



Monday, August 18, 2008

ACEEE Summer Study at Asilomar, California

There's No Business Like... Energy Efficiency



Jennifer Amann,
Director, ACEEE Building
Program

by Jennifer Amann

For much of the past quarter century, it seemed efficiency was the Rodney Dangerfield of energy resources—it got no respect. Fossil fuels, and to a lesser extent nuclear power, were the go-to resources, the only sources with the availability and price-point to meet our growing energy needs. Sure, renewables garnered a lot of attention, but more as a near-term niche source and a long-term, clean energy fantasy.

What a difference record high energy prices, national security concerns, and the looming challenge of global warming make. The spotlight has turned to energy efficiency, and now it's time for us to show what we can do. Fortunately, the energy efficiency community has been toiling away, directing our considerable passion and expertise to finding the technologies and practices, programs and policies to make the most of every Btu, however it is generated. We're ready to see our name in lights.

And, as it turns out, we have many of the answers. So why haven't we solved the problem? It's all about scale. Making the most of the new opportunities at this critical time will require an unprecedented scaling up of technical solutions, skills and knowledge transfer, and outreach to engage the end-user. We've made lots of progress; it's time to crank it up.

We know how to reduce energy use in existing homes by 50% or more through extensive, deep retrofits. Scaling up aggressively with the economies of scale that reduce transaction costs, we could achieve a 30% to 50% improvement in much of the U.S. housing stock in a decade. To do this, we must move the skills and knowledge out to a broad and diverse set of businesses and consumers, and then get out of the way.

At ACEEE, we're looking to new program approaches to scale up energy savings in the residential sector. For product categories like lighting and some appliances, where there are

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Sunday Plenary We Have the Tools to Win

Summer Study Co-Chair Rich Brown began the opening plenary session by telling us who we are (about one-third consultants), where we are from, and that there are more of us than ever here (over 900). Our other Co-Chair, Michael Baechler, let us know that what we do is very valuable and needed and subject to the interests of headhunters. Steve Nadel welcomed us to the 14th or the 15th Summer Study (which is it Steve?), and introduced the plenary speaker, Hal Harvey, CEO and President of the ClimateWorks Foundation, who introduced us all to his Design to Win challenge, and the power of 2°C. How can we keep global temperature change at less than 2°C to avert crop failures, floods, and other worldwide catastrophes? In brief, we need to bet on a 50/50 chance of meeting that goal by reducing carbon dioxide output by 30 Gt by 2030. That's all!



Hal Harvey,
ClimateWorks
Foundation

Part of the problem, according to Harvey, is that "Coal is as cheap as dirt." So we have to find means other than market forces to stop new coal-fired power plants from being built. We have to capture carbon and sequester it in the earth. Renewable energy portfolios work well already and we need to do more of it. We need to focus in six areas:

the power sector (no more conventional coal); industry (energy efficiency standards and emissions targets for sectors such as steel and cement); buildings (toughen codes and transform utilities); transportation (fuel efficiency); forestry (stop cutting down forests); and agriculture.

The challenge before us is to design whole building systems that work. Harvey used the example of a home that is well insulated. That home needs a smaller than normal air conditioner, or even no air conditioner. Getting policy right is the second challenge that Harvey presented. Among other ways of doing it right, he is a strong advocate for going for 100% market penetration with more energy efficient technology. If we stay on the margins, we will never reach the ambitious targets we need

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Banking on Behavior: New Initiatives at ACEEE



Karen Ehrhardt-Martinez, ACEEE Research Associate

by Karen Ehrhardt-Martinez

According to a recent Gallup poll, nearly 30% of Americans reported that energy prices were the most important financial problem facing their families today. In fact, energy costs were ranked above all other categories of financial problems including inflation, the cost of owning a home, and health care costs. High gasoline prices even have Americans rethinking their driving habits.

For nearly four months, American drivers have reduced their driving by 3%–4%.

But are these new concerns likely to translate into long-term behavioral changes and more energy-efficient behavior? Research suggests that it will take more than high prices to achieve maximum energy savings. People may like to think of themselves as rational economic actors, but a variety of studies by social psychologists and behavioral economists reveal that people often act in ways that may be better described as “socially rational” and “predictably irrational.”

I have recently authored two papers on the topic of social rationality arguing that current energy policy and policy models need to broaden their understanding of human behavior to adequately capture behavior-based efficiency savings.¹ In other

words, there are a lot of non-economic reasons that people reduce or increase their energy use. Policies and programs that wisely make use of social science insights will be notably more effective than those that rely on economic measures alone.

As part of a related research effort, ACEEE is also working to map the potential energy savings that are achievable via behavioral change. In addition, ACEEE is leading an effort for the California Public Utilities Commission aimed at identifying effective means of motivating policymakers and others to pursue behavior change strategies, as well as the means for encouraging greater innovation in the production of technologies and services.

