



Monday, August 22, 2016

ACEEE Summer Study at Asilomar, California

Energy Efficiency May Be Invisible, But It's Yuuuge! Now Let's Make It Bigger



Maggie Molina, ACEEE program director, Utilities, State, and Local Policy Program

Energy efficiency is now our nation's third-largest electricity resource, responsible for avoiding the emissions equivalent of more than 300 power plants since 1990, as my colleagues and I reveal in a new paper released this month. This remarkable achievement is possible thanks to this community's decades of hard work and dedication on energy efficiency policies, programs, technologies, and practices. And we estimate that by 2030 efficiency can become our largest electricity resource, delivering a wealth of benefits to our nation: lowering energy bills, cutting emissions associated with climate change, reducing energy burdens for those most in need, and improving community resilience. But this future will not happen on its own. We need continued action and excellence in energy efficiency policies and programs.

Utility investment is a bedrock of our nation's progress on efficiency. In 2015, electric and gas utilities invested more than \$7.5 billion in customer-funded energy efficiency programs, four times as much as a decade ago. Today we stand at a crossroads as the utility industry is rapidly evolving. For efficiency to live up to our needs in this changing landscape, utilities must prioritize energy efficiency as a resource that lowers costs and reduces emissions. They will need to develop customer rate design that is aligned with principles of efficiency, and fully integrate energy efficiency in all types of resource planning. Our utilities team at ACEEE, managed by Brendon Baatz, is working on these issues and will soon kick off a new project—a utility

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Building Resilient Communities



Cole Roberts, Associate Principal, ARUP

Conference Co-Chair Nan Zhou set the theme for this year's Summer Study, encouraging attendees to think systematically in a disconnected society. "Connect technology with design," she stated, reminding us that well-designed buildings will help us move from components to systems, from buildings to community.

This emphasis on community was highlighted in the synergies described by Cole Roberts, Sunday's plenary speaker. Roberts, Associate Principal with Arup's Energy and Resource Sustainability division in San Francisco, California, developed the conference theme with his presentation *Two Degrees/ A Crisis of Efficiency/ From ZNE Buildings to Climate Positive Communities*.

Roberts' presentation fluctuated between the time frame for actions on a community- or city-wide scale, and the need for effective action now. Quoting from Jared Diamond's book *Collapse* (specifically Chapter 14), he points out that we must understand how to recognize our problems, choose to act to remedy or avoid the problems, and then follow (hopefully) with effective action—which is hard to discern without continually questioning our actions.

Roberts brought our attention to a few of these immediate problems. "We don't have a power problem, we have a water

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Monday Night's Plenary Speaker— Bill Ritter

“Powering Forward: What Every American Should Know About America’s Clean Energy Revolution”



**Bill Ritter, Governor,
Center for the New Energy
Economy, Colorado
State University**

Governor Bill Ritter was elected Colorado’s 41st governor in 2006. During his four-year term, Ritter established

Colorado as a national and international leader in clean energy by building a New Energy Economy. After leaving the Governor’s Office, Ritter founded the Center for the New Energy Economy at Colorado State University, which works with state and federal policy makers to create clean energy policy throughout the country. Governor Ritter has authored a book that was recently published entitled, *Powering Forward – What Everyone should know about America’s Energy Revolution*.



Summer Study Evaluation Form

Before you leave, remember to complete an evaluation form for a chance to win an iPad Mini! The form can be found in your Summer Study packet, using the mobile app, or through Survey Monkey using this web address: www.surveymonkey.com/r/SummerStudy16.

Return the hard copy form to the office in Surf & Sand.

Your thoughts and suggestions are extremely important to us and will help in the planning of future Summer Studies.

ANNOUNCEMENTS

Got Something to Report?

If you have any announcements, updates, or information related to events here at ACEEE, drop them off at the **Surf and Sand** room to the attention of *The Grapevine* Staff in “Report Basket” or email them by 3:30 pm to twhite@homeenergy.org. *The Grapevine* will also appear on the ACEEE Blog at www.ACEEE.org/blog.



