

Won't Get Fooled Again



Marty Kushler, Director,
ACEEE Utilities Program

I am pleased to report that all the “market fundamentals” continue to look strong for utility-sector energy efficiency. While the recession has eased electric demand a bit, long-term concerns about system reliability and adequacy of supply remain. Construction costs for new generating facilities have soared, concerns about CO₂ emissions are ever-increasing, and energy efficiency continues to prove itself as by far the cheapest available resource

option. (Indeed, an ACEEE review last fall found

14 states with major energy efficiency programs reported results yielding an average utility cost of conserved energy of 2.5 cents per kWh—see *Saving Energy Cost-Effectively: A National Review of the Cost of Energy Saved Through Utility-Sector Energy Efficiency Programs.*)

So why do I have this lingering feeling of worry? Perhaps it's because we've been on this mountaintop before. Back in 1992 I was lead author (along with Ken Keating, Jeff Schlegel, and Ed Vine) of an invited paper here at Summer Study entitled “The Purpose, Practice and Profession of

DSM Evaluation: Current Trends, Future Challenges.” In that paper, we waxed eloquently about the strong position of utility-sector energy efficiency and the rosy future we foresaw for continued robust growth. Two years later, California launched the movement toward utility deregulation (“restructuring”) that spread across the nation, and utility energy efficiency spending plunged by 50% over the following three years.

For those relatively new to the energy efficiency field, I say: take nothing for granted. We're already seeing some of the dreaded “raids” on energy efficiency funds in the Northeast, as cash-strapped states look for any possible sources of revenues. And the inevitable backlash against the recent advancement of strong progressive energy efficiency policies in many states—by special interests philosophically and/or economically opposed to funding energy efficiency programs—is already beginning to sprout (for example, the recent “hit piece” on energy efficiency by the conservative “Texas Public Policy Foundation”).

So my key message here is: enjoy the good times, but stay on guard and don't let up on the vigorous advocacy for the cheapest, fastest, and cleanest energy resource: energy efficiency.

Art Rosenfeld Won't Be Retiring Anytime Soon

Inside the air-conditioned ACEEE conference room on a mid-June day in Washington, DC, Art Rosenfeld clicks through 33 pages of a PowerPoint presentation on Cool Roofs. Hyderabad, India; Santorini, Greece; and UC Davis are all following the lead of ancient Egyptians who knew (long before there was mechanical refrigeration) that reflective roofs stay cool in the sun and can cool urban areas by 20% during the hot summer months.

“If a roof is flat it shall be white,” says Rosenfeld, then settles into networked low power mode while the outreach coordinator for Greenworks Philadelphia describes the city's initiatives to help residents paint their roofs white without having to remove the tar.

Rosenfeld, who awakens intermittently to insert commentary during the presentation, is the very definition of energy efficiency. Throughout the day he alternates between burning gigawatts of brain waves with power naps. There is no such thing as retirement for this 83-year-old.

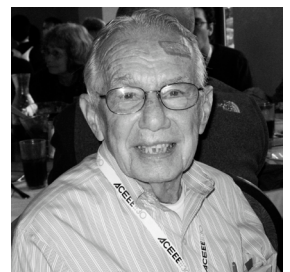
“I just saw Art working on his computer in the social lounge,” said Stuart Cooley, a professor at Santa Monica Community College, after a late night of watching “Carbon Nation” at Summer Study. The documentary

about solutions to climate change would have been incomplete without Rosenfeld, who was a prominent character.

Last March, Jon Koomey led a group of scientists who published an article in *Environmental Research Letters* that defines the Rosenfeld as a unit of electricity savings equal to 3 billion kilowatt-hours per year, the amount needed to replace the annual generation of a 500 megawatt coal-fired power plant. “Power plants are what Art uses most often to explain to policy makers how much electricity can be saved by efficiency investments,” Koomey said.