Finally, ACEEE is working with the California Institute for Energy and Environment and the Precourt Institute for Energy Efficiency to organize the second annual Behavior, Energy and Climate Change Conference, which will be held in Sacramento, California, November 16–19, 2008. (More information is available at www.BECCconference.org.)

¹Ehrhardt-Martinez, Karen. 2008. “Energy Efficiency and Socially Rational Behaviors: The Role for Social Sciences in Bridging the Energy-Efficiency Gap and Accelerating Efficiency Gains.” *Dialogue*. (August) U.S. Association for Energy Economics.

Ehrhardt-Martinez, Karen; Laitner, John A. “Skip” and Wendy Reed. 2008. “Dollars or Sense: Economic versus Social Rationality in Residential Energy Consumption.” *Proceedings of the ACEEE Summer Study on Energy Efficiency in Buildings*.

Energy Efficiency, continued

large differences between business-as-usual and state-of-the-art, new approaches to raise awareness of the best-of-the-best will complement traditional offerings for widely-available premium products. For other products, such as HVAC, we need to help consumers and programs value systems, not just equipment, because that’s where we’ll find real savings. We must also turn our attention to consumption. How can we help consumers choose high-efficiency equipment that’s the right size, instead of opting for the biggest with the most bells and whistles?

Consumers, particularly those in the residential and small commercial sector, need better information not only to guide their purchasing decisions, but also their day-to-day energy use patterns. Scaling up the use of feedback mechanisms and other signals can help consumers make better choices. A growing number of social scientists are turning their attention to the challenge of energy consumption. Their insights are bringing a renewed vigor to the pursuit of behavioral opportunities to improve energy efficiency and cut overall energy consumption.

ACEEE is eager to continue working with, and learning from, each of you to find ways to move energy efficiency solutions into the mainstream. Let’s get on with the show!

Sunday Plenary, continued

to reach to save the planet. The third challenge is getting the implementation of policy right, in part by building powerful institutions that send into the field thousands of building inspectors.

Harvey reassured us that we can reach 80% of the goal of keeping climate change below 2°C through the end of the century with existing technology. The other 20% will come with innovation and learning from experience before 2030. We have the tools we need. With a systems approach and getting policy and implementation right, we will win.

WINNING NAME

In 1913, the YWCA® held a contest to name their new property on the Monterey Peninsula. The winning name came from a Stanford University student, Helen Salisbury, who made up the word Asilomar, derived from the Spanish words “asilo” meaning retreat or refuge, and “mar,” meaning sea, hence “refuge-by-the-sea.”

All About ACEEE Ally Program: Opportunities for Energy Efficiency Leaders



Ann Suydam, ACEEE Development Director

by Ann Suydam

Our Ally Program, created by the ACEEE Board of Directors last year, brings together visionary energy leaders who want to help us in our efforts to shape our nation's energy efficiency research and policy agenda. Ally participants gain enhanced access to energy experts, both inside and outside of ACEEE, and receive information about

the latest trends and newest developments in the energy efficiency community.

Now in its second year, the Ally Program has over 40 participants. Many have participated in special policy breakfasts that we organize in Washington, D.C. with leading Congressional staff members and other policymakers who share up-to-date

developments on specific policy issues. Ally Webinars have provided members with critical policy updates in key states and regions across the country. The program also offers participants access to the newest ACEEE research on a periodic basis. Additionally, the Ally program sponsors special networking opportunities for diverse stakeholders to forge new relationships. Finally, our new Summer Study Student Scholarship Program has been initiated by two of our Ally Program members and will be sustained by support from Ally members in the future.

If you are interested in helping ACEEE to define the vision and the roadmap for a sustainable energy future, we invite you to consider membership in the Ally Program. You will support a common cause that will help further your own mission as well—a prosperous economy, an environment in balance, and a restored sense of national and international security. For more information, please contact me at 202-507-4012 or asuydam@aceee.org.

Tonight's Plenary

Steve Nadel, Executive Director of ACEEE, will moderate a discussion with plenary speakers Kevin Dowling, Ph.D., Vice President for Innovation for Philips Solid State Lighting Solutions and Dan Sosland, Executive Director of Environment Northeast on "Going to the Next Level to Address Climate Change: Business and Policy Perspectives."

After the discussion, ACEEE will make one of two 2008 Champion of Energy Efficiency Award presentations. The second will be at tomorrow's plenary. Come be part of the discussion about ways to address climate change and applaud our 2008 Champions of Energy Efficiency, beginning at 7:30 pm in Merrill Hall.

