



Tuesday, August 19, 2014

ACEEE Summer Study at Asilomar, California

## Where the Action Is: States and Local Communities

by Eric Mackres, Local Policy and Community Strategies and Annie Gilleo, State Policy Research Analyst, ACEEE

Over the past decade, states and local communities have stepped forward as leaders in energy efficiency. Across the states, total utility investment in energy efficiency has increased more than 600% since 2002. Local action on efficiency also remains robust, even now that Recovery Act grants have been expended. A third of cities have a comprehensive energy management plan in place and 80% plan to have one in the next three years.

This year, we found ourselves in the position of defending this progress. In Florida, utilities spent the summer arguing that energy efficiency isn't a cost-effective investment. In Indiana and Ohio, we watched as legislators rolled back energy efficiency resource standards. Does this mean that the era of state-led energy efficiency has come and gone? We certainly don't think so.

Utilities in Indiana and Ohio have indicated that they plan to continue offering efficiency programs to their customers, even without state standards in place. And in the Southeast, where many customers face high energy bills, energy efficiency has taken hold as an economic development strategy. This year, Mississippi and Louisiana, new actors to state-led efficiency, rolled out quick-start programs for electric customers, and Arkansas continues to ramp up its savings targets.

Also on the horizon are new EPA rules under Section 111(d) of the Clean Air Act. Many states may find they need to re-think their

energy portfolios as a result of the rules. Energy efficiency has a promising role to play in reducing emissions while maintaining reliability standards, and we expect that ramping up efficiency efforts will be a critical strategy for states across the country.

Energy efficiency is also playing a large role in planning at the local level. Last year saw the release of ACEEE's City Energy Efficiency Scorecard, which provided the first comprehensive, comparative assessment of local action on efficiency. As we have increased our efforts to assist the cities scored in the report, there is clear interest in improvement. Many cities are adopting energy performance goals and putting energy management systems in place. Nearly a dozen have adopted building energy disclosure policies (Chicago, for example, has become a leader with policies applying to both commercial and residential buildings) and many more are considering them. Two-thirds of cities say they plan to increase or significantly increase their deployment of efficient technologies over the next five years. Cities increasingly see efficiency investments—such as those in water and wastewater systems, outdoor lighting, multimodal transportation choices, and public and private buildings—as low-cost ways to improve their infrastructure and delivery of basic services.

One other development of note to cities is the growing momentum and coordination to improve efficiency in multifamily housing. Many utilities, state and city agencies, housing providers, and energy advocates are working together for the first time to bring the best program practices to scale and increase the resources available to these underserved buildings.

Clearly, energy efficiency is a hot topic across the nation and at all levels of government. We look forward to seeing what the coming year will bring.

### Monday Plenary: The Utility of the Future

Monday's plenary speakers helped us see the future of energy utilities in a distributed, low-carbon world. Ron Binz, principal with Public Policy Consulting, and Kimberly Harris, CEO of Puget Sound Energy, outlined the pressures on both the up-stream generation and downstream consumer demand side of energy utilities. And in Ron's words, "something has got to give."

Rob set the context of our efforts by reminding us of our climate imperatives, noting that in 2013 the Mauna Loa observatory recorded an atmospheric carbon dioxide concentration of 400 parts per million (ppm), well above the 350 ppm

concentration deemed the safe upper limit to avoid the worst effects of climate change. New utility business models are emerging from within this context.

The pressures on utilities include electricity demand growth approaching 1%, while the cost per watt of photovoltaics continues to decline to \$4.50/watt unsubsidized cost for residential systems, and \$2/watt at utility scale. Utilities must now plan to handle the potential for over-generation from massive amounts of distributed renewable energy.

