

2015 International Energy Program Evaluation Conference

Broadening Our Horizons

Pre-Conference Workshops: Monday, August 10, 2015

Conference: August 11-13, 2015

Hyatt Regency, Long Beach, California



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Welcome to our 2015 IEPEC Conference. In this United Nations International Year of Evaluation, our theme is Broadening our Horizons. Energy program evaluation occurs within a context of ever changing political, economic, and social environments. These changes affect program and evaluation objectives, methods, and level of oversight. For this conference, we have selected papers using well-known energy program evaluation methods to


address related policy topics and added in a good sprinkling of programs addressing emerging issues and methods to prepare us for the future.

So much is happening in the area of energy programs, and good, solid evaluations of programs continues to rise in importance. Now more than just a regulatory requirement, evaluation assures ratepayers and legislators that the results are reliable and worthy of further investment.

The 2015 IEPEC Planning Committee is expecting the conference this August to be one of the best in years. This program is once again a rich array of opportunities to learn and share, to meet and greet, to review recent work, and to look ahead to the future. The program will offer:

- 8 workshops,
- Networking Reception on Monday night,
- 150 peer-reviewed papers,
- 5 discussion panels,
- 30 posters featured at our ever-popular Tuesday night Poster Reception,
- A Rainbow Harbor cruise Wednesday evening, and
- Again this year, 39 Quick Take papers—full papers, introduced to you through short presentations

It is more than any one person can take in, so bring a co-worker or two to cover the sessions you can't. Bring your new hires to take advantage of the numerous networking opportunities, and don't forget the workshops on the first day—a great way to get targeted learning straight from some of the leading practitioners in the field. Make your reservations now for both the conference and the hotel, before they sell out. Come join the conversation, renew your old relationships with colleagues, make some new ones, and contribute to the most stimulating and largest professional assembly of energy evaluation work available anywhere in the world.



Jane S. Peters, Ph.D.
IEPEC Board President

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BTan Consulting

Northeast Energy Efficiency Partnerships

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Eve & Shel Feldman Student Scholarships

Yinsight

Monday, August 10, 2015

6:00 PM - 7:30 PM

Immediately following the workshop on Monday, August 10, join your energy evaluation colleagues for a meet and greet and share backgrounds, exchange ideas, and discuss challenges. Plan to arrive in town early enough to attend.



Courtesy of Joe Lopes



**Relax on our Rainbow Harbor Cruise
Wednesday, August 12, 2015, 5:45 PM - 7:30 PM
(BOARDING BEGINS AT 5:15 PM)**

Glide through the calm waters of Rainbow Harbor along the magnificent coastline with wonderful views of downtown Long Beach. Departing from the dock in Rainbow Harbor (5-minute walk from conference hotel), our vessel, Endless Dreams, consists of three entertaining levels with contemporary appointments. Includes one free drink ticket, followed by a cash bar, and light hors d'oeuvres. The cost of this event for registered conference attendees is \$72. Guests are encouraged to attend. The non-registered attendee fee (17 years and older) is \$72. For children ages 3-16 the cost is \$55. Children under 3 are free. This event

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CONFERENCE AND HOTEL INFORMATION

Important Deadlines:

May 21, 2015:	Deadline for “early bird” reduced conference and workshop registration.
July 20, 2015 :	Hotel cut-off date (There is a limited block of rooms at the conference rate, so make your reservation early)
August 10, 2015:	Workshops
August 11-13, 2015:	Conference

Conference Cancellation Policy

Prior to July 1	Full refund for cancellations
July 1 – July 31	Refund minus \$50 administrative fee for cancellation
After July 31	No refund but registrations can be transferred

Reservation and Room Rates

Event Site **Hyatt Regency Long Beach**
200 South Pine Avenue
Long Beach, California, USA, 90802
Telephone: 562-491-1234

Room Rate: \$179, includes free in-room WiFi

The conference is being held at the Hyatt Regency Long Beach in Long Beach, California. There is a limited block of rooms available at the conference rate of \$179. Rooms at this rate are available on a first come first served basis until July 20, 2015. Once the complete block of rooms at the IEPEC rate is booked, additional rooms may be available, but they are likely to be at a much higher rate.