CALIFORNIA ARTS & CRAFTS

Julia Morgan was true to the California Arts & Crafts style when she designed Asilomar. The Arts & Crafts movement had its roots in late 19th century Britain, where its leading theorists had trained as architects and now wanted to reform design and bring back the quality craftsmanship of the work itself. In America, the Arts & Crafts movement was readily embraced, and buildings—commercial and residential—were being constructed of local materials and designed to blend in with the landscape. These structures, and their furnishings, were simple and elegant, and left unpainted to reveal the natural beauty of the wood.

— from *visitAsilomar.com*

MYTH BUSTERS

The average person today is inundated with messages about saving energy. Unfortunately too many messages perpetuate long-standing myths, making it difficult to sort out good advice from bad. ACEEE has compiled a list of myth-busters to help separate energy savings fact from energy wasting fiction.

MYTHBUSTING FACT #1

Turning off lights, even for short periods of time, really saves energy, with little impact on the lifespan of the bulb. Turn off the lights even when you're leaving a room for just a few minutes.

MYTHBUSTING FACT #2

Today's compact fluorescent lightbulbs work just as well as incandescents, and are just as safe. CFLs have come a long way in terms of quality and variety, and use a fraction of the energy of incandescent bulbs. Look for the ENERGY STAR label to ensure high quality bulbs, and try out different color varieties to find the one you like best ("soft white" most closely mimics the color of an incandescent). As for safety, even if a bulb breaks in your house authorities suggest that there is not enough mercury in the bulb to present a substantial health hazard. That being said, efforts should be taken to dispose of CFLs properly.

INFORMAL SESSIONS

2 pm - 4 pm

TOWN HALL MEETING

Energy Efficiency Work at DOE

–Alexander “Andy” Karsner, Assistant Secretary, Office of Energy Efficiency and Renewable Energy, U.S. DOE (**Chapel**)

LEED Volume/Portfolio Reviews—What Does Good QC Look Like

–Mike Opitz (**Nautilus**)

Envisioning Energy Efficiency

–Harvey Sachs, ACEEE (**Heather**)

Latest Developments on White Tags Around the World (including developing an harmonized saving evaluation method)
–Paolo Bertoldi, European Commission (**Kiln**)

Is an Operation and Maintenance Rating System Needed?

–Michael Lubliner, Washington State University Energy Program (**Scrapps**)

Solar Water Heating Programs and New Showerhead Performance Standards

–Robert Mowris & Ean Jones, Verified Inc; Andrew McAllister, California Center for Sustainable Energy; Owen Howlett, HMG (**Triton**)

4 pm - 6 pm

Moving beyond 1% Annual Savings: What Leading Utilities and States are Doing to Maximize the Energy Savings from Ratepayer-Funded Efficiency Programs

–Howard Geller, Southwest Energy Efficiency Project; Marty Kushler, ACEEE (**Fred Farr Forum**)

Effective Integration of Energy Efficiency, Everyday Load Management, and Demand Response

–Charlie Middleton, PG&E; Roger Levy, Demand Response Research Ctr. (**Heather**)

4E: International Cooperation and Coordination on Efficient Electrical End-Use Equipment

–Hans-Paul Siderius, SenterNovem (**Dolphin**)

International Best Practices in Building Energy Codes: A New Community of Practice?

–Adam Hinge, Sustainable Energy Partnership; Cliff Majersik, Institute for Market Transformation (**Kiln**)

1,000 Home Challenge: Demonstrating Deep Reductions (70%-90%) in Existing U.S. and Canadian Homes

–Linda Wigington, Affordable Comfort, Inc. (**Scrapps**)

Think Small—Scalable Efficiency Programs to Serve Utilities’ Less than 100kW Customers

–Tim Kensok, AirAdvice (**Evergreen**)

Expanded Test Protocols for Low Ambient Testing of Unitary AC Systems
–Keith Temple, Field Diagnostic Services, Inc. (**Triton**)

Technology Needs for Zero Energy Buildings

–Ren Anderson, NREL (**Oak Shelter**)

SSL Quality Pledge: An LED Quality Performance Reporting Initiative

–Marci Sanders, D&R International (**Toyon**)

California’s Long-Term Energy Efficiency Strategic Plan

–Cathy Fogel and Jeanne Clinton, California Public Utilities Commission
Opening Remarks by Commissioner Dian Grueneich (**Nautilus**)

What’s with NTG in California?

–Pierre Landry, SoCal Edison (**Curlew**)

BOX LUNCHES

Planning a lunch outing? If you’d like to order a box lunch for Wednesday, Thursday and/or Friday, sign up at least 48 hours in advance in the ACEEE Surf and Sand Office.



is published by **Home Energy Magazine**

www.homeenergy.org

Jim Gunshinan, Managing Editor

Steve Greenberg and Tom White, Reporters

Kate Henke, Production

Got Something to Report?

If you have any announcements, updates, or important information related to events here at ACEEE, drop them off at the Grapevine Office (Room 509 in the Pirates’ Den) or email them by 3:30 pm to jgunshinan@homeenergy.org.