Energy for a Sustainable and Secure Future

6th National Conference on Science, Policy and the Environment
January 26-27, 2006

Agenda

Ronald Reagan Building and International Trade Center
1300 Pennsylvania Avenue, NW, Washington, DC

Thursday, January 26, 2006

8:00 am **Registration & Continental Breakfast**
Amphitheater Foyer, food also in Hemisphere Suite

8:00 am- **Exhibition** Amphitheater Foyer and Hemisphere A
5:30 pm **Poster Session** Hemisphere A and B

9:00 am **Welcome** (Amphitheater)
Amb. Richard Benedick, President, National Council for Science and the Environment

9:15 am **Keynote Address** (Amphitheater)
Ross Pillari, President, BP America

10:00 am- **Plenary Roundtable –Opportunities for Decisionmaking** (Amphitheater)
Moderator:
Henry (Hank) Habicht II, CEO, Global Environment and Technology Foundation
Speakers:
Bob Greco, Director of Policy Analysis, American Petroleum Institute
Mark Levine, Director, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory
Katie McGinty, Secretary, Pennsylvania Department of Environmental Protection; Chair, Council on Environmental Quality 1993 -1998
Hazel O'Leary, President, Fisk University; Secretary of Energy 1993-1997

11:00 am **Plenary Roundtable - Opportunities from Science and Technology** (Amphitheater)
Moderator:
Charles (Chip) Groat, Director, Center for International Energy and Environmental Policy, University of Texas, Austin; Director, U.S. Geological Survey 1998-2005
Speakers:
Volker Hartkopf, Director, Center for Building Performance and Diagnostics, Carnegie Mellon University
Daniel Kammen, Director, Renewable and Appropriate Energy Laboratory, University of California, Berkeley
James Lake, Associate Director for Nuclear Programs, Idaho National Laboratory
Lee Lynd, Professor of Engineering, Dartmouth College

12:15 pm-1:30 pm **Lunch** (on your own - food court in the building)
Book Signing: *Cities in the Wilderness*, *Bruce Babbitt*, Secretary of the Interior, 1993-2000
Film Amphitheater**:** *Edens Lost & Found: Chicago* , *Harry Wiland*, Wiland-Bell Productions
** Breakout Session Chairs and Volunteers meet in Polaris B/C

1:30 pm-5:00 pm **Concurrent Breakout Sessions**

Meeting Rooms	Decisionmaking in the Real World
	1. *Financing Energy Decisions (combined with session 2)*
Meridian E	2. Public Incentives vs. Market Forces
Meridian B	3. Vehicles & Transportation
Classroom C	4. Community Planning
Classroom A/B	5. Creating Climate-neutral Campuses
Classroom D	6. Building Design
Meridian D	7. Utilities
	Guiding Research for Safe, Clean, Available, Reliable and Affordable Energy
Oceanic B	8. Earth Observation Systems and Energy Planning
Continental C	9. The Future of Energy: Projections, Uncertainty and Risk
Polaris B/C	10. Assessing Energy Impacts on the Environment and People
Hemisphere B	11. Agriculture and Bioenergy - Achieving Sustainability
Continental B	12. Setting Research Priorities: Who? How? Why?
	Expanding Understanding
Meridian C	13. Professional Education and Capacity Building
Oceanic A	14. Consumer and Decisionmaker Education
Polaris A	15. K-12 Energy Education
Horizon B	16. Why do People Make the Decisions They Do? - Capitalizing on the Social Sciences
Continental A	17. Innovative Uses of Information Technology
Horizon A	18. Business Approaches to a Sustainable Energy Future
Amphitheater	19. Global and U.S. Perspectives on the Prospects for Renewable Energy

5:30 pm **Award Ceremony**
Amphitheater
Russell Train, Chairman Emeritus, World Wildlife Fund**;** First Chair, Council on Environmental Quality; Administrator, U.S. Environmental Protection Agency 1973-1978

6:00 pm **6th John H. Chafee Memorial Lecture on Science and the Environment** (Amphitheater)
Introduction
Amb. Richard Benedick, President, National Council for Science and the Environment
Finding Climate Change and Being Useful
Ralph J. Cicerone, President, National Academy of Sciences

7:00 pm-8:00 pm **Reception**
Atrium

8:00 pm **Post Conference Social Outing** (Amphitheater Foyer)
Interested students and young professionals meet Ashley Peterson in Amphitheater Foyer