A recent Commissioner of the California Energy Commission (serving from 2000-2010), Rosenfeld came up with Rosenfeld's Law, which states that the amount of energy required to produce one dollar of GDP has decreased by about one percent per year since 1845. California's low electricity per capita growth since 1973 has been dubbed the Rosenfeld Effect.

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The Grapevine Staff Revealed

The daily conference newsletter you hold in your hand has been an important part of the Summer Study on Buildings for almost 30 years. *The Grapevine* was started in the early 1980's by Alan Meier, who was the Summer Study chairperson at the time. Alan is a senior staff scientist in the Energy Analysis Group at the Lawrence Berkeley National Laboratory, and is founding editor of *Home Energy* magazine, the leading North American trade publication on residential energy efficiency, now in its 27th year of publication.

Up until this year, *The Grapevine* was produced and edited entirely by the staff of *Home Energy* magazine. This year, the *Home Energy* staff (Tom White, Steve Greenberg, Jim Gunshinan, and Leslie Jackson), has been joined by Melanie Feliciano, ACEEE's new web manager, a position she has held since February 2010. She keeps the web site updated with fresh press releases, conference information, new blue cover reports and energy efficiency news.

Prior to joining ACEEE, Feliciano was managing editor and web master of *The Biscayne Times* in Miami and *YO! Youth Outlook* magazine in San Francisco; and was a writer and web production manager at Latino.com and MichiganLive.com.

You can find *The Grapevine* on the new, improved ACEEE web site at www.aceee.org/blog, and *Home Energy* at homeenergy.org.



Melanie Feliciano, Tom White, Leslie Jackson, Jim Gunshinan, and Editor and Courier Steve Greenberg (not shown).

Announcements

Panel Leader Change

Brian Coffey replaces Ray Cole in Panel 11.

Mapping EE Education and Workforce Development for 2012

At the Panel 10 (8:30 am Thursday) Session we will start mapping where we are with EE education and workforce development. Are we really at 10% of where we need to be? We plan to hand over a map in two years highlighting where we are now, and where we want to be, to participants at the next Summer Study. If you wish to be a part of our continued dialogue after this event, please contact Monica Brett, mbrett@swenergy.org.

Informal Session: Unitary HVAC Quality Maintenance Impacts Assessment Project

Please join us on Thursday for an informal session where the project team will present work to date and host a facilitated discussion that will encourage participants to further identify project gaps and suggest roadmap solutions. Copies of the draft compiled research bibliography, summary of the Technical Forum output, and a draft of the Final Report outline will be available. Please see Thursday's edition of the Grapevine for session location. Contact Brett Close brett.close@sce.com for more info.

EEDAL Call for Abstracts for 2011 Conference

EEDAL is the international conference on residential energy efficiency (appliances, lighting, ICT, smart meters, HVAC, behaviour, policies and programmes). The 2011 meeting will be held in Copenhagen (GK) from 24 to 26 May 2011. The Call for Abstracts is available at <http://re.jrc.ec.europa.eu/energyefficiency/> or contact paolo.bertoldi@ec.europa.eu.

Summer Study Dance Party and Camp Song Contest

Celebrate ACEEE's 30th anniversary at the Dance Party in Merrill Hall, 8 -11:30 pm, featuring the Perry and the Pumpers. The Pumpers are a blues band, playing the blues the right way - classic Chicago, Memphis and New Orleans blues and rock n' roll.

ACEEE Idol

Have you been working hard on your entry for the Summer Study camp song competition? All songs will be performed during the Band breaks at the Dance Party. Sign up for ACEEE Idol at the Surf & Sand--soloist or group!

Faces of Summer Study



Steve Greenberg, LBNL, and Tom Owen, Pulse Energy



Hao Bin aka "Good Guy" Center of Science and Technology of Construction in China.



Xia Yujuan, aka, "Summer" and Shi Xinyong, aka, "Rocky," Chinese delegates to Summer Study

PANEL 12—Display and Poster Sessions Thursday

4:00 pm - 6:00 pm

All presentations are located in Merrill Hall

EnergySmart Home ScaleSM (E-Scale)

Patricia Love, Oak Ridge National Laboratory

Houston Energy Efficiency Study: Predictions, Performance & Real World Results

Shaun Hassel, Advanced Energy Corporation

Unitary HVAC Savings: The Expected Value Method

Reid Hart, Portland Energy Conservation, Inc.

