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SCIENCE LITE SERIES

ENERGY PRODUCTION, CONSERVATION AND EFFICIENCY

Energy Sources and Climate: Thinking Outside the Box

the INSTITUTE for ENERGY EFFICIENCY

Mel Manalis

Research Physicist and Senior Lecturer, Environmental Studies Program

We currently are seeing an unprecedented global effort to reduce carbon dioxide in our atmosphere and oceans and combat global warming. Even in these times of significant change, many don't truly understand the sources of their energy or the environmental and economic benefits (and downsides) of the alternatives. Coal, for example, is a vital source of energy for the world's electricity (50% in America and 70% in China), yet it contributes 40% of the world's carbon dioxide. This lecture will review the fundamentals of global warming and explore the strengths and weaknesses of alternative energy sources, including solar, wind and nuclear.

Thursday, December 10, 2009

Reception and check in 7 p.m.

Lecture at 7:30 p.m.

First Presbyterian Church Fellowship Hall

21 East Constance Avenue (at State Street)

Admission cost: $8 for UCSB Affiliates and Chancellor's Council members; $10 for non-members

For questions, or if you need special arrangements to accommodate a disability, please call UCSB Community Relations at 893-4388. **PLEASE REGISTER EARLY**

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"*Energy Sources and Climate*" 12/10/09

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❑ Please reserve _____ place(s) for non-members at $10 each.

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Make your check payable to the **UCSB Affiliates** and return it to the Office of Community Relations, UCSB, Santa Barbara, CA 93106-1136.

The Speaker

Mel Manalis is a Research Physicist and Senior Lecturer for the Environmental Studies Program at UC Santa Barbara and a member of the Institute for Energy Efficiency's Economics and Policy Solutions Group. His research interests surround the development of quantifiable sustainability measures. Manalis has taught at UCSB for 35 years and has developed courses related to energy. During the 1980's, he led a seminal delegation of wind energy experts to advise the Chinese government on how to initialize a large-scale wind energy effort that has become a major underpinning of today's rapid advance in China's wind power development. He conducted the first wind energy study of Vandenberg Air Force Base in Lompoc California and the nascent study of solar energy applications for the California Energy Commission following the 1973 oil embargo. Manalis received his Ph.D. from UC Santa Barbara in 1970.