Friday, January 27, 2006

8:00 am **Continental Breakfast** (Amphitheater Foyer and Hemisphere Suite)

8:00 am- **Exhibition** Amphitheater Foyer and Hemisphere A
1:30 pm **Poster Session** Hemisphere A and B

9:00 am **Keynote Address** (Amphitheater)

Introduction

***Anthony Michaels*,** Director, Wrigley Institute for Environmental Studies, University of Southern California

Plenary Lecture

Dian Ogilvie, Senior VP and Chief Environmental Officer, Toyota Motor Sales, USA

10:00 am- **Concurrent Symposia**
noon

Decisionmaking in the Real World (Meridian D/E)

How are decisions made about energy systems to develop or use, technologies to deploy, policies to propose? How are factors such as technology, economics, public concerns balanced? What are the processes and pressures? What are the opportunities for decisions that will improve the sustainability and security of energy production and use?

H. Jeffrey Leonard, Moderator, President, Global Environment Fund
Patrick Atkins, Director of Environmental Affairs, Alcoa
Michele Blazek, Director of Technology and Environment, AT&T
Lewis Milford, President and Founder, Clean Energy Group
Sunita Narain, Director, Centre for Science and Environment, New Delhi, India
Timothy Profeta, Director, Nicholas Institute for Environmental Policy Solutions, Duke University
Patrick Spears, President, Inter-tribal Council on Utility Policy

Guiding Research for Impact (Hemisphere B)

How are decisions made about research priorities? What are the processes and pressures? what are the opportunities for transformative research regarding energy sources, uses and processes?

Mike Telson, Moderator, Senior Advisor, University of California Office of Federal Governmental Relations, and Former Chief Financial Officer, US DOE
Melanie Kenderdine, VP, Gas Technology Institute, and former Director DOE Office of Policy
Robert Kripowicz , President, Milestone Consulting and Former Acting Assistant Secretary for Fossil Energy, U.S. Department of Energy
Patrick Leahy, Acting Director, U.S. Geological Survey
Richard Meserve, President, Carnegie Institution of Washington
Ari Patrinos, Associate Director, Office of Biological and Environmental Research, DOE Office of Science

10:00 am-noon **Concurrent Symposia Continued**

Assessing Energy Futures (Horizon Ballroom)

What do the major models say? Why are the projections so different? How do decisionmakers use this information? How can better models and scenarios that take advantage of technological changes be developed and used to improve decisionmaking?

Stephen DeCanio, *Moderator*, Dept. of Economics, University of California, Santa Barbara
Guy Caruso, Administrator, Energy Information Administration, U.S. Department of Energy
Chris Flavin, President, Worldwatch Institute
Robert L. Hirsch, Senior Energy Program Advisor, SAIC
Michael Totten, Senior Director, Climate & Water Programs, Conservation International

10:00am-noon **Climate Change: Science to Action** (Amphitheater)

In October 2005, the Yale School of Forestry and Environmental Studies sponsored a conference Climate Change: Science to Action. US leaders from science, business and finance, environmentalists and civil society, education, entertainment and advertising, news media, politics, and religion and ethics met to craft a strategy for communicating scientific information about climate change in a way that compels action by society. Discussants will present the action plan developed at the conference. Societal leaders not present at the conference will respond, initiating a dialogue that will involve all present at this symposium.

Dan Abbasi, Moderator, Associate Dean, Yale School of Forestry and Environmental Studies
Presenters:
Richard Cizik, Vice President for Governmental Affairs, National Association of Evangelicals
Robert Edgar , General Secretary, National Council on Churches, Congressman- PA (1974-87)
Richard Somerville, Distinguished Professor, Scripps Institution of Oceanography, University of California, San Diego
Respondents:
Rick Piltz, Founder and Director, Climate Science Watch
Gordon Slack , Energy Business Director, Dow Chemical
Jim Yienger, Director, International Council for Local Environmental Initiatives (ICLEI)

Integrating Discoveries from Other Scientific Fields into Energy Science and Technology (Polaris Suite)

Scientific discoveries in non-energy fields have great potential for potential for transforming the future use of energy. This symposium will explore contributions from fields such as nanotechnology, biotechnology, information technology, microbiology and social sciences that may be applicable to energy. Leading researchers and thinkers will describe advances in these fields and potential applications to energy. All present will discuss how to provide better connections between these sciences and traditional energy research and development.

