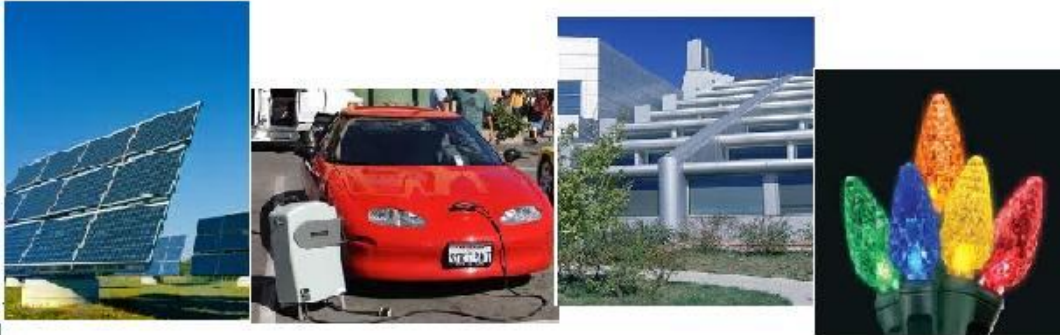


Physics of Sustainable Energy II: Using Energy Efficiently and Producing It Renewably



**Saturday/Sunday, March 5–6, 2011
University of California at Berkeley**

**Sponsored by: The American Physical Society's
 Forum on Physics and Society
 Topical Group on Energy Research and Application
 & The American Association of Physics Teachers**

This second workshop on Physics of Renewable Energy is being organized because of the enthusiastic reception of the first such workshop, held in March 2008. Once again, international experts will give the technical background to understand the issues connected with using energy more efficiently and producing it renewably.

Organizers: David Hafemeister, Cal Poly, San Luis Obispo; Daniel Kammen, World Bank; Barbara Levi, *Physics Today*; Peter Schwartz, Cal Poly, San Luis Obispo

\$100/\$80 for students includes all talks, 2 lunches and conference proceedings
\$35 for Saturday night banquet

To register by credit card go to www.aps.org/units/fps/meetings/energy/
or send a check to APS Meetings Dept., One Physics Ellipse, College Park, MD, 20740-3844.

\$100 registration____, \$80 Student____, \$35 Banquet____: Total_____

Name_____

Address_____

Phone_____email_____

Home Institution_____

See www.calpoly.edu/~dhafemei/APSEnergy.html

Physics of Sustainable Energy II: Using Energy Efficiently and Producing It Renewably

Evans Hall 10, University of California at Berkeley

Saturday, March 5, 8:30 AM

Energy Policy

CA State Policy, Dian Grueneich (former CA PUC Commissioner)
Science and Policy Innovations for a Low-Carbon Economy, Dan Kammen (UC Berkeley, World Bank)
Energy in the Developing World, Ashok Gadgil (LBL)
Energy and Water Connection, Michael Webber (Univ. Texas)

Environmental Effects of Fossil Fuels

NAS 2010 Study, Hidden Environmental Costs of Fossil Energy, Chris Field (Carnegie Inst. of Washington)
Studying the Causes of Recent Climate Change, Benjamin Santer (LLNL)
Non-Carbon Greenhouse Gases, Katey Anthony (U. Alaska)
Global Circulation Models, Inez Fung (UC Berkeley)
Carbon Sequestration, Julio Friedmann (LLNL)

Decarbonizing Transportation

Transportation Mode Switching, Betty Deakin (UC Berkeley)
Electric Cars: Hybrids/PHEV/BEV, Dan Sperling (UC Davis)
Low Carbon Transportation Fuels of the Future, Tim Lipman (UC Berkeley)

Banquet Speaker: Art Rosenfeld (former Calif. Energy Commissioner)
on “*Energy Efficiency 1970—2030: From Sustainability to Carbon Taxes*,”

Sunday, March 6, 8:30 AM

Enhanced Efficiency Buildings

Exploring the Limits of Energy Efficiency in Office Buildings, David Claridge (Texas A&M)
Energy Simulation Tools for Buildings, Philip Haves (LBL)
Smart Buildings Using Demand Response, Mary Ann Piette (LBL)
Appliance and Lighting Energy Standards, Greg Rosenquist (LBL)

Renewable Energy

NAS 2009 Study on Electricity from Renewable Resources, K. John Holmes (NAS Study Director)
APS 2010 Study on Integrating Renewables on the Electricity Grid, George Crabtree (Argonne Nat'l. Lab)
Offshore Wind Power, Walter Musial (NREL)
Thermodynamic Efficient Solar Systems, Roland Winston (UC Merced)
Photovoltaic Roof Systems, Ben Bierman (Solyndra)
Photovoltaic Concentrator Systems, Steve Horne (Sol Focus)
Topics in Nuclear Power: Small Reactors and Nuclear Waste, Robert Budnitz (LBL)