Year Impacts Evaluations](#) - William Marin, Itron and Kurt Scheuermann, Itron

COST EFFECTIVENESS: CUTTING EDGE ISSUES**Moderator: Ralph Prael, Prael & Associates***This session explores several advanced issues in cost-effectiveness analysis, including: performing and interpreting the results of sensitivity analyses, adapting traditional benefit-cost frameworks to better accommodate market transformation initiatives, and handling subtleties regarding the treatment of incentive payments and incremental costs.*

Regency E & F

- [The Sensitive Side of Cost Effectiveness](#) - Christine Hungeling, Itron and Jean Shelton, Itron
- [Modifying California's Traditional Resource Acquisition Benefit-Cost Analysis to Accommodate Market Transformation Programs](#) - Richard Ridge, Ridge & Associates and Brian Arthur Smith, Pacific Gas and Electric Company
- [Focusing Some Light on Two Specific Issues for Cost Effectiveness Testing](#) - Seth Craigo-Snell, CLEARResult

11:45–12:30 Closing Plenary**MOVING DSM EVALUATION FROM DEFENSE TO OFFENSE: A MARKETER'S PERSPECTIVE****Regency A****Bill Leblanc, Chief Instigation Agent, E Source**

DSM programs must be evaluated in order to support integrated planning, to prove that ratepayer money was spent properly, and to obtain regulatory incentives. But are we building a road to the promised land of more program participation, greater integration of offerings, improved utility brands, and more interactive approaches with partners...OR are we building walls made of ever-stricter evaluation protocols that actually seal us off from our biggest opportunities? Come hear a DSM marketer's perspective, using humor and anecdotes, about the DSM road less traveled.

12:30 Adjourn