Are you part of the hot water industry? Are you into being a key part of the premier U.S. hot water technical conference? Then join ACEEE’s Hot Water Forum Steering Committee! Help us develop a great program for the 2017 conference held in Portland, Oregon. Be sure to stop by Getting into Hot Water: New Results and Emerging Opportunities informal session on Monday afternoon from 2-4pm, and let Chris Perry know if you’re interested in joining the Steering Committee at cperry@aceee.org.

Tuesday Night’s Plenary Speaker— Hunt Allcott

“The Economics of Energy Efficiency”

Hunt Allcott is an Assistant Professor of Economics at New York University and a Faculty Research Fellow at the National Bureau of Economic Research. He is a Scientific Director of ideas42, a think tank that applies insights from psychology and economics to business and policy design problems, an Affiliate of Poverty Action Lab, a network of researchers who use randomized evaluations to answer critical policy questions in the fight against poverty, and a Faculty Affiliate of E2e, a group of economists, engineers, and behavioral scientists focused on evaluating and improving energy efficiency policy. He is also a Contributing Author of the Intergovernmental Panel on Climate Change Fifth Assessment Report. According to a recent article in the American Economic Journal, Professor



INFORMAL SESSIONS

2-4 pm

Thinking Beyond Nudges: The Link Between Personal Values, Lifestyle Choices, and Sustainable Practices

Ingo Bensch, Evergreen Economics

ROOM: Marlin

EIA Building Data (RECS & CBECS) and Forecast Analysis (AEO) Update

Joelle Michaels, United States Energy Information Administration

ROOM: Heather

Intelligent Efficiency Protocols Project

Ethan Rogers, American Council for an Energy-Efficient Economy

ROOM: Scripps

Multifamily Programs: News, Networking, and Going Bigger

Dan York, American Council for an Energy-Efficient Economy

ROOM: Evergreen

Getting Into Hot Water: New Results and Emerging Opportunities

Gary Klein, Gary Klein and Associates

ROOM: Oak Shelter

Getting There from Here: A Roadmap for the “Emerging” Uses for Connected Thermostats

Rebecca Foster, Vermont Energy Investment Corporation

ROOM: Dolphin

Using AMI Data Analysis To Improve Program Outcomes

Daniel Fredman, University of Vermont and Lawrence Berkeley National Laboratory

ROOM: Toyan

Latest Developments in European Energy and Climate Policies: The Role of Energy Efficiency

Paolo Bertoldi, European Commission

ROOM: Sanderling

Perspectives on Doubling Energy Efficiency in California

Sylvia Bender, CEC; Jan Berman, PG&E; Pete Skalal, CPUC

ROOM: Chapel

Energy Efficiency for All Project

Stephen Morgan, Clean Energy Solutions

ROOM: Embers Living Room

Energy Efficiency Program Evaluator

Certification: A Proposal

Michael Li, US Department of Energy

ROOM: Kiln

SEED Platform and the Benchmarking/ Open Data Movement

Harry Bergmann, US Department of Energy

ROOM: Nautilus

Climate-based IRP: How Do Buildings Need to Change for a 2 degree C Solution?

Harvey Michaels, Massachusetts Institute of Technology; Doug Mahone, Santa Cruz, California

ROOM: Fred Farr Forum

4-6 pm

The Future of Evaluation, Measurement, and Verification

Jeff Perkins, ERS

ROOM: Fred Farr Forum

US Department of Energy: Meet & Greet

Andrew Barr, US Department of Energy

ROOM: Chapel

Energy Efficiency’s Possible Play in the New Administration: How Do We Get There from Here?

Steve Cowell, E4TheFuture

ROOM: Heather

NEER Isn’t So Far: How a National Efficiency Registry Can Help States Track Benefits of Energy Efficiency

Peggy Kellen, The Climate Registry

ROOM: Kiln

Small Scale Commercial Retrofits

Cathy Higgins, New Building Institute

ROOM: Triton

COMNET Energy Modeling Guidelines for Standard 90.1-2016 (Addendum BM)