Reservations **By phone: call 1-562-491-1234 – please mention IEPEC to get the group rate.**

All conference attendees are responsible for making their own hotel reservations and payments. When making your reservation, mention the following code: IEPEC.

Online Reservations: Access the link from our website: www.IEPEC.org.

Room Rates **\$179 Single/Double—These rates expire on July 20, 2015, but block is limited—Call Soon!**

Cancellations can be made up to 4:00 pm day of arrival. Check-in time is 4:00 pm and checkout is at 12:00 pm.

Transportation Information: Please see hotel website.



FEATURED SPEAKERS



KEYNOTE SPEAKER: CASS R. SUNSTEIN, AUTHOR AND HARVARD PROFESSOR

Cass R. Sunstein is founder and director of the Program on Behavioral Economics and Public Policy, as well as the Robert Walmsley University Professor at Harvard. Sunstein's scholarship spans five major areas: behavioral economics and public policy, constitutional law and democratic theory, legal theory and jurisprudence, administrative law, and the regulation of risk. From 2009 to 2012, he served as the Administrator of the White House Office of Information and Regulatory Affairs. He is coauthor of *Nudge* (2008) and recently, author of *Wiser* (2014) and *Choosing Not To Choose* (2015).

CLOSING PLENARY: BILL LEBLANC, CHIEF INSTIGATION AGENT, E SOURCE *Moving DSM Evaluation from Defense to Offense: A Marketer's Perspective*

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.



Eight Preconference Workshops

Half-Day Session

Identifying, Implementing, and Evaluating a Successful Monitoring Project **Intended Audience:** Entry Level or Intermediate

Instructors:

Amit Kanungo, *DNV GL*

David Cranford, *DNV GL*

Jarred Metoyer, *DNV GL*

Time: 8:30 AM - 11:30 AM

Cost: \$75 (INCLUDES ONE BREAK)

An introduction to the monitoring process including an overview of the major challenges and techniques to address them. Field monitoring can be an integral part of a successful project, whether it be an energy efficiency or demand reduction project. The techniques presented at this workshop will be applicable to residential, commercial, and industrial facilities and measures. This workshop helps participants understand how to gain usable outcomes from monitoring project results. Presenters will describe the application of field monitoring, as well as the problems of baseline determination. Other workshop topics include the estimation of delivery, and evaluation of both energy efficiency and demand reduction projects and technologies.

Half-Day Session:

Top-Down Methods for Measuring Energy Efficiency Impacts **Intended Audience:** All Interested Parties

Instructor:

Marvin Horowitz, *Demand Research LLC*

Time: 1:00 PM - 5:00 PM

Cost: \$75 (INCLUDES ONE BREAK)

The purpose of this workshop is to keep policymakers and evaluation professionals up-to-date on the latest developments in measuring mandated and publically-funded efficiency program accomplishments at the aggregate (e.g., utility, state or national) level.

Half-Day Session

The Uniform Methods Project: A Crash Course on Phase II Activities and Next Steps **Intended Audience:** Entry Level Learners

Instructors:

Arlis Reynolds, *Cadmus*

Michael Li, *U.S. Department of Energy*

Hossein Haeri, *Cadmus*

Time: 1:00 PM - 5:00 PM

Cost: \$75 (INCLUDES ONE BREAK)

An update on activities, new protocols, and next steps for the Uniform Methods Project (UMP).

- Learn about the quick summary template that distill protocol details into short and standardized format.
- Learn about key component of the latest 10 EM&V protocols.
- Learn the scope of the UMP including activities from inception and to date.
- Discuss current uses of the UMP materials.
- Discuss potential new developments and uses for the UMP project.

