ACEEE
American Council for an Energy-Efficient Economy

the grapevine

Wednesday, August 20, 2014 ACEEE Summer Study at Asilomar, California

Incorporating Behavior-Based Tools into Energy-Efficiency Programs

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I am excited to be here at Summer Study enjoying the many papers on Panel 7 (Capturing Savings and Behavior)! If you have an interest in behavior-based programs, I encourage you to attend the presentations. Alternatively, please consider joining us for one of several informal sessions on behavior-related topics including multi-family programs, games, and the recent launch of the peer-reviewed *Journal for Energy Research and Social Science* (ERSS) from Elsevier.

I would like to catch you up on what the Behavior Program at ACEEE has been doing to increase the integration of behavior into energy efficiency programs. We continue to work to serve the energy efficiency community in a variety of ways, through publications, webinars, and consultation. You may have tuned in to one of the webinars from our on-going ACEEE/SEE Action Behavior series. [SEE stands for State and Local Energy Efficiency]. Recently, we have covered utility programs, persistence rates, and evaluation methods. Our next webinar in September will be about community outreach programs.

Another goal of our program is the facilitation of exchange and collaboration across a variety of sectors and disciplines. The Behavior, Energy, and Climate Change (BECC) Conference is a key component of this strategy. Since its inception in 2007, ACEEE has co-chaired BECC with Stanford's Precourt Energy Efficiency Center (PEEC) and the California Institute for Energy and Environment (CIEE) and this year it will be December 7-10 in Washington, D.C. One way to learn more about this topic is to join our LinkedIn group; with over 1,800 members, it is an active site for discussions on behavior and energy efficiency!

A theme in our work has been identifying how behavior-based components can enhance traditional energy-efficiency programs, across both the residential and commercial building sectors. We recently launched a pilot project in Tacoma Park,

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The Best Work I Ever Did For Free

Internships are a vital pathway to bring bright new people to our industry. They're an opportunity to learn not only the topic of energy efficiency, but to share the experience of more seasoned professionals and learn about how to approach a career in energy efficiency. At the ACEEE Hospitality Suite on Monday, several successful energy efficiency professionals realized that they had a common experience, in either hiring or serving as an intern. Here are some of their thoughts on the importance of providing these internships to interested young people.

"As an intern in the early 90's, I was able to initially ride sidecar with the Energy Manager as the City of Berkeley rolled out lighting retrofit projects throughout municipal facilities. It was a rich experience that was key in fostering my passion and commitment to this industry. Besides learning the technical, project management and policy lessons, I still appreciate the valuable insights and importance of human resources concerning staff development and relationships with clients and contractors that my boss/mentor modeled for me."

—Bruce Chamberlain, kW Engineering (served as an intern for the City of Berkeley Energy Office).

"My philosophy on internships and why I've always supported them is that it's a way of giving back to the industry, a way to keep "filling the pipeline" with new talent and new ideas that help keep the industry relevant. One of the side benefits of having interns is that they can challenge what those of us who've been here a long time consider as the norm and force us out of our comfort zone In a positive way. Another personal reason why I am a big proponent of internships is that my master's degree was funded by an ASHRAE research project a kind of internship, and I haven't forgotten the opportunities that gave me as I started my own career 30 years ago."

—Rich Hackner, GDS Consulting (hired Jim Kelsey as an Intern at the Energy Center of Wisconsin)

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Incorporating Behavior-Based Tools, cont.

Maryland, (*PowerSmart* in Tacoma Park), so we will pratice what we preach with a stacked approach to tenant engagement in multi-family housing. And in our *ACEEE Field Guide to Utility-run Behavior Programs,* we provide a reference guide for those who want to understand the entire landscape of behavior programs; the guide offers a common language and set of practices for incorporating behavior.

There is also a growing interest in using game mechanics to influence people to change their behavior in a "fun" way to support energy efficiency. Our upcoming report *Games for Grown-ups: The Role of Gamification in Energy Efficiency*, examines the recent history of both games and gamification with a specific focus on their deployment in energy efficiency and sustainability efforts. There are not yet guidelines or benchmarks for the qualities and features an energy program incorporating game mechanics must have in order to be successful. In the report, we look at a cross-section of games and identify some best practices.

Thank you for taking the time to read about some of our behavioral efforts. We are always looking for feedback, so please do not hesitate to contact me at smazur@aceee.org or 202.507.4026. Happy camping!

WANTED

The Acronym Police Dept. (APD), have identified the proliferation of TLAs (three letter acronyms) as a major threat to effective, broad-based understanding (BBU) of energy efficiency. In response, the APD has agreed to offer as a reward, an Official ASK (Asilomar S'mores Kit) to the individual who can correctly identify the most acronyms in list at right. Entries should be submitted to the Grapevine Office (**Surf & Sand**) by midnight Weds. evening.