Model, Measure, Manage: Achieving and Sustaining Cost-Effective Energy Savings in Real Time

Vinay Ghatti, The Weidt Group, Inc.

Chillers Out: Early Replacements of CFC Chillers

Amanda Lowenberger, ACEEE

Measurement-based Energy Management at a Low Energy University Campus: Energy Information Systems and the Proactive Use of Data

Jessica Granderson, Lawrence Berkeley National Laboratory

Transforming the New Home Market through High Performance Construction

Stephanie Thomas-Rees, Florida Solar Energy Center

Rebuilding Greensburg, Kansas to Be a 100% Renewable Energy City: A Green Disaster Recovery Story in Middle America

Shanti Pless, National Renewable Energy Laboratory

Monitoring Savings from O&M Improvements in Commercial Buildings: Tracking Savings and Ensuring Persistence in Real Time

Patrick O'Neill, NorthWrite, Inc.

Getting Ambitious with Efficiency : Potential Impact of Adopting Maximum Technologies as Minimum Efficiency Performance Standards in the U.S. Residential Sector

Virginie Letschert, Lawrence Berkeley National Laboratory

SEAT (Subdivision Energy Analysis Tool)

Scott Horowitz, National Renewable Energy Laboratory

DOE's Commercial Lighting Solutions Interactive Web Tool

Tracy Beeson, Pacific Northwest National Laboratory

The Silicon Valley Energy Map: A Tool for Marketing, Education, and Inspiration

Shayna Hirshfield, City of San Jose, Environmental Service

Survey of Existing Utility Programs Staffing

Jay Wrobel, Midwest Energy Efficiency Alliance

Identifying Inefficient Thermal Envelopes with Utility Bill Analysis of Single-Family Homes in Boulder, Colorado

Sean Casey, National Renewable Energy Laboratory

What's Your Excuse? Examining CFL Storage Patterns

Kevin Price, KEMA, Inc

Hands-on Demonstration of Learn HVAC - An Educational Software Tool

Joe Deringer, SuPerB

Art Rosenfeld continued

Keep reading to find out why the effect bears his name.

In 1975, he founded the group that became the Center for Building Science at Lawrence Berkeley National Laboratory (LBNL).

"When ACEEE first started hosting the Summer Study conference, most of the papers presented came from LBL," said Brian McCowan of Energy Resource Solutions.

The Center developed a broad range of energy efficiency technologies, including electronic ballasts for fluorescent lighting, a key component of compact fluorescent lamps; and low-emissivity coatings for glass windows that allow light in but block heat from either entering (summer) or escaping (winter). Dr. Rosenfeld was personally responsible for developing the predecessor to DOE-2, a computer program for building energy analysis and design that was incorporated in California's Building Code in 1978. These codes have served as models for the nation, copied by Florida and Massachusetts, and other states are beginning to adopt them

as well. DOE-2 is widely used to design energy efficient new buildings in the United States, China and many other countries.

In 2009, California passed policy to make new buildings and retrofits have white or otherwise reflective roofs. It's the only state with the policy, and Rosenfeld hopes that other states will soon follow suit. During the plenary sessions at the 2010 Summer Study, he made a point to campaign for cool roofs. But he doesn't have to convince this audience, which has responded to his high fidelity bird call for decades—it's all about convincing the public, which Cathy Zoi pointed out isn't always easy. Perhaps a good way to bring Rosenfeld's message to a wider audience is to produce a "sexy" show on HGTV or consumer-produced videos posted to the web site of the Alliance to Save Energy, which does media campaigns and outreach to consumers, would encourage people to use their extra cash on energy efficiency projects.

Submit your ideas on the ACEEE Twitter #SummerStudy feed!