Full-Day Session:

Evaluation Management 101 **Intended Audience:** Entry Level

Instructors:

Bobbi Tannenbaum, *BTan Consulting*

Robert Kasman, *Pacific Gas & Electric*

Tammy Kuiken, *DNV GL*

Time: 9:00 AM - 5:00 PM

Cost: \$150 (INCLUDES TWO BREAKS AND LUNCH)

This overview workshop is designed for professionals responsible for developing, overseeing, or managing energy program evaluations. The workshop is taught by a team of evaluation professionals with decades of experience designing, implementing, and managing evaluation activities. Past attendees to this workshop rated it highly, saying the workshop provided them with a basic understanding of evaluation and associated terminology, allowing them to take full advantage of the conference. Workshop will help attendees to:

- Use best practices in evaluation management to increase likelihood of results being used and useful.
- Understand the key issues associated with impact and process evaluations of energy programs, as well as market research to support programs and evaluations.
- Understand basic analytical concepts key to evaluation research.
- Know the uses and relative costs of evaluation methods.

Full-Day Session

Beyond Evaluation 101: Effective Process and Market Evaluations

Intended Audience: Entry Level

Instructors:

Jane Peters, *Research Into Action*

Linda Dethman, *Research Into Action*

Marjorie McRae, *Research Into Action*

Time: 9:30 AM - 5:30 PM

Cost: \$150 (INCLUDES TWO BREAKS AND LUNCH)

Evaluation 101 is a good start, but there are lots of details that ensure an evaluation can really make a difference in a program as compared to one that just fulfills a requirement. This course will be for those evaluators and evaluation managers who:

- Want their evaluations to get beyond the surface,
- Want to know what makes an evaluation more than bedtime reading,
- Are curious about why process evaluation is getting so much attention,
- Are wondering about the difference between market and process evaluation, and
- Want evaluations to be useful and used.

Full-Day Session

Evaluating Multiple Impacts of Energy Portfolios

Intended Audience: Intermediate

Instructors:

Rosalie Ruegg, *TIA Consulting, Inc.*

Yaw O. Agyeman, *Lawrence Berkeley National Laboratory*

Time: 9:00 AM - 5:00 PM

Cost: \$150 (INCLUDES TWO BREAKS AND LUNCH)

This workshop will present a systematic approach to estimating multiple impacts of portfolios of energy technologies. It will take participants through a series of steps to produce comprehensive impact evaluation, using a cost-effective approach. It will discuss the advantages and challenges of using a uniform approach to evaluation, and will demonstrate how a uniform approach enables aggregation of results across portfolios, thereby capturing a larger share of a given public energy investment.

Full-Day Session

Behavior Evaluation: Creating Effective and Evaluable Behavior Programs

Intended Audience: All Interested Parties

Instructors:

Alexandra Dunn, *Research Into Action*

Miriam Goldberg, *DNV GL*

Shawn Bodmann, *DNV GL*

Time: 9:30 AM - 5:30 PM

Cost: \$150 (INCLUDES TWO BREAKS AND LUNCH)

In this workshop, participants will: (1) Know the value of using experimental and quasi-experimental techniques for evaluating behavior pilots and programs; (2) Understand the difference between true experiments, quasi experiments, and observational research; (3) Understand the limitations of various analytical techniques and evaluation designs; (4) Understand what's needed to make specific evaluation approaches reliable; (5) Know how to set up a randomized treatment-control design so it's valid; (6) Be able to design behavior programs to improve evaluability; (7) Feel comfortable linking process and impact evaluation methods and results for behavioral programs; and (8) Learn how to integrate the evaluation of behavior programs with concurrently running, more traditional efficiency programs to avoid double-counting of savings.

Full-Day Session

Basic Statistics

Intended Audience: Entry Level

Instructor:

M. Sami Khawaja, *Cadmus*

Time: 9:30 AM - 5:30 PM

Cost: \$150 (INCLUDES TWO BREAKS AND LUNCH)

Reasons for statistics. What the various statistical measures (mean, variance, proportion, range) are. How are they used? How to compute/interpret them.

- Statistical tests. Using statistics for testing differences among groups (e.g., participants and nonparticipants), different time periods (e.g., pre and post). How you compute/interpret statistical tests. Confidence and precision. Point and interval estimates.
- Sampling. Types, sample size determination.
- Data sources/cleaning. Program tracking, weather, economic, demographics. Outliers, identification, corrections.
- Explaining variation. Regression models, assessing quality of the regression model.
- Expressing uncertainty. Acceptable uncertainty, tradeoff with cost, value of information, confidence and precision, method of improving confidence and precision, methods for decreasing sample size.