BAU	EM&V	PJM	TLA
CEV	NTG	RPS	TRC
CHP	PAC	RTF	UEC
DSM	PBR	STB	ZNE

The Best Work, cont.

"When I was an engineering student in the 80's, I was able to get by on very little money. I wasn't aware of it at the time, but that provided a unique opportunity to explore my interests, and gain some professional experiences that would never have been open to me if I had to find a "good-paying" job. I was an intern for about a year, and that led to a full-time job, and the people I worked with started to form my professional network, which I still count on today. My network has also been supplemented by former interns who I mentored in the field, and who have gone on to be exceptional contributors to the field."

-Kristin Heinemeier, UC Davis (served as an intern for Alan Meier at Home Energy Magazine, (formerly "Energy Auditor and Retrofitter"), oversaw intern work by Bruce Chamberlain at the City of Berkeley, and hired Anita Ledbetter as an intern at Texas A&M).

"My internship at Texas A&M provided the experience and mentorship I needed to develop my career. When I started, I didn't know much at all about energy, but I found that I was able to contribute quite a bit while I learned the trade. The internship created many learning and networking opportunities that directly led to my jobs as Executive Director of Solar San Antonio, and then at Build San Antonio Green."

—Anita Ledbetter, Build San Antonio Green (served as an intern for Kristin Heinemeier at Texas A&M)

"My company has hired interns from a formal internship program for the last two years. They've been a great help in developing IT solutions this year. When I was an intern I developed the beginnings of a network that persists to this day. Many of the folks I met there are still in the industry and I still cross paths with them all the time. One of the great things about being an intern is what Shunryu Suzuki refers to as "beginner's mind." When I was an intern in Wisconsin, I already had several years of experience. But since everyone there knew me mainly as an intern, that allowed me to ask all kinds of "beginner" questions. Those questions become more difficult to ask once you're in a position where you're expected to know the answers. Embracing beginners mind is good practice at any point in your career, but it's easiest at the beginning."

—Jim Kelsey, kW Engineering (served as an intern for Rich Hackner the Energy Center of Wisconsin).

"I *think* that I interned for Art Rosenfeld while an undergraduate in—gulp!—1974, but my memory is hazy. I do know that while Art was mentoring me, I continued the tradition by hosting a string of interns. I am unabashedly proud of their accomplishments and I derive huge pleasure when somebody approaches me and says, 'you probably don't remember me, but I interned with you. It changed my life.' Should I tell her that she changed my life, too?" —Alan Meier, LBNL and UC Davis Energy Efficiency Center.

You might be surprised at how many others have used internships to launch their careers, benefitting from the mentorship of established professionals. Or how others have hired interns that went on to huge success. Share your story by emailing a brief comment to Kristin Heinemeier at kheinemeier@ucdavis.edu by Thursday noon.

Art Rosenfeld

Art Rosenfeld, co-founder of ACEEE, was honored last night for the role he played in creating the energy efficiency industry. Luminaries Ashok Gadgil, David Goldstein, Carl Blumstein, John Wilson, Howard Geller, Dian Grueneich, and Steve Chu provided recorded and in-person tributes to his trailblazing, passionate, and tireless work to reduce the energy consumption of our built environment.

When he was given the award, Art asked if he could share a few remarks. "I can't resist a captive audience," the octogenarian quipped. "These days ACEEE is known as a democratic organization, but it was formed in a cold fury at President Carter. During the 1970s energy crisis, he gave out $88 billion for alternative fuels, and for efficiency he gave us…a sweater."

"The average person thought our buildings were about 50% efficient. We knew efficiency was closer to 5-10%. That turned out to be an overestimate, because we took it for granted that what went on in buildings made sense. Sam Berman worked out that replacing US windows would save an amount of energy equivalent to the oil in Alaska's Prudhoe Bay. After 20 years you would have to replace those windows, but replacing windows is a lot easier than trying to replace Prudhoe Bay."

Looking back at his transition from particle physics to energy efficiency, Art said, "I figured I would just do efficiency a few years. But I'm a bad judge of time. Four years turned into ten years turned into forty years."

New, Improved CBECS, RECS, etc.

What is building energy use today and where is it going? Just as important, what is the average floor area of an office building or the energy use of a single-family home? A team from the Energy Information Administration (EIA) avoided answering those questions but they did explain how they are improving the quality of its flagship surveys, the Residential Energy Consumption Survey (RECS) and the Commercial Buildings Energy Consumption Survey (CBECS), including more results sooner. Among the innovations are more "experiments" to test the reliability of data and new survey techniques. For example, EIA sent energy auditors to commercial buildings to compare the results with their interviews of the building managers. Of course, they are trying to learn how to make best use of smart meter data and the web. Expect to see a special report on the mysterious MELs (miscellaneous electric loads). No word on when a study on marijuana growhouses will begin, but maybe EIA will leave that growing energy use to the states.

