



# THE GRAPEVINE

ACEEE Summer Study at Asilomar, California

Monday, August 14, 2006

## Utility Sector Energy Efficiency? ...Gotta Wear Shades

by Marty Kushler



**Marty Kushler**  
Utilities Program Director,  
ACEEE

Looking back on my 27 years in the field, it's difficult to recall a more vibrant and exciting time for utility-sector energy efficiency. This may just be a matter of failing memory, but the mountain of e-mails, phone calls, and other inquiries I've been receiving suggests otherwise.

One hesitates to use the over-worn metaphor of the "perfect storm," but it's hard to overlook

the convergence of (1) record-high energy prices; (2) growing utility system reliability concerns; (3) enormous national security costs related to energy dependence; and (4) ever-more-alarming news about global warming. Although federal energy policy emanating from the powers that be in Washington, D.C., does not reflect it yet, we are entering a new golden age for energy efficiency.

As they have been for the last two decades, the states are way out front on this issue. Just to list a few examples, we have California's historic commitment to energy efficiency as the first-priority utility resource; New England state and regional commitments to greenhouse gas reduction; major advancements in utility-sector energy efficiency in the Southwest; a reawakening of state activity in the Southeast; and the emergence of important new policy tools, such as Energy Efficiency Resource Standards (EERS), in a number of

states. More and more governors, utility commissioners, and legislators are waking up to the fact that with national energy markets out of control, their best course is to invest in homegrown energy efficiency and renewable energy.

With this new and exciting state activity, there is a growing interest in tracking accomplishments and making comparisons across states. We at ACEEE have historically tried to do this to some extent, through our Web site summary tables (see [www.aceee.org/briefs/mktabl.htm](http://www.aceee.org/briefs/mktabl.htm)) and periodic "Scorecard" reports. But we have noticed, and others have commented, that it would be nice to have some better metrics available to gauge energy efficiency accomplishments. For example, many states report results in average cost per kWh of savings, but the assumptions and inputs into that calculation often vary. Might it be possible for states to adopt a uniform standard for making and reporting such metrics? Or, if states can't adopt one standard, perhaps they could agree to some guidelines for clear disclosure of the assumptions and inputs they used in assessing their energy efficiency accomplishments.

Similarly, could we develop consistent metrics for reporting other dimensions of energy efficiency program impact, such as impacts on capacity and peak demand (\$/kW)? How about metrics for reporting environmental impacts and other non-energy benefits? If you are interested in a discussion of the issues surrounding the reporting of utility-sector energy efficiency impacts and accomplishments, and how to better facilitate interstate comparisons and national aggregate assessments, come to our informal session today at 4:00 pm, "Energy Efficiency Results Reporting Metrics"—see today's *Grapevine* for location.

To modify the old expression: As we learn to ride these exciting times, let's "kick ass and keep score."

# The Week Ahead



## Ron Judkoff

- **Director, Buildings & Thermal Systems Center, National Renewable Energy Laboratory**
- **Co-Chair, 2006 Summer Study**

the national and international interests. The 2006 Summer Study affords an important opportunity to step back and envision a very different energy future, one in which buildings become net energy producers, and automobiles provide electrical storage to stabilize the grid. Here's a chance to plug-in to the most innovative minds both inside and outside of our profession to identify the best of what works, and what might be next.

Topics addressed in the 2006 Summer Study include:

- \* Technologies, design, and performance of buildings;
- \* market transformation;

Welcome to the 14th Biennial ACEEE Summer Study on Energy Efficiency in Buildings, and hello to \$3/gallon gasoline, \$15/Mbtu natural gas, and \$0.10/kWh electricity (U.S. average). A diverse group of energy efficiency professionals from around the world has gathered to discuss the technological basis for, and practical implementation of, improving energy efficiency in buildings. Not since the 1970s has this topic been so vital to

- \* program design, implementation, and evaluation;
- \* human and social dimensions of energy use;
- \* regulation and deregulation of the utility industry;
- \* efficient communities; and
- \* energy and environmental policies.

The organizing committee of the 2006 Summer Study selected "Less is More: En Route to Zero Energy Buildings" as the conference theme. Certainly such buildings will marry extreme energy efficiency with renewable technology, but what exactly do we mean by Zero Energy Buildings?

Do we mean zero utility bills, zero source energy, zero site energy, zero emissions? What about zero energy communities? These intriguing questions and more will be part of the formal and informal dialogue over the next week. By inviting plenary speakers with new perspectives, by offering new panels, by arranging debates on important topics, and by encouraging papers that reflect fresh ideas, we hope that this Summer Study will engender a lively exchange of views, concepts, and visions for the future. Be challenged, be intellectually stimulated, be engaged, express yourself, and above all have a really enjoyable conference.

