

Seminar Series



Join us the second Thursday of every month for a series of “brown bag” seminars, sponsored by the National Renewable Energy Laboratory and the U.S. Department of Energy (DOE). Each seminar is held at NREL’s Washington, D.C., office or in Golden, Colorado. Topics focus on new and innovative renewable energy and energy analysis strategies, models, and technologies.



Web Access and Call-In Information

Log-In Info

URL for log-in:

<https://www.mymeetings.com/nc/join/>

Conference Number: SW192882

(no passcode is needed)

You also can join the event directly at

<http://www.mymeetings.com/nc/join.php?i=SW192882&p=&t=c>

Call-In Info

To call in: 1-877-989-1543

Passcode: 8864359



Environmental Impacts and Costs of Energy: Methodology and Results of the ExternE Project of the EU

A seminar presented by DOE/EERE’s Office of Planning, Budget, and Analysis and NREL’s Strategic Energy Analysis and Applications Center

Ari Rabl, Senior Scientist

Centre Energétique et Procédés, Ecole des Mines de Paris

BONUS: Thursday, July 17, 2008

12:15 – 1:15 p.m. (Golden, Colo.)

2:15 – 3:15 p.m. (Washington, D.C.)

(The seminar is also offered via conference call or Internet conferencing.

See the log-in and call-in information below. **An RSVP is required to ensure that we have enough phone lines and/or seats.**)

Environmental damage is one of the main justifications for increased use of conservation and renewables. Ari Rabl, of the Ecole des Mines de Paris, has been one of the key participants in all phases of the External Costs of Energy (ExternE) project series of the European Union (EU). During this seminar, he will present a summary of the methodology and results from ExternE. His analysis provides substantial evidence that the classical air pollutants (particles, NO_x and SO_x) from fossil fuels impose significant public health costs, comparable to the cost of global warming from CO₂ emissions. The total external costs are relatively low for natural gas (in the range of about 0.5 to 1 cents/kWh for most EU countries), but much higher for coal and lignite (in the range of about 2 to 6 cents/kWh for most EU countries). By contrast, the external costs of nuclear, wind, and photovoltaics are very low. The external costs of hydro are extremely variable from site to site, and the ones of biomass depend strongly on the specific technologies used and can be quite large for combustion.

Ari Rabl is a senior scientist at the Ecole des Mines de Paris. Since his retirement in 2007 (obligatory at 65 in France), he has been a consultant for Ecole des Mines and others. He received a Ph.D. in physics from Berkeley in 1969, and has worked at Argonne National Laboratory, NREL (1978-80), and Princeton University (1980-89). He has published more than 100 peer-reviewed journal articles and review papers, 10 patents, and the books *Active Solar Collectors and Their Applications* and *Heating and Cooling of Buildings: Design for Efficiency*. His specialty, since 1992, is the impact of pollution on health and environment.



Ari Rabl

Golden, Colo., information

1617 Cole Blvd., Golden, Colorado
Building 3, Conference Room 170.

Due to construction at the Visitors Center, the seminar location will remain in Building 3 until further notice.

Please contact Kalia Kehoe at

kalia_kehoe@nrel.gov or 303-384-7439

Washington, D.C., information

901 D Street SW (adjacent to the Forrestal Building)
or 370 L’Enfant Promenade. Ninth Floor.

Please contact Wanda Addison, of Midwest Research Institute (MRI), at

wanda_addison@nrel.gov or 202-488-2202

For more information on NREL analysis and applications, please visit www.nrel.gov/analysis and www.nre.nrel.gov/applying_technologies