7:30–8:30	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 Elneceve, 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.

- **Cracking the Code: Impact Evaluation Methods and Results of ARRA-Funded Energy Code Initiatives** - Michael Rovito, ERS and Tim Pettit, DNV GL
- **Savings South of the Border: Evaluating Impacts of Appliance Energy Efficiency Standards in Mexico since 2000** - Michael McNeil, Lawrence Berkeley National Laboratory
- **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 Phoutrides, Northwest Energy Efficiency Alliance
- **Utilities C&S Federal Advocacy – Policy Considerations for Calculating Net Attributable Savings** - Paula Gruending, California Public Utilities Commission and Ken Keating

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.

- **Discrepancy Analysis: How to Show the Implementer What to do Next** - Susan Haselhorst, ERS
- **Around and Around the Custom Implementation – Evaluation Feedback Loop** - Kris Bradley, Itron and Peter Lai, California Public Utilities Commission
- **When Failure Can Be a Resounding Success: The Pilot** - Arlis Reynolds, Cadmus and Kim Crossman, National Grid
- **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.

- **Effective Practices for the Planning, Design, Implementation, and 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.

- **Comparison of Bayesian Billing Analysis to Pooled Fixed Effects and Variable Base Degree Days** - Benjamin Hannas, Ecotope
- **Cage Match or Happy Couple? Engineering Simulation Models and Billing Analysis** - Lauren Gage, Bonneville Power Administration
- **Measurement Uncertainty, Sampling 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
- **Practical Guidance for Selecting Opt-In Research Designs: Addressing Methodological Trade-Offs and Avoiding Common Pitfalls** - Lucy Morris, Pacific Gas and Electric and Brian Smith, Pacific Gas and Electric

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 market 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.

- **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 and Christopher T. Payne, Lawrence Berkeley National Laboratory
- **Advanced Impact Evaluation Reporting: Making Results Useful to More Stakeholders** - Robert Kasman, Pacific Gas & Electric and Adam Scheer, Pacific Gas & Electric
- **Cape Light Compact: The Power of Understanding Your Customers** - Jake Millette, Opinion Dynamics and Antje Flanders, Opinion Dynamics
- **Analysis of Heat Consumption in Public Buildings and the Underlying Energy Savings Potential in Slovakia** - Katarína Korytárová, Ministry of Economy of the Slovak Republic and Kvetoslava Šoltéssová, Slovak Innovation and Energy Agency
- **Vacation Destination Nantucket – No Walk in the Park When You Are on an Island: Conducting Residential Metering Study and Site Visits on Nantucket Island** - David Kim, 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.

- **Final Results from SMUD's SmartPricing Options Pilot** - Stephen George, Nexant and Nate Toyama
- **The Impact of Time-of-Use Rates on Residential Customers in Ontario, Canada** - Ahmad Faruqui, The Brattle Group and Neil Lessem, The Brattle Group
- **Baby, It's Cold Outside: 2014 Polar Vortex Impacts on Residential Dynamic Electricity Pricing Programs** - David Becker, Elevate Energy

REFLECTIONS ON RESULTS AND METHODS FOR AGGREGATED PROGRAM IMPACTS

Moderator: Elizabeth Titus, Northeast Energy Efficiency Partnerships

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.

- **Making Sense of 1000 Program Results: How are DSM Programs Really Performing?** - Rachel Reiss Buckley, E Source and Mark Brown, QuadROI
- **The View from the Top: Top-Down Estimation of Program Savings Using Utility-Level Data in Massachusetts** - Ferit Ucar, NMR Group and Noel Stevens, DNV GL
- **Rolling Up IOU Account-Level Data to Measure Savings from the Top-Down** - Noel Stevens, DNV GL and Monica Cohen, Columbia Energy

IT'S FOUNDATIONAL: DEVELOPING AND IMPLEMENTING AMAZING BASELINE STUDIES

Moderator: Allison Mace, Bonneville Power Administration

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.