View Art's presentation at www.aceee.org/blog.

INFORMAL SESSIONS 2:00 pm - 4:00 pm

The Scale and Persistence of Feedback-Induced Energy Savings

Karen Ehrhardt-Martinez, Human Dimensions Research Associates and John "Skip" Laitner, ACEEE (Acacia)

California Public Utilities Commission-California Institute for Energy & Environment - Embedded Energy in Water Research

Chris Ann Dickerson, CAD Consulting (Chapel)

Unitary HVAC Quality Maintenance Impacts Assessment Project: Fault Detection, Diagnostics and Repair; and Duct Test and Seal

Brett Close, EM&V Group, Southern California Edison (Scripps)

The Zero Energy Commercial Buildings Consortium (CBC): Public-Private Collaboration for Market Transformation

Diana Lin, Alliance to Save Energy (Evergreen)

More on Energy Codes: What factors contribute to an effective code? How can attribution for a code-ready market be determined?

Douglas Mahone, Heschong Mahone Group, Inc. (Fred Farr Forum)

Charting the EE R&D Future: BPA's 2010 Northwest Energy Efficiency Technology Roadmap

Ryan Fedie, Bonneville Power Administration (Heather)

Opportunities for Success and CO₂ Savings from Appliance Energy Efficiency Harmonization

Paul Waide, Navigant Consulting (Kiln)

OFF-SITE: Tour of Hummingbird House

Jim Lutz, LBNL and Larry Weingarten

Energy Efficiency Savings at the Aggregate Level: Why It Matters

Marvin J. Horowitz, Demand Research, LLC (Nautilus)

Design Lights Consortium Solid State Lighting Qualified Products List: LED Luminaires for Commercial EE Programs

Jonathan Linn, Northwest Energy Efficiency Partnership (Oak Shelter)

California's upcoming Energy Efficiency Web Portal

Laura Kimes, Southern California Edison (Sanderling)

Support for the use of public domain simulation tools: deployment of a faster, easier-to-use EnergyPlus

Philip Haves, Lawrence Berkeley National Laboratory (Toyon)

Building Energy Labeling & Rating; Moving to Time of Transfer Disclosure and Upgrades

Richard Faesy, Energy Futures Group, Inc., Jeff Lindberg and Bob Stull, PECl (Triton)

How can DOE expand 10-fold the number of installed GSHPs in a decade or less?

Tina Kaarsberg (Afterglow Living room)

High Savings Goals and the Rebate/Buydown Elephant in the Room – Recognizing How to Move on & Market Lift

Rich Winch & Monica Curtis, Wisconsin Energy Conservation Corp. (Embers Living Room)

Camp Song Workshop

Barbara Smith (Hearth Living Room)

Multifamily Billing Analysis of New Mid-rise Buildings in Seattle

Kevin Geraghty & Jonathan Heller, Ecotope, Inc. (Willow Inn 2)

Benchmarking Energy Use in Indian Commercial Buildings-Implications for Outcome-based Building Energy Code and Building labeling

Satish Kumar, International Resources Group (Oak Knoll 1)

Russia's Untapped Energy Resource-Energy Efficiency

John Millhone, CEIP (Willow Inn 1)

Looking into the Future; Assessing the long-term U.S. efficiency potential

Mathias Bell, Rocky Mountain Institute (Oak Knoll 2)

A game changer for Evaluation? Using smart meter data to verify savings

Kerstin Rock, PECl (Marlin)

the grapevine

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Publish your papers in *Energy Efficiency*

The journal covers wide-ranging aspects of energy efficiency in the residential, tertiary, industrial and transport sectors. For more information, contact the following people who are at ACEEE this week: Paolo Bertoldi (Editor-in-Chief), and the members of the Editorial Board: Marilyn Brown, Anibal de Almeida, Jeff Harris, Marvin Horowitz, Loren Lutzenhiser, Hideto Nakagami, Diana Urge-Vorsatz, Ed Vine, and Paul Waide.