John Busch and I, the co-chairs, would like to thank the 28 Panel Leaders who evaluated over 800 abstracts, then selected and led 282 papers through a rigorous review process. We would also like to thank the many peer reviewers who worked with the panel leaders to develop papers. Most importantly, we would like to thank ACEEE staff, in particular Glee Murray and Rebecca Lunetta, for their tireless efforts to make this an extraordinary conference, and to produce the extremely valuable proceedings.

---

## Demand Action Now

Surabi Menon, staff scientist at Lawrence Berkeley National Laboratory, delivered a well-reasoned call-to-action speech that was conceived and written by James Hansen, director of the Goddard Institute for Space Sciences, who unfortunately could not be present in person. Hansen's basic message had three key points:

- we have reached a climate tipping point;
- adopting an alternative scenario rather than business as usual will work to avert dangerous climate change; and
- the time to embark on an alternative strategy is now, as greenhouse gases stay in the atmosphere for decades.

Hansen's proposed alternative scenario targeted emissions from coal-fired power plants. He recommended that CO<sub>2</sub> emissions from all new coal-fired plants should be sequestered starting in 2012 in both developing and developed countries. Any coal-fired plants without sequestration should be bulldozed over a 25-year period from 2025 to 2050, Hansen suggested—a suggestion that brought a rousing cheer from the

audience. Other alternative strategies included slowly building up a carbon tax, stretching the use of conventional oil fuels, and limiting the use of unconventional petroleum fuels.

Changing environmental policies is both necessary and feasible, Hansen argued; world governments have rallied once before for an environmental cause when they collaborated on reducing the release of CFCs into the atmosphere after their presence was linked to the destruction of the ozone layer. To avert dangerous climate change, scientists need to clearly convey the message about dangerous climate change and the public needs to get informed and get angry. Special interests have been all too successful at sowing confusion, he said. Strong leadership at the national level is needed now to get the U.S. to address its dangerous levels of carbon emissions. Hansen rounded off the evening by answering questions from the audience by telephone. In response to one such question, Hansen stated, "Nothing I am saying is as a government official. I'm just exercising my right to free speech." May we all go out and exercise that same free speech muscle.

# Tonight's Plenary Speakers

Dian M. Grueneich, from the California Public Utilities Commission, and Richard Sedano, director of the Regulatory Assistance Project, two professionals with many years of experience and wisdom gained as advocates for energy efficiency, reliability, and environmental responsibility, will talk on *Policy Innovations at the State level: Greenhouse Gas and Energy Efficiency Performance Targets* at tonight's plenary.

Many people in California have been pleasantly surprised by some of the environmental advocacy of Governor Arnold Schwarzenegger. For example, Schwarzenegger recently bypassed the federal government and made an agreement with the United Kingdom's Tony Blair on supporting voluntary measures to combat global warming. And as further proof of the Governor's good faith, he appointed one of tonight's plenary speakers, Dian M. Grueneich, to the California Public Utilities Commission in January 2005. The state senate unanimously confirmed Commissioner Grueneich in May 2005 for a six-year term.

Grueneich earned her Juris Doctorate from Georgetown University Law Center in 1977 and a Bachelor of Arts degree in Human Biology from Stanford University in 1974. She has served on the Board of ACEEE. Grueneich began her career at the California Energy Commission in 1977. In 1986, she founded her own law and consulting firm, Grueneich Resource Advocates (GRA), where she was the principal until her appointment to the Commission. The usual lawyer jokes do not apply.

Grueneich is the Presiding Commissioner for energy efficiency and oversees the 3-year \$2.7 billion energy efficiency program of the California investor-owned utilities (IOUs). She is active in Western energy issues and recently organized the first-ever workshop with the Oregon, Washington, and California commissions on climate change, advanced coal, and carbon sequestration.

Grueneich sponsored the Commission's 2005 greenhouse gas (GHG) performance standard policy and was the Commission lead on development of California's Energy Action Plan II. She is the Commission's representative on the Governor's Climate Action Team, a member of the National Energy Efficiency Leadership Group, and serves on the Leadership Council of the China-United States Energy Efficiency Alliance.

The motto of Vermont is simply "Freedom and Unity." When it comes to regulating utilities, balancing market freedom and the common good is not so simple. The Regulatory Assistance



**Dian M. Grueneich**  
California Public Utilities  
Commission



**Richard Sedano**  
Director, Regulatory Assistance  
Project

Project (RAP), with offices in Vermont and Maine, is a nonprofit organization, formed in 1992 by experienced utility regulators, that provides research, analysis, and educational assistance to public officials on electric utility regulation. RAP is committed to fostering regulatory and market policies for the electric industry that encourage economic efficiency, protect environmental quality, assure system reliability, and allocate system benefits fairly to all customers.

