

## Alan K. Meier

Senior Scientist, Lawrence Berkeley National Laboratory

[akmeier@lbl.gov](mailto:akmeier@lbl.gov) [www.lbl.gov/~akmeier](http://www.lbl.gov/~akmeier)

Professional Researcher, Energy Efficiency Center.

University of California, Davis

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### Professional Preparation

University of California, Berkeley	Chemistry & Economics	B.A. 1974
University of Pennsylvania	Biological Chemistry	1975 - 76
University of California, Berkeley	Energy and Resources	Ph.D. 1982

### Appointments

2007-	Professional Researcher and Director of Curriculum, Energy Efficiency Center, UC Davis
2002 – 2006	Senior Analyst, International Energy Agency, Paris, France
2002-	Senior Scientist, Lawrence Berkeley National Laboratory
1989-90	National Science Foundation Fellow, Visiting Researcher, Waseda University, Tokyo, Japan
1987 & 1996	Consulting Professor, Department of Civil Engineering, Stanford University
1982-2002	Scientist, Lawrence Berkeley National Laboratory

### Selected relevant publications:

- Meier, Alan, Cecilia Aragon, Therese Peffer, and Marco Pritoni. 2010. *Thermostat Interface and Usability: A Survey*. Berkeley (Calif.): Lawrence Berkeley National Laboratory, September.
- Meier, Alan, Cecilia Aragon, Therese Peffer, Daniel Perry, and Marco Pritoni. 2011. "Usability of residential thermostats: Preliminary investigations." *Building and Environment* 46 (10) (October): 1891-1898. doi:10.1016/j.buildenv.2011.03.009.
- Meier, Alan, Cecilia Aragon, Marco Pritoni, Daniel Perry, and Therese Peffer. 2011. Facilitating Energy Savings Through Enhanced Usability of Thermostats. In *ECEEE Summer Study on Energy Efficiency*, 1431-1438. Belambra Presqu'île de Giens, France: European Council for an Energy-Efficient Economy, June 6.
- Peffer, Therese, Marco Pritoni, Alan Meier, Cecilia Aragon, and Daniel Perry. 2011. "How people use thermostats in homes: A review." *Building and Environment* 46 (12) (December): 2529-2541. doi:10.1016/j.buildenv.2011.06.002.
- Perry, D., C. Aragon, A. Meier, T. Peffer, and M. Pritoni. 2011. "Making Energy Savings Easier: Usability Metrics for Thermostats." *Journal of Usability Studies* 6 (4): 226-244.

### Other selected publications:

- Leighty, Wayne, and Alan Meier. 2011. "Accelerated electricity conservation in Juneau, Alaska: A study of household activities that reduced demand 25%." *Energy Policy* 39 (5) (May): 2299-2309. doi:10.1016/j.enpol.2011.01.041.
- Meier, Alan, Karen Rosen, and Wolfgang Huber. 1998. Reducing Leaking Electricity to 1 Watt. In *ACEEE Summer Study on Energy Efficiency in Buildings*. Pacific Grove, CA: American Council for An Energy-Efficient Economy.
- Meier, Alan K., and James E. Hill. 1997. "Energy test procedures for appliances." *Energy and Buildings* 26 (1): 23-33. doi:10.1016/S0378-7788(96)01022-5.

Meier, Alan, Leo Rainer, and Steve Greenberg. 1992. "The Miscellaneous Electrical Energy Use in Homes." *Energy - The International Journal* 17 (5): 509-518.

Meier, Alan, Janice Wright, and Arthur Rosenfeld. 1981. "Supply Curves of Conserved Energy for California's Residential Sector." *Energy -- The International Journal* 7: 347-358.

### **Synergistic activities:**

1. Standby power use (1995 - ). I recognized the micro and global significance of electricity consumed by appliances while switched off—1% of global CO2 emissions—and proposed technical and policy solutions. This included a goal of reducing standby to 1 watt per product. An Executive Order by President Bush was based on my recommendations.
2. Graduate courses in energy efficiency (2007 - ). I pioneered a one-year graduate course in energy efficiency at UC Davis. This course is designed to convey the major concepts of energy demand and efficiency, including technologies, economics, and behavior.
3. Saving electricity in a hurry (2001 - ). I developed policies and strategies to assist regions suffering from temporary shortfalls in electricity supplies. These situations require a unique mix of technological and behavioral policies. I assisted California, Australia, Juneau AK, Japan, and China in responding to electricity shortages.
4. Supply curves of conserved energy (1979-2009). I established methods to aggregate the potential energy savings (and costs) from conservation measures in a way that could be compared to supply alternatives. This approach has been widely adopted by policymakers to understand opportunities to save energy and reduce carbon emissions.
5. Home Energy Magazine. (1979 - ) I founded a non-profit organization to disseminate reliable research results to energy-efficiency professionals. This magazine remains a key source of technical information for contractors, architects, regulators, and policymakers.

### **Collaborators & Other Affiliations**

*Collaborators and Co-Editors:* Aragon, C. (U. Wash.), Barnsley, I. (Int. Energy Agency), Barrett, J. (UC Davis), Biermayer, P. (LBNL), Biggart, N. (UC Davis), Bradley, R. (Int. Energy Agency), Brown, R. (LBNL), Cheung, I. (LBNL), de T'Serclaes, P. (Int. Energy Agency), Deumling, R. (Consultant), Diamond, R. (LBNL), Ellis, M. (Int. Energy Agency), Finkelor, B. (UC Davis), Goreham, R. (UC Davis), Granderson, J. (LBNL), Gunda, S. (UC Davis), Gunshinan, J. (Home Energy), Hao, E. (UC Berkeley), Harrington, L. (U. Melbourne), Heinemeier, K. (UC Davis), Hermelink, A. (Fraunhofer), Jollands, N. (Euro Bank for Recon), Kawamoto, K. (Osaka U), Kloss, G. (LBNL), Koomey, J. (Stanford), Kornbluth, K. (UC Davis), Lanzisera, S. (LBNL), Laustsen, J. (Int. Energy Agency), Leighty, W. (Shell Oil), Lutz, J. (LBNL), McMahon, J. (LBNL), Modera, M. (UC Davis), Moezzi, M. (Consultant), Murphy, S. (UC Davis), Nakagami, H. (Jyukankyu), Nordman, B. (LBNL), Onoda, T. (Int. Energy Agency), Pasquier, S. (Int. Energy Agency), Peffer, T. (UC Berkeley), Perry, D. (U. Wash.), Pritoni, M. (UC Davis), Ruth, M. (U. MD), Salon, D. (UC Davis), Sandquist, T. (PNNL), Sathaye, N. (LBNL), Schneider, K. (PNNL), Siderius, H. (Novem), Smith, D. (Microsoft), Sperling, D. (UC Davis), Tanaka, K. (Int. Energy Agency), Thomas, V. (Georgia Tech), Vernon, D. (CA U Humboldt), Waide, P. (Navigant), Wenzel, T. (LBNL),

*Graduate Advisors and Postdoctoral Sponsors.* Rosenfeld, A. (LBNL), Holdren, J. (OSTP)

*Thesis Advisor and Postgraduate-Scholar Sponsor.* Leighty, W. (Shell Oil), Stillwater, T. (UC Davis), Joel Bremson (UC Davis),

*Total number of graduate students advised:* 6.