- **Swimming Against the Tide—Gauging HVAC Quality Installation and Quality Maintenance Program Efforts to Establish a Foothold in the Market** - Rohit Vaidya, NMR Group
- **Observed Efficiency Trends in Residential Appliances in California Homes Relative to the Evolution of Appliance Standards** - Claire Palmgren, DNV GL and John Stoops, DNV GL
- **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

THE SECRET OF MY SUCCESS: INSIGHTS GAINED THROUGH METRICS

Moderator: Riley Hastings, Eversource Energy

This session features three 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.

- **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
- **KPI: Not Just Key Performance Indicators but Keen Portfolio Intelligence** - Jessica Aiona, Cadmus and Michael Goldman, Eversource Energy

PANEL: CAN WE CREATE A REGULATORY FRAMEWORK THAT ENCOURAGES MARKET EFFECTS?

Moderator: Robert Wirtshafter, Wirtshafter Associates

In most states, current regulatory/legislative treatment restricts the pursuit of market transforming energy efficiency activities. A recent White Paper by Ralph Pahl 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.

3:00–3:45 Afternoon Break

3:45–5:15 Concurrent Sessions

Matching DR With Incentives That Work. Possible?

Moderator: Ed Thomas, PLMA

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.

- **Evaluating a Behavioral Demand Response Trial in Japan: Evidence from the 1-Year Experiment** - Toshihiro Mukai, Central Research Institute of Electric Power Industry and Ken-ichiro Nishio, Central Research Institute of Electric Power Industry
- **The Matchmaker: Methods for Predicting Participation and Finding the Best Demand Response Programs for Customers** - Alan Elliott, Opinion Dynamics and Olivia Patterson, Opinion Dynamics
- **Residential Customers' Response to Critical Peak Events of Electricity: Utility Experience** - Suman Gautam, DNV GL and Seth Blumsack, Penn State University
- **The Price is Right: The Minimum Incentive Level Customers Need to Participate in Demand Response** - Debbie Brannan, Navigant and Jesse Feinberg, Consolidated Edison

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.

- **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
- **Using a Delphi Approach to Estimate Impacts of Windows Programs** - Noah Lieb, Apex Analytics and Sarah Castor, Energy Trust of Oregon

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 both 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** - Andrew Correia, NMR Group and David Barclay, NMR Group

COMMERCIAL AND INDUSTRIAL EVALUATION TECHNIQUES

Moderator: Dick Spellman, GDS

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 Evaluating Non-Standard Industrial Projects** - Kevin Warren, Warren Energy Engineering and Michael Honeychuck, Warren Energy Engineering
- **Improvements in SEM Program Evaluation Methods: Lessons Learned from Several Recent Projects** - Heidi Ochsner, Cadmus

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 an evaluation of results for applications of such new technologies.

- **The Next New Thing—Is It Really That Good?** - John Proctor, Proctor Engineering
- **Using Retrospective Analysis to Guide a Prospective Model for Residential Electric Heat Savings in a Cold Climate** - Greg Fanslow, VEIC
- **A Ductless Heat Pump in Every Pot?** - Justin Spencer, Navigant

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

8:00–4:00

Registration

8:00–9:45

Concurrent Sessions

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.

- **Evaluating and Overseeing Large-Scale Portfolio Evaluations – Formulas for Success** - Nick Hall, Evaluation Management and Oversight Services
- **How Much Evaluation Is Enough? A Guide to Determining Evaluation Efforts within the Context of EPA Rule 111 (d)** - Michael Messenger, Itron
- **What’s in Your EM&V Mix? Improving Transparency and the Understanding of EM&V Practices** - Julie Michals, Northeast Energy Efficiency Partnerships
- **To Do or Not to Do Redux: Triggering an Impact Evaluation** - Susan Haselhorst, ERS and Erik Mellen, Eversource Energy

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

Moderator: Laura Schauer, ILLUME Advising

This session presents 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.

- **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 five 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?

- **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.

- **Exploring Deep Savings: A Toolkit for Assessing Behavior-Based Energy Interventions** - Beth Karlin, UC 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
- **Best Randomization Methods for Behavioral Program RCTs** - Alessandro Orfei, Opower and Arhan Gunel, Opower
- **Engaging Hard-to-Reach Customers: A Data-Based Comparison Across Recruitment Techniques** - Josh Levig, 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.