Prior to joining RAP in 2001, Richard Sedano served as Commissioner of the Vermont Department of Public Service (VDPS) for nine years, and in staff positions for seven more.

The VDPS represents utility consumers in all regulatory matters, and is the state's energy office and consumer advocate. Sedano served as chair of the National Association of State Energy Officials from 1998-2000. He is currently a member of the Board of Directors of Northeast Energy Efficiency Partnerships, the Green Mountain Institute for Environmental Education, and the Planning Commission for the City of Montpelier.

Sadano was a member of the Task Force on Reliability to the United States Secretary of Energy's Advisory Committee from 1997-1998, and a member of the Advisory Committee to the ISO-New England Board of Directors from 1999-2003.

Expect straight talk, astute analysis, and practical solutions from tonight's plenary speakers.

---

## Announcements

### Box lunches

Box lunches may be ordered 48 hours in advance from ACEEE staff in Surf and Sand. The last day you may order a box lunch is Wednesday by noon for Friday consumption.

### Data Center Demonstration on Wednesday

On Wednesday afternoon there will be a free bus to see Sun Microsystems' campus for a demonstration of energy-efficient direct-current distribution systems for data centers. Please sign up at Surf and Sand no later than 10:30 am on Tuesday.

# Informal Sessions

## 2:00 pm-4:00 pm

### **Emerging Technologies I: Research Cooperation**

*Two informal sessions at 2 pm-4 pm focus on the need for collaboration among market players to develop strategies for moving new products and technologies to market and a framework for when technologies are ready for market.*  
Location: Dolphin

### **Reducing EE Opportunity Identification Costs: Industrial Fans and Pumps**

Mark Case  
Location: Marlin

## 4:00 pm-6:00 pm

### **Energy Efficiency Results Reporting Metrics**

Dan York  
Location: Oak Shelter

### **Emerging Technologies II: Technology Evaluation**

Jim Parks  
Location: Heather

### **Asia-Pacific Partnership—Planning Collaborative Projects**

Rich Karney, Andrew Fanara, Jeff Harris  
Location: Scripps

### **Progress, Success, and Challenges in Promoting Energy Efficiency Standards and Labeling Globally**

CLASP (Wiel, Egan, and Della Cava)  
Location: Scripps

### **Energy Efficiency Certificates (White Certificates) and DSM Obligations and Their Possible Integration with the Carbon Market**

Paolo Bertoldi  
Location: Sanderling

### **Residential Lighting Persistence—What We Know, What We Need to Know**

Angela Li  
Location: Triton

### **New Directions for Post-Occupancy Evaluation**

Carol Jones, Dave Hewitt  
Location: Sanderling

### **Information on EIA's Energy Efficiency WBB site**

Behjat Hojjati  
Location: Nautilus

### **Evaluation and Research—AESP Survey on Hot Topics and Industry Perspectives**

Ingo Bensch  
Location: Marlin

### **Residential Energy Code—A Strategy to Get Beyond Federal Standards and Cost-Effectiveness Thinking**

Christopher Dymond  
Location: Kiln

### **Energy Star New Construction and Existing Buildings National Working Group**

M. Colgrove  
Location: Nautilus

### **New Tools for Education and Training for Energy-Efficient Building Operations**

Joe Deringer, Philip Haves

## Join Us at the Pacific Grove Golf Links!

KEMA has organized a golf outing during the Summer Study "free time" on Wednesday afternoon, August 16th for anyone who is interested.

Pacific Grove Golf Links is located seven blocks north of the Asilomar conference center gates. Check it out at [www.ci.pg.ca.us/golf/](http://www.ci.pg.ca.us/golf/). You really can't beat the location.

If interested, sign up in the Surf and Sand to reserve a tee time. Space is limited, so please try to sign up early.

## THE GRAPEVINE

is published by *Home Energy* magazine, now available on-line at [www.homeenergy.org](http://www.homeenergy.org).

### **Managing Editor**

Mary James

### **Reporters**

Elka Karl, Steve Greenberg,

Jim Gunshinan

### **Production**

Leanne Maxwell

## Standby Power Meeting Scheduled for Thursday

Please join us for a special meeting, Standby Power Consumption: Opportunities for International Harmonization to be held Thursday afternoon from 2:00 pm to 5:30 pm in Pinecrest. As a precursor to the international Standby Power Conference to be held in Australia this November, the meeting will provide an update on the status of standby power policies and programs around the world, stimulate a discussion of key harmonization issues, and seek input on the next steps for moving forward toward greater international coordination. Come share your thoughts! For more info see Steve Nadel or Katie Ackerly of ACEEE.