Tuesday Plenary

How Big Can We Think?

Philip Enquist, Partner-in-Charge of Urban Design and Planning at Skidmore, Owings & Merrill, discussed "Our Urban Future" in the Tuesday plenary. That future includes many more people–according to recent studies, urban populations will double worldwide by 2050, up to 7 billion. But as Phil noted, these cities are unprepared and may be overwhelmed by population growth without adequate planning.

"We need to understand the strengths and weaknesses of cities…to achieve carbon neutrality. Climate change is bringing us together by necessity." 75% of carbon emissions currently come from cities and there will be an unprecedented demand for new buildings—potentially as much as 475 billion square feet [about 140 square feet per new city dweller]! He described an ongoing shift in American priorities away from sprawling development toward reinvestment in dense cities.

Enquist laid out 7 principles for improving cities:

1. Defining urban metrics
2. Transportation infrastructure
3. Urban forms
4. Repairing our ecosystems
5. Growing food more responsibly
6. Energy, water, and waste mitigation
7. Changing our priorities

Quoting Jonas Salk, Phil reminded us that "There is a limit to how much we can use from earth's resources." He described a new reality that comes about as a result of the growth of human population, one that moves from competitiveness and independent powers, to a non-siloed view that builds consensus, solving problems with the power of collaboration.

The Next Big Number

Eavesdrop on conversations this week and you may hear the number 111(d). (Also prominent in informal sessions, plenary talks, and Grapevine articles.) What's this number and why is it important? This is the Section of the Clean Air Act, "Standards of performance for existing sources" that, thanks to recent rulings by the US Supreme Court, is the basis of EPA's regulation on reducing greenhouse gas emissions. It has the potential of completely transforming energy efficiency activities at almost every level. But will it?

Keep eavesdropping.

ANNOUNCEMENTS

New Buildings Institute (NBI) is pleased to announce that Charles Eley, longtime energy efficiency advocate and consultant, has been named an NBI Fellow. In addition to his energy codes and policy work, Mr. Eley has developed a number of important publications including the Advanced Lighting Guidelines, the Lighting Fundamentals Handbook, as well as numerous other technical manuals on energy efficiency and code compliance.

GOLF, ANYONE?
Join Dave Houghton for a round of Golf Wednesday and Thursday afternoon at Pacific Grove Links.
Call Dave at 970 209 1216.

ACEEE just released a meta-review of energy efficiency potential studies called "Cracking the TEAPOT." The report explores how savings estimates have changed over time, and teaches stakeholders about how the studies are carried out. You can find it at http://aceee.org/research-report/u1407.

SOCIAL EVENT – Monterey Bay Aquarium
A dessert reception will be held at the Monterey Bay Aquarium for all Summer Study participants and their guests. Each (full week) participant's ticket is included in their registration fee. If you would like to purchase additional tickets, you may do so in the Summer Study office in **Surf and Sand** until 11:00 am today. Transportation to the Aquarium will be provided beginning at 7:00 pm from the flag pole area next to the Hearst Social Hall.

2016 Summer Study Co-Chairs Announced

Nan Zhao
Nan is a Staff Scientist and the Deputy Group Leader of the China Energy Group of Lawrence Berkeley National Laboratory. In addition, since 2010 Dr. Zhou has served as the Deputy Director of the U.S.-China Clean Energy Center-Building Energy Efficiency

Mary Werner
Mary is Executive Manager of Integrated Deployment at the National Renewable Energy Laboratory.

2014 Champion of Energy Efficiency in Buildings Award Winners: Sheldon Strong, Founder and Director, Center for Energy & Environment; Paul Johnson, Massachusetts Energy Efficiency Advisory Council, accepted by Christina Halfpenny; Energy and Environmental Technologies Division, Lawrence Berkeley National Laboratory, accepted by Mary Ann Piette.

More Cool Choices, More Winners

Cool Choices awarded prizes to three more people playing Cool Choices during the Summer Study. (Anyone who plays is eligible to win a daily prize.)

Mark Brown and Kate Scott both won a pair of "fast lane" passes which enables them to skip to the front of the dinner line at any point. Rich Hackner won a Cool Choices t-shirt too—just for taking a sustainable action.

There's still time for you to join the game and win a daily prize—or perhaps even one of our grand prizes (to be distributed at the dance on Thursday). To play go to https://coolchoices.us and use the invitation code ASILOMAR2014.

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