

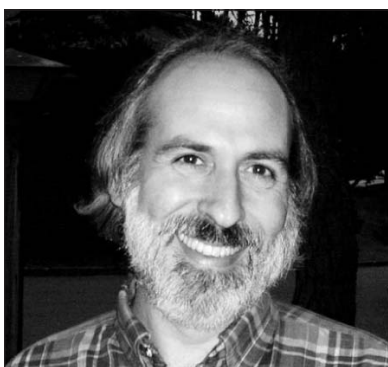
THE GRAPEVINE

ACEEE Summer Study at Asilomar, California

Sunday, August 13, 2006

Welcome

by Steven Nadel



Steven Nadel,
Executive Director, ACEEE

On behalf of ACEEE, I want to welcome you to the 14th biennial Summer Study on Energy Efficiency in Buildings. Although much has changed since our first Summer Study in 1980, too much has stayed the same. In order to develop plans for moving forward, it's instructive to look at what has changed, what has not, and why.

In terms of changes, substantial progress has been made in the development of new energy-efficient technologies, practices, programs, and policies. The average new refrigerator used 1,278 kWh/year in 1980, but in today's market there are full-size automatic-defrost refrigerator-freezers using less than 400 kWh/year. Electronic ballasts and T8 lamps were just invented around 1980; today they are the norm, with energy efficiency efforts now focusing on such technologies as super T8 lamps, pulse-start ceramic metal halide lamps, and LEDs. Utility DSM programs have gone from initial efforts in a few states to an approximately \$2 billion per year industry that in leading states is reducing electricity use by more than 1% each year. Appliance and equipment efficiency standards have been adopted for more than 40 products. ACEEE has grown from a fledgling organization in which volunteers organized one conference to a 25-year-old organization with 22 staff, nearly 300 published peer-reviewed reports, and dozens of successful conferences to its credit.

As a result of all of these developments, energy use today is much lower than levels were predicted to be when we organized the first Summer Study. For example, a 2002 published review found that studies from the mid- to late

1970s predicted on average that U.S. energy use in 2000 would be about 143 quadrillion Btu (quads). Actual use in 1999 was 99 quads, 31% lower than the midpoint prediction. Study after study is finding that cost-effective opportunities still exist that could further reduce U.S. energy use by 20%–40%.

However, not all of the changes are positive. The prevailing scientific consensus is that global warming is happening and that, to a large extent, climate change is a result of human activities. Seas are warming, glaciers are melting, droughts and wild fires are more severe, and multiple scientific papers are concluding that hurricanes are getting more intense. Oil imports have risen, from 40.5% of petroleum products supplied in 1980 to 65.5% in 2005. And it is no longer just oil markets that are of concern, because both natural gas and coal prices have increased approximately 60% and 100% respectively in the past three years.

On the other hand, many things have not changed. High energy prices were a concern then and still are now. As of this writing, oil markets are approaching \$80 per barrel—a level only topped (in inflation adjusted terms) briefly in 1981. U.S. consumers, businesses, and policymakers are still slow to respond to these problems. While there are leaders who are changing, the majority of consumers, businesses, and policymakers just try to “get by” without making difficult choices. As a result, while energy use growth rates have slowed, energy use has grown 28% from 1980–2005. Essentially, energy use has grown in step with our population, and savings from more efficient technologies have been offset by use of new and bigger products such as personal computers, microwave ovens, SUVs, and larger homes.

What's the lesson in all of these trends? I think we have shown on the ground how energy efficiency can be an important part of the solution to our energy problems, but we need to redouble our efforts so that energy use per capita can decline instead of staying level. Economists now estimate that energy intensity in the U.S. (energy use per unit GDP) is declining about 1% per year. We need to double this improvement to really have an impact on such problems as global warming, high energy prices, and high reliance on imported fuels. Unless we reduce the growth rate in energy use still further, clean energy supplies will not be able to catch up with demand, and we will continue to see energy prices, oil imports, and carbon emissions

Welcome, cont

increase. We can't make these problems go away, but by doubling efficiency achievements, we can make these problems much more manageable. We also need to redouble our efforts in the developing world so that they choose the efficient path, not the one we have chosen for the past 25 years.