- Michael Ihesiaba, ConEd of New York
- Kerstin Rock, CLEAResult
- Shahanna Samiullah, Southern California Edison
- Bill Saxonis, New York Department of Public Service

9:45–10:15**Morning Break**

10:15–11:45**Concurrent Sessions**

COMMERCIAL NEW CONSTRUCTION PROGRAMS: REAL WORLD CONSIDERATIONS FOR EVALUATIONS

Moderator: David Weitz, CSG

This session offers four 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.

- **New Construction Multifamily Building Recruitment—A “Full Contact” Game!** - Mandy Pom, Tetra Tech
- **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 Sarah Budinger, Cadmus
- **The Architecture of Savings in a New Construction Program** - Marc Collins, Itron and Jennifer Chiodo, Cx Associates

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
- **Estimated Impacts of Installation Best Practices on the Realized Energy Efficiency of Residential AC Systems: A Before and After Test of the Effectiveness of Training in Improving Energy Efficiency** - Michael Sullivan, Nexant and Kausar Ashraf, Independent Electricity System Operator
- **To Condense, or Not to Condense? Installation Practices Leave Boiler Savings on the Table** - Laura Tabor, Navigant and Antonio 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 Smith, Pacific Gas & Electric
 - **Better Control Groups With (Statistical) Science: Using Synthetic Control Group Methods to Address Common Data Constraints in M&V** - Jonathan Boiser, ADM Associates
 - **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 Impact Analysis: Is Your Comparison Group Comparable?** - Seth Wayland, Opinion Dynamics
-

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

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

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 for lighting savings measurement in nonresidential buildings.

- **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
- **Market Lift: The Enigma of Incentive Program Redesign** - Michael Strom, NMR Group and Matthew Nelson, Northeast Utilities
- **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
- **The Keystone of Energy Efficiency: New Approaches to Data Analysis Methods in a Mid-Atlantic State** - Victoria DeCicco, Nexant and Salil Gogte, Nexant
- **Are the Lights Really On? Leveraging a Cost Effective Approach to Estimate Lighting Usage in Nonresidential Buildings** - David Gonzales, Itron and Brian McAuley

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 will 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.

- Tim Guiterman, EnergySavvy
- Dan Violette, Navigant
- Ryan Bliss, Research into Action

11:45–1:00 Lunch Break

WEDNESDAY AFTERNOON, AUGUST 12

1:00–2:30 Concurrent Sessions

METHODS, METERS, AND MODELS: INNOVATIVE OPPORTUNITIES FOR REFINING THE ESTIMATION OF 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.

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

WILL THE REAL BASELINE PLEASE STAND UP!

Moderator: Rob Kasman, Pacific Gas & Electric

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.

- **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
- **Baseline or Bust: Calculating Savings for a Residential Heating Equipment Program** - Kathryn Parlin, West Hill Energy and Computing and Tami Buhr, Opinion Dynamics
- **Eww, Groooss! Cleaning Up Gross Baselines** - Michael Rufo, Itron

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.

- **The Impact of On-Bill Programs on Loan Performance: Evidence from the Green Jobs, Green New York Program** - Jeff Deason, Climate Policy Initiative
 - **Who Dunned? Determining Savings Attribution When Both Rebates and Financing Are Available** - Stephen Grover, Evergreen Economics and Jenny Fraser, Evergreen Economics
 - **Show Me the Attribution: Methodological Problems and Solutions for Estimating Impacts for Finance Programs** - Jeevika Galhotra, Opinion Dynamics and Katherine Randazzo, Opinion Dynamics
 - **Impact Evaluation of Energy Efficiency Financing Programs** - Emily Martin Fadrhonic, Lawrence Berkeley National Laboratory and Chris Kramer, Energy Futures Group
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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.

- **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
- **Conducting Evaluation in an Era of Declining Telephone Survey Response Rates** - Tami Buhr, Opinion Dynamics and Hannah Arnold, 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 Mandy Pom, Tetra Tech
- **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
- **Alternate Endings – A Tale of Two Surveys** - Gomathi Sadhasivan, DNV GL and Rich Barnes, DNV GL
- **Want Better Response Rates? Go Mobile! Best Practices for the Mobile Era** - Kaitlin Andryauskas, Opinion Dynamics and Emma DeCotis, Opinion Dynamics

PANEL: STATES AND REGIONS PREPARE FOR THE CLEAN POWER PLAN**Moderator: Steve Schiller, Schiller Consulting**

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.