Charles Eley and Alexi Miller, New Buildings Institute

ROOM: Scripps

Diversity in the Energy Efficiency Community

Naomi Baum, American Council for an Energy-Efficient Economy

ROOM: Evergreen

Strategic Energy Management Open Space

Kathleen Belkhatay, Energy Trust of Oregon

ROOM: Oak Shelter

A Three-Prong Approach to Plug Load Management

Janice Boman, Embertec

ROOM: Acacia

The Energy-Water Nexus: Exploring the Stream of Opportunities

David Ribeiro, American Council for an Energy-Efficient Economy

ROOM: Toyan

Pre-pay Electricity, Energy Efficiency, and Equity

Annie Gilleo, American Council for an Energy-Efficient Economy

ROOM: Dolphin

Role of Energy Efficiency in Achieving Paris Agreement Goals: Informal Discussion on Energy Efficiency in Countries’ Commitment

Ali Hasanbeigi, Lawrence Berkeley National Laboratory

ROOM: Nautilus

Addressing Barriers to Increased Heat Pump Water Heater Market Penetration

Ed Vineyard, Oak Ridge National Laboratory

ROOM: Marlin

Windows of Opportunity: A New View of Improving Window Efficiency

David Bailey, Larson Manufacturing

ROOM: Sanderling

Advancing DC Power in the Home

Steve Pantano, CLASP; Peter May-Ostendorp, Xergy Consulting

ROOM: Afterglow Living Room

Daylighting Programs, Policy and Code: What’s Next?

Lisa Heschong, UCSC; Kevin Van den Wymelenberg, University of Ohio

ROOM: Embers Living Room

Let's Make it Bigger, continued

scorecard—to track utility progress on energy efficiency and to examine emerging opportunities (stay tuned in 2017!).

Our state policy team, managed by Annie Gilleo, will release our 10th annual State Energy Efficiency Scorecard next month. We find that state-level leadership on energy efficiency has remained strong. Despite some pushback in a couple of Midwestern states, energy efficiency resource standards continue to have an excellent track record and are still making inroads in some new states. And as the Clean Power Plan sets a vision of where our electric power sector needs to go, states are wise to prioritize energy efficiency as a low-cost, zero-emission strategy.

Local governments are also ramping up their efforts on energy efficiency for their climate and community goals. Our local policy team, managed by Lauren Ross, is kicking off our third edition of the City Energy Efficiency Scorecard ranking the 50 largest cities, accompanied by a self-scoring tool for all governments (to be released in 2017). The team also continues to document ways that efficiency can help reduce household energy burdens and work with utilities to improve and expand multifamily and low-income energy efficiency programs. Finally, we are also leveraging opportunities for water and energy efficiency to work together.

Energy efficiency's track record to date has been outstanding, but more work needs to be done to realize its potential to be our largest and most beneficial energy resource. We look forward to working with you all to help make that happen.

P.S. Please congratulate Marty Kushler, utilities fellow and on ACEEE's staff since 1998, for having attended 18 consecutive Buildings Summer Studies since his first in 1982 (the first Summer Study was held in 1980)!

Resilient Communities, continued

problem in California," he stated. And, "For most people energy efficiency doesn't matter—energy is not a lot of the total cost of housing." If energy costs are trending down, then Roberts proposed we make more effort on code enforcement. "One way to do this is digitize the compliance process so everyone can see it. Another is to use outcome-based codes, as in San Francisco."

In the near term, which he defined as 02100 (a nod to Stewart Brand's 10,000-year clock), resilience is where the energy is. In communities subject to flooding, or influx of displaced people (26 million per year since 2008) large amounts of energy are used to support destabilized communities. But how will architects successfully design buildings that can withstand severe weather events if today's building codes don't use predictable future weather data? Arup is working to address future climate integration under different emission scenarios with its Weather Shift project.

Looking into the next timeframe after 02300, Cole looks for systemic design that emphasizes synergy at scale, "synergy trumps integration... Consider rather what are the optimum scales where the synergy can play out. At what scale do different systems optimize and become most effective, as we move from existing building to existing city retrofits?"

To move towards this synergy, we need to "reset the default status quo, the real bogeyman." One hopeful sign of this changing default are communities of care (known as creation care), that are developing a sense of long-term stewardship of the planet. In developing these networks of trust, these communities will contribute to our resilience and ultimately our happiness.



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the grapevine

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THE GRAPEVINE DAILY NEWSLETTER

The Grapevine is published daily to highlight upcoming presentations and events, review events of the previous day, and list important announcements. It will be distributed each morning at breakfast in the **Crocker Dining Hall**, and in the **Surf and Sand** room. We welcome suggestions for the next day's newsletter.