The Summer Study this week is a good time and place to begin these efforts. We can learn about the most promising technologies, programs, and policies, and strategize in informal sessions about how to build on these successes. We should also be honest and admit where things have not progressed as we had hoped, in order to learn from these experiences. By fully taking advantage of all that the Summer Study has to offer, we can lay the groundwork so that, when we meet in the future, we can look back at 2006 as a turning point in the realization of our efforts.

Important Information for Asilomar Guests (or Stuff You Should Know)

Emergencies and Cell Phones

In an emergency, don't use a cell phone to call 9-1-1. Dial "0" for the Operator, who will then connect you to the proper authority.

Funny but true: Don't use a cell phone near the fire alarm in your room. The fire system here at Asilomar operates on a radio frequency. Occasionally, someone using a cell phone just below the fire alarm has set it off. If this happens, Security will come to shut off the false alarm, and you may be embarrassed.

Business Center

The Business Center is located next to the Front Desk. Hours of operation are 6:30 am to 12 midnight. Charges are collected on the honor system. There are four dedicated local access lines for checking e-mail. There is one personal computer available for word processing needs. Fax and copy services are available at the Front Desk. Conference calls can be arranged in the business center—ask the Front Desk staff for assistance.

Park Store

The Park Store is located in the Administration building. The hours are 6:30 am to 9:00 pm daily. Coffee and espresso drinks, bakery items, cold beverages, personal care items, phone cards, and gifts are available. There are bike rentals in the Park Store between 9 am and 6 pm.

Housekeeping

Irons, ironing boards, hairdryers, and extra blankets or pillows can be delivered to guest rooms by our housekeeping staff.

For More Fun

Volleyballs, ping pong paddles and balls, pool cues and balls, board games, and the lending library can be found at the Front Desk.

Changing Climate Talk



Surabi Menon
LBNL Physicist

The latest developments in global climate change can be scary, or at least that's what some in the Bush administration appear to think.

Tonight's scheduled plenary speaker, Dr. James Hansen, director of NASA's Goddard Institute for Space Studies in New York City, has complained in recent media accounts of pressures to

muzzle him, including reportedly being asked by NASA officials to let NASA's public affairs office preview all of his speeches and publications. While he has chosen to ignore these pressures, last-minute travel changes have succeeded in temporarily silencing him, or at least preventing him from addressing the 2006 Summer Study in person. Fortunately, an accomplished stand-in and a technological solution have been found. Surabi Menon, a physicist with the Lawrence Berkeley National Laboratory and a former post-doc of Dr. Hansen who continues to work closely with him, will deliver Hansen's speech for him. Dr. Hansen will be connected by phone to Merrill Hall during the plenary, and thus will be able to answer any questions from the audience.

The title of tonight's talk, *The Threat to the Planet: Actions Required to Avert Dangerous Climate Change*, indicates that Hansen has no intention of pulling any punches at this year's Summer Study. With 39 years at NASA, Hansen brings a wealth of experience to any discussions of climate change and necessary political responses. Since the late 1970s, he has worked on simulations of the Earth's climate, for the purpose of understanding the human impact on global climate. You may have seen *An Inconvenient Truth*, but don't miss Menon's version of Hansen's sequel.

Ron Judkoff, director of the Buildings and Thermal Systems Center at the National Renewable Energy Laboratory and co-chair of this year's Summer Study, will also give a not-to-be-missed talk tonight on the propaganda and real impacts of zero-energy buildings. With two such hot topics on tap, be sure to finish up all your registration details, sign off that Blackberry, hang up that cell phone, and hurry on down to Merrill Hall by 7:30 tonight.

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