# Linda Latham Scholars

*Linda Latham served as ACEEE's Chief Operating Officer until her untimely death in September 2011. Linda believed that students bring talent and creativity to the field of energy efficiency, especially if we provide a venue to inspire and educate them.*



**(L-R) Lena Burkett, Meegan Kelly, Jie Zhao, Craig Roussac, Kristine Walker, Andrew Lick, Flore Marion, Christopher Wold, Kathryn Newhouse, Chris Wolken. (Jonathan Chambers, absent).**

ACEEE Board member Gene Rodrigues roused the Monday plenary by introducing the 2014 Linda Latham Scholars, reminding us of Linda's desire "to bring more young people into the world of energy efficiency." Gene exhorted ACEEE attendees to pledge donations so that more scholars may come in 2016. The Latham scholarship "identifies the best and the brightest, and brings them to Asilomar to learn from those care about energy efficiency." The Grapevine staff got to chat with a few of the eleven 2014 scholars.

Christopher Wold (Vanderbilt University's Institute for Energy and the Environment): "There's a lot of great engineering solutions to climate change problems, but there is missing information on how to apply those solutions: what are the conditions

that lead to energy efficiency—is it democracy, or [better] government? My interest is in understanding the human solutions to climate change."

Jie Zhao (Carnegie Mellon University): "I got my undergrad and master's in electrical engineering in China, and then came to Carnegie Mellon, in the School of Architecture's Building Performance and Diagnostics program. My specific topic is occupant behavior: how to use technology to influence office workers' behavior towards energy efficiency; to turn off lights, turn off their screens. If we can make it easy, people will do it. If it's inconvenient, people won't."

Kathryn Newhouse (University of Michigan): "I'm just about to start a dual degree with the Institute for Global Sustainable Enterprise at the University of Michigan. I'm getting a Master of Science in Natural Resources and Environment, and an MBA at the Ross School of Business. I'm interested in sustainable energy systems, specifically building materials and building energy technology, but I want to work on the business side of the technology or building material."

Lena Burkett (Appalachian State University). Lena has worked as a HERS rater with the Clinton Climate Initiative's Home Energy Affordability Loan program in Little Rock, AR. Lena got to knock on doors and see homeowners' reactions to strangers asking to audit their energy use. She's now working on an MS In Building Science.

*The Linda Latham Scholarship Fund is made possible this year through the generosity of the following supporters: Carl Blumstein, Steve Morgan, Peter Smith, Tim Stout, Jud Virden, and Steve Wiel.*

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## Monday Plenary, cont.

Ron briefed the audience on many variations of utility performance-based regulation. Read the Utilities 2020 report for more details on utility regulatory models (RIIO, Iowa and Grand Bargain). The ultimate goal is to move utilities from an asset-based commodity to an energy services model that emphasizes value.

Ron closed with a word about an important number: 111(d). Why should we care? Because EPA rules resulting from this section of the Clean Air Act will state that utilities can use energy efficiency as part of their requirement to lower carbon emissions. Energy efficiency is the cheapest way of complying with 111(d) to shrink overall carbon emissions. Since 111(d) may be key to the future of your energy efficiency business, ask what you and your organization can do to support its implementation.

Kimberly showed us how Puget Sound Energy has become

their customers' energy provider of choice. 25% of PSE's service territory is under competition from "municipalization". PSE was the highest priced utility, but now it's the 4th in its territory.

How will PSE compete against distributed generation? By getting reliability right. Customers don't want their power to go out. But PSE must determine how to spend money to increase reliability of the grid—by using low-tech tree trimming or hi-tech smart grid implementation.

What keeps Kimberly up at night? Over 27% of PSE's workforce is over 60 years old and will be eligible to retire in the next five years. "This is a huge risk to our industry. It's so important that we have skilled and passionate young people coming into the industry."

If this keeps you up at night too, read Gene Rodrigues' introductory pitch above in support of the Linda Latham scholars.