Tina Kaarsberg, Moderator, Office of Policy & International Affairs, US Department of Energy
Marilyn Brown, Interim Director, Engineering Science and Technology Division, Oak Ridge National Laboratory
Patricia M. Dehmer, Director, Office of Basic Energy Sciences, Office of Science, U.S. Department of Energy
Willett Kempton, Senior Policy Scientist, Center for Energy and Environmental Policy, University of Delaware
Bruce Logan, Director, H2E Center & Engineering Environmental Institute, Pennsylvania State University

Noon- 1:30 pm **Buffet Lunch** (Atrium)
** Some tables reserved for mentor/young professional networking.

1:30 pm **Plenary Roundtable - Building Collaborations for Progress** (Amphitheater)
Moderator:
Phil Sharp, President, Resources for the Future; Congressman, Indiana (1975-95)
Speakers:
Sally Bingham, Director, The Regeneration Project , Episcopal Power and Light
Reid Detchon, Executive Director, Energy Future Coalition, former Principal Deputy Assistant Secretary for Renewable Energy, U.S. Department of Energy
Rob Donkers , Counselor for Environmental Affairs, European Commission Delegation in Washington, D.C
Phil Harter, Earl F. Nelson Professor of Law, University of Missouri
Wayne Shirley , Director, The Regulatory Assistance Project

2:45 pm **Plenary Roundtable - Integrating Climate Change into Energy Planning** (Amphitheater)
Moderator:
Vijay Vaitheeswaran, Global Environment & Energy Correspondent, *The Economist*
Speakers:
Marilyn Brown, Director, Engineering Science and Technology Division, Oak Ridge National Laboratory
David Conover, Principal Deputy Assistant Secretary for Policy and International Affairs, U.S. Department of Energy
Congressman Jay Inslee, State of Washington - First District, U.S. House of Representatives
Joe Romm, Executive Director, Center for Energy & Climate Solutions and former Acting Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy

4:00 pm **Adjourn**

Breakout Sessions – Thursday, January 26, from 1:30 pm – 5:00 pm

Sessions on Decisionmaking in the Real World

1. Financing Energy Decisions (Combined with Session 2)

2. Public Incentives vs. Market Forces Room: Meridian E

Session Chair: ***Craig Schiffries***, Director of Science Policy, National Council for Science and the Environment
Discussants*:* ***Bruce Babbitt***, United States Secretary of the Interior, 1993-2000; ***Richard Doege***, Department of Economics, University of Maryland; ***Tom Donlan***, Editorial Page Editor, Barron's Financial Newspaper; ***Mindy Lubber***, President, Coalition for Environmentally Responsible Economies (CERES)

What are the relative roles of public incentives and market forces in determining which energy projects are funded? Is there a need for something like the "New Apollo" program proposed by Rep. Jay Inslee? This session will feature a presentation by Bruce Babbitt, Secretary of the Interior, 1993-2000, who will discuss his new book *Cities in the Wilderness*, which makes the case for major public investment.

3. Vehicles & Transportation Room: Meridian B

Session Chair: ***Joe Romm***, Executive Director, Center for Energy & Climate Solutions; Former Acting Assistant Secretary, Energy Efficiency and Renewable Energy, U.S. Department of Energy
Discussant: ***Julie Abraham***, Director, Office of International Policy, Fuel Economy and Consumer Programs, National Highway Traffic Safety Administration (NHTSA)

The transportation sector is not only a major consumer of oil but also a major contributor to climate change and emission of pollutants. What are the opportunities and challenges to "winning the oil end game", creating fuel cells, electric cars and other transformative approaches? What are the opportunities and challenges for mass transit? What are other interim strategies?

4. Community Planning Room: Classroom C

Session Chair: ***Jeff Soule***, Director of Policy, American Planning Association
Facilitator: ***Kimberly Lamphier***, Business Resource Representative, Montgomery Works, Montgomery County, MD
Discussants: ***David Whitaker***, Transportation Planning Manager, State of Maryland, Department of Planning

The physical design of a community has significant impacts on energy use. Sprawl creates automobile dependent communities. A counter-movement including "new urbanism" and "walkable, liveable communities" and integrating transportation and energy planning into community design provides an alternative to spiraling sprawl. How can transportation and energy-related issues be better incorporated into community planning?