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 are used to address the assessment of opportunity costs, externalities, and the counterfactual.

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

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

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.

- **Real Time Monitoring in the Internet of Things World: Reshaping How We Collect Data** - Kevin Price, Evergreen Economics and David Thayer, Pacific Gas & Electric
- **Bringing Advanced Methods to Advanced Metering Data** - Ken Agnew, DNV GL and Andrew Stryker, DNV GL
- **Leveraging Big Data to Develop Next Generation Demand Side Management Programs and Evaluations** - Mike McGaraghan, Energy Solutions and Daniel Young, Energy Solutions
- **The Promised Land: Making Use of Data from Smart Meters** - Al Bartsch, West Hill Energy and Computing and Kathryn Parlin, West Hill Energy and Computing

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

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.”

- **Spillover – Worth Crying Over: An Innovative Methodology for Quantifying Nonparticipant 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
- **101 Sources of Spillover: An Analysis of Unclaimed Savings at the C&I Portfolio Level** - Antje Flanders, Opinion Dynamics

QUICK TAKES: A RANDOM WALK DOWN MEASURE AND TECHNOLOGY LANE**Moderator: Scott Pigg, Energy Center of Wisconsin and Don Jones, Rocky Mountain Power**

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.

- **Warming Up to Direct Install Refrigeration Measures** - Carlyn Aarish, Cadmus and Elizabeth Titus, Northeast Energy Efficiency Partnerships
 - **Not so Intractable After All? Lessons from a Midstream EE Pilot Targeting Set-Top Boxes** - Alexandra Dunn, Research Into Action and Miriam Fischlein, Southern California Edison
 - **Third Party Verification of Non-Regionally Specific Appliance Recycling Models Using On-Site Metering** - Pace Goodman, Navigant and Steve Hastie
 - **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
 - **Heat Pumps Are Like Bulletproof Vests and Other Lessons Learned from a Pilot Evaluation** - Jeremy Kraft, EMI Consulting and Ellen Steiner, EMI Consulting
 - **Challenges in Evaluating Monitoring-Based Commissioning Programs in California** - Amit Kanungo, DNV GL and C D Nayak, DNV GL
-

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

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.

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.

- **NEBs: The Latest in Results, Applications, and Best Practices for State Cost-Effectiveness Tests** - Lisa Skumatz, Skumatz Economic Research Associates and Dana D'Souza, 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 AND BUSINESSES: WHAT WORKS AND WHAT DOESN'T?**Moderator: Ed Vine, 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.

- **Energy Savings from “Smart” Thermostats: Issues, Challenges, and Results** - Michael Blasnik, Nest Labs
- **Connecting Behavior Change to Energy Savings** - Kira Ashby, Consortium for Energy Efficiency
- **Assessing the Potential of Social Networks as a Means for Information Diffusion – the Weatherization Experiences (WE) Project** - Beth Hawkins, Oak Ridge National Laboratory and Erin Rose, Oak Ridge National Laboratory
- **Energy Impact from Gamification-Induced Behavior Change** - Ingo Bensch, Evergreen Economics

NONRESIDENTIAL 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.

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

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

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.

- **A Longitudinal Study of Energy Use in Newly Constructed Homes in the Pacific Northwest and Verification of Energy Savings in Rated Program Homes** - Dan Rubado, Energy Trust of Oregon and Phil Degens, Energy Trust of Oregon
- **Systematic vs. User Error in Home Energy Ratings: Evaluation in Real-World Laboratory Homes** - Abram Conant, Proctor Engineering Group and John Proctor, Proctor Engineering Group
- **ENERGY STAR Building Scores Provide No Basis for Energy Savings Claims** - 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.

- **Pilot Study for a Thermostatic Shower Restriction Valve Device** - Joseph D'Acquisto, PPL Electric Utilities and Anders Wood, Cadmus
- **Innovative WiFi Thermostat Program Evaluation** - Joseph Lopes, DNV GL and John Trowbridge, Austin Energy
- **Filling the Measure Pipeline: An Examination of Six Utilities' Emerging Technology Measure Development Processes** - John Cornwell, Evergreen Economics and Martha Thompson, Evergreen Economics
- **Dimming Ballasts: As Good As We Think?** - Dave Bisbee, Sacramento Municipal Utility District and John Caffrey, ADM Associates
- **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
- **Introducing...Emerging Technologies! Evaluation of Vendor Partner Solicitation Efforts** - Martha Thompson, Evergreen Economics and Tami Rasmussen, Evergreen Economics
- **Window Attachments: An Untapped Residential Energy Savings Opportunity?** - Stephen Bickel, D&R International and Emily Phan-Gruber, D&R International

9:45–10:00 Morning Break

10:00–11:30 Concurrent Sessions**REAL-TIME EVALUATION: OPPORTUNITIES, TRADE-OFFS, AND WHAT DOES IT TAKE****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?

- **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
- **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

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.

- **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 Multi-Year Lighting Panel Study** - David Barclay, NMR Group and Matt 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.

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

COST EFFECTIVENESS: CUTTING EDGE ISSUES

Moderator: Ralph Prah, Prah & 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.

- **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 Smith, Pacific Gas & Electric
- **Focusing Some Light on Two Specific Issues for Cost-Effectiveness Testing** - Seth Craigo-Snell, CLEAResult

11:45–12:30

CLOSING PLENARY



BILL LEBLANC, CHIEF INSTIGATION AGENT, E SOURCE

Moving DSM Evaluation from Defense to Offense: A Marketer's Perspective

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

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Cancellation Policy: Conference registration fees will be refunded (less a \$50 cancellation fee) if notice is received in writing by July 31, 2015. Workshop registration fees will be refunded (less a \$50 cancellation fee) if notice is received in writing by July 31, 2015. No refunds given for cancellations after July 31, 2015.

WORKSHOP REGISTRATION FEE: All workshops are scheduled for Monday, August 10, 2015. See full description for start and end times.

Half Day Workshop	Identifying, Implementing and Evaluating a Successful Monitoring Project _____ US \$75
Half Day Workshop	Top-Down Methods for Measuring Energy Efficiency Impacts _____ US \$75
Half Day Workshop	The Uniform Methods Project: A Crash Course on Phase II Activities and Next Steps _____ US \$75
Full Day Workshop	Evaluation Management 101 _____ US \$150
Full Day Workshop	Beyond Evaluation 101: Effective Process and Market Evaluations _____ US \$150
Full Day Workshop	Evaluating Multiple Impacts of Energy Portfolios _____ US \$150
Full Day Workshop	Behavior Evaluation: Creating Effective and Evaluable Behavior Programs _____ US \$150
Full Day Workshop	Basic Statistics _____ US \$150



Special Event: Rainbow Harbor Cruise, Wednesday Evening, August 12, 2015, 5:45 - 7:30 pm
 (boarding begins at 5:15 pm)

	Quantity		
Registered Attendee	_____	US \$72	Total \$ _____
Non-Registered Attendee (17 and above)	_____	US \$72	Total \$ _____
Children (3-16 yrs.)	_____	US \$55	Total \$ _____
Children (under 3):	_____	free (must be registered for final count)	

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Help. It is Not Possible!!!! I Cannot Attend All the Sessions

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Presenters who do not wish to have their materials recorded will not be included.

Nominations for Lifetime Achievement Award are Now Open

Do you know an evaluator who has consistently made significant contributions to the field of energy program evaluation?

The International Energy Program Evaluation Conference (IEPEC) is accepting nominations for the 2015 Lifetime Achievement Award. This award is given to a member of the evaluation community who has consistently provided significant contributions to the energy services evaluation field.

Submit your nominations online at this link: <https://www.surveymonkey.com/s/Lifetime2015>. The deadline is May 29th.

The IEPEC Board and Conference Planning Committee will review the nominations and select a candidate in July, who will be announced at the August conference. If you have questions, please contact Cara Lee (Sam) Mahany Braithwait at 608-231-2552 or email to samb@CAenergy.com.



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