# INFORMAL SESSIONS

2-4 pm

**Europe Energy Efficiency Targets for 2020 and 2030: the Role of National Energy Efficiency Action Plans**

Paolo Bertoldi, European Commission  
**Room:** Chapel

**Driving Demand for Residential Scores at the Federal, State, and Local Level**

Joan Glickman, U.S. DOE  
**Room:** Fred Farr Forum

**How Can Regional Energy Programs or Networks Play a Role in Scaling Up EE**

Christine Vance, The Energy Coalition  
**Room:** Heather

**Off-the-Shelf Integrated Solutions That Perform as Expected – What Will It Take?**

Cindy Regnier, LBNL  
**Room:** Kiln

**Exploring the Value of an Evaluator Certification**

Michael Li, U.S. DOE  
**Room:** Nautilus

**Can't Live With Them; Can't Live Without Them: Working with National Accounts**

Diane Levin, Ecova  
**Room:** Scripps

**What do Analytics, EM&V and Beer Have in Common? Smart Program Design. And You**

Leo Carrillo, PG&E  
**Room:** Evergreen

**Why is the CPUC So Fussy about Getting the Savings Right?**

Dina Mackin, CPUC  
**Room:** Triton

**Transformative Energy Planning: Scenarios and Incremental Screening**

David Hill, VEIC  
**Room:** Oak Shelter

**What Do We Want? Multifamily Labeling! When Do We Want It? Now!**

Shelley Beaulieu, TRC  
**Room:** Acacia

**Energy Efficiency Financing: How Do We Know It Works?**

Chris Kramer, Energy Futures Group  
**Room:** Toyon

**Equity in Energy Efficiency**

Sean Murphy, National Grid  
**Room:** Marlin

**Building a Market for Super-Efficient Clothes Dryers**

Rebecca Foster, VEIC  
**Room:** Dolphin

**Accelerate Energy Saving Opportunities in Building Pumping Systems through Targeted Prescriptive Incentives**

Brent Ross, Armstrong Fluid Tech.  
**Room:** Sanderling

**Improving Outcomes from Appliance Awards Programs**

Nicole Kearney, CLASP  
**Room:** Afterglow Living Room

**Commercial Energy End Use: Analysis of National Prototype Commercial Buildings after Implementation of ASHRAE Standard 90.1-2013 Plus Brainstorming for the Next Code Cycle**

Reid Hart, PNNL  
**Room:** Embers Living Room

**Redesigning the Chinese Menu: How to Design the Most Strategic Portfolio of Efficiency Offerings**

Matt Tidwell, BPA  
**Room:** Hearth Living Room

**Choice Modeling for Program Evaluations**

Pat McGuckin, Cadmus  
**Room:** Long View South

## Twitter Alert!

Join the Summer Study conversation on Twitter using hashtag #ACEEE\_SSB



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*Register now for the ET Summit.*

*For more information, visit*

*[www.etsummit.com](http://www.etsummit.com)*

*or talk to a member of the ETCC here at the Summer Study!*

## Tuesday Plenary & Champion of Energy Efficiency Awards Presentation



### “Designing Our Urban Future” — Philip Enquist

This evening's plenary speaker is Skidmore, Owings, & Merrill's firmwide leader for Urban Design & Planning. His work across the globe is focused on smart growth strategies for regions and the rebuilding of inner cities—revitalizing their commercial centers and neighborhoods; strengthening their infrastructure of streets, transit and parks; improving social infrastructure and educational environments; and preserving the natural environment.

### *Home Energy Magazine Turns 30!*

*On the occasion of our 30th anniversary in print, Home Energy will have a birthday cake-cutting celebration!*

*Please join us to raise a glass with friends from 3:45-4:15 Tues. 8/19 under the balcony at Merrill Hall.*

*This time overlaps with the end of the informal session and beginning of the poster/display session.*

# PANEL 12: DISPLAYS & POSTERS – MERRILL HALL

## 4:00 pm – 6:00 pm Tuesday, August 19

**Panel 4 Paper** – *Combining Deemed and Measured: The Modified Lighting Approach Blends Deemed and Measured Methodologies to Create an Alternative Model for Determining Energy Savings*  
**Josiah Adams, Ecology Action**

*At-Scale Prediction of Building R-Value and Mass Density from Potentially Aerial Thermal Images*  
**Salahaldin Alshatshati, The University of Dayton**

**Panel 9 Paper** – *Program Strategies for Tackling Miscellaneous Energy Loads*  
**Jennifer Amann, American Council for an Energy-Efficient Economy**

*The DOE Building America Solution Center: Research to Go for Builders and Contractors*  
**Michael Baechler, Battelle/Pacific Northwest National Laboratory**

*The EZ Retrofit Tool – Assessing Energy and Water Efficiency Opportunities in Multi-Family Properties*  
**Alireza Bozorgi, ICF International**

**Panel 4 Paper** – *Selecting Energy Efficiency Measures Beyond 2012 IECC for Utility Programs, Stretch Codes and Base Codes*  
**Jim Edelson, New Buildings Institute**

**Panel 3 Paper** – *Greening ACEEE: Extending Energy Savings and Sustainability in an Office Setting*  
**Julie Edwards, American Council for an Energy-Efficient Economy**

*Interactive Exploration of Lighting Usage Variation in Residential Dwellings*  
**William Gifford, DNV GL**

*Demonstration of EDAPT & PAT: Tools for Utility Design Assistance Programs*  
**Jennifer Elling, Xcel Energy**

*From Data to Customer Insight: Customer Intelligence Tools for Integrated Demand-Side Management*  
**John Joseph, Pacific Gas & Electric Company**

**Panel 2 Paper** – *From Platinum to Three Stars: Comparative Analysis of U.S. and China Green Building Rating Programs*  
**Nina Zheng Khanna, Lawrence Berkeley National Laboratory**

**Panel 9 Paper** – *Using Public Participation to Improve MELs Energy Data Collection*  
**Margarita Kloss, Lawrence Berkeley National Laboratory**  
(Iris Hoi Cheung presenting)

*Whole House Retrofit and Home Performance Services: The State of the Commercial Market and Implications for Program Design*  
**Mitchell Rosenberg, DNV GL**

*Reaching the YouTube Audience with Energy Efficiency Fundamentals*  
**Eric O'Neill, Michaels Energy**

*Weatherization Experiences Project - A Social Network Analysis*  
**Erin Rose, Oak Ridge National Laboratory**

*Taking Charge of Wireless Power Efficiency*  
**Pierre Delforge, Natural Resources Defense Council**

*Tipping Points for Carbon Dioxide and Air Pollution Benefits: An Energy Systems Analysis of Natural Gas versus Electric Technologies in the U.S. Buildings Sector*  
**Carol Shay Lenox, U.S. Environmental Protection Agency**

*LEDs: The State of the Commercial Market and Implications for Program Design*  
**Kristina Kelly, DNV GL**

*DOE's LED Lighting Facts: Promoting Accuracy and Consistency in an Emerging Market*  
**Marci Sanders, D&R International**

*Mapping Customer Data for Greater Insights: The Role of Geospatial Analysis in Energy Efficiency Program Planning and Evaluation*  
**Luisa Freeman, DNV GL (Gomathi Sadhasivan presenting)**

**Panel 4 Paper** – *Evaluating Energy Savings of New Chinese Code*  
**Wei Feng, Lawrence Berkeley National Laboratory**

**Panel 4 Paper** – *Quantifying the Financial Value of Insurance for Energy Savings Projects*  
**Rick Jones, Hartford Steam Boiler Inspection & Insurance**  
(David Tine presenting)

**Panel 9 Paper** – *Efficient Induction Cooking Technology Design and Assessment*  
**Micah Sweeney, EPRI (Brian Fortenbery presenting)**

**Panel 4 Paper** – *Gold Mining in Your Back Yard: Discovering, Exploiting and Measuring Unsuspected O&M Savings Opportunities with Diagnostic Benchmarking: Field Trial Results*  
**Les Lambert, Lambert Engineering**

*Strategies for Controlling a 1-MW High Performance Computer to Reduce Campus-Wide Peak Demand*  
**Shanti Pless, National Renewable Energy Laboratory**

### Boxed Lunches

Anyone who wants to order boxed lunches for Thursday or Friday must place their order with ACEEE in **Surf and Sand** by 5pm Tuesday. Please include your name and any special dietary requests with your order. Pick up will be in **Surf and Sand** after Breakfast on Thursday and Friday.

The grapevine

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Tom White, Managing Editor

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Steve Greenberg, Leslie Jackson, & Chris Stratton, Reporters

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