5. Creating Climate-neutral Campuses Room: Classroom A/B

Session Co-Chairs: ***Kristy Jones***, Coordinator, Campus Ecology Program, National Wildlife Federation; ***Julian Keniry***, Director, Youth and Campus Programs, National Wildlife Federation
Discussants: ***Jennifer Andersen***, Coordinator, Maine Global Warming Action Coalition, Natural Resources Council of Maine; ***Dan Kammen***, Professor and Director, Renewable and Appropriate Energy Laboratory, University of California – Berkeley; ***Brooke Owyang***, Student, Berkeley

Energy Alliance for Renewables Project, University of California – Berkeley; ***Andrea Putman***, President, P2 Consulting

Many college and university campuses are examining their energy consumption and taking steps to reduce their contribution to global warming. Initiatives range from student led activities to multi-campus partnerships coordinated and encouraged by state government. How can scholarship regarding energy efficiency, demand management, and conservation be integrated with campus practices? What are the key steps in converting a campus to climate-neutrality?

6. Building Design Room: Classroom D

Session Chair: ***David Michaelson***, Chair, National Capital Region, U.S. Green Building Council
Discussants: ***Volker Hartkopf***, Director, Center for Building Performance and Diagnostics, Carnegie Mellon University; ***Tom Kiser***, CEO, Professional Supply, Inc.

Tremendous energy savings can be achieved from designing residential, commercial, and industrial buildings with energy conservation as a goal. Designs of new buildings and retrofits of existing buildings can save money and energy? What are the opportunities and challenges for science, engineering and design to turn individual buildings into power plants and net energy producers rather than energy hogs?

7. Utilities Room: Meridian D

Session Chair: ***Scott Sklar***, President, Stella Group
Discussants: ***Winifred Perkins***, Manager, Environmental Relations, Florida Power and Light; ***Bill Prindle***, Deputy Director, American Council for an Energy Efficient Economy

Aside from transportation, the energy sustainability and security issue will largely be determined by the practices of utilities. Is clean coal an oxymoron and an illusion? What are the short term and long term challenges and opportunities for utilities to provide electricity with reduced impact on the environment, human health and expenses? What are the roles of regulatory and non-regulatory means to advance best practices?

Sessions on Guiding Research for Safe, Clean, Available, Reliable and Affordable Energy

8. Earth Observation Systems and Energy Planning
Room: Oceanic B

Session Chairs: ***Jill Engel-Cox***, Battelle Science & Technology International; ***Erica Zell***, Research Scientist, Battelle Memorial Institute
Session Co-Chairs: ***Richard Eckman***, Energy Management Program Manager, Earth-Sun Systems Division, NASA
Discussants: ***Paul Gilman***, Project Leader, National Renewable Energy Laboratory; ***Scott McFarland***, Business Development, The Boeing Company; ***Scott Rayder***, Chief of Staff, National Oceanic and Atmospheric Administration (NOAA); ***Paul Stackhouse***, Senior Research Scientist, NASA Langley Research Center

The hurricanes of fall 2005 have made painfully clear the inter-related nature of weather and energy supply. Earth observation systems are key tools for forecasting, identification of energy resources and impacts. What opportunities exist from the formation of a Global Earth Observation System of Systems (GEOSS) and what are the challenges in linking earth observation to energy needs?

9. The Future of Energy: Projections, Uncertainty and Risk
Room: Continental C

Session Chair: ***Jim Barrett***, Director, Sustainable Economics Program, Redefining Progress
Discussants: ***Dan Desmond***, Deputy Secretary, Office of Energy and Technology Development, Pennsylvania Department of Environmental Protection; ***Charles (Chip) Groat***, Director, Center for International Energy and Environmental Policy, University of Texas, Austin

Decisionmakers depend upon forecasts of future energy availability and consumption. Energy-related projections are carried out by a wide range of organizations and at varied geospatial scales. How strong is the science of energy forecasting? What are the roles of scenario-based approaches to better incorporate future technological changes? What public and private investments are needed to improve energy forecasting?

10. Assessing Energy Impacts on the Environment and People
Room: Polaris B/C

Session Chair: ***Nathalie Valette-Silver***, National Ocean Services, National Oceanic and Atmospheric Administration
Discussants: ***Bill Karsell***, Task Force Leader, ASTM International; ***Stanley Rhodes***, President and CEO, Scientific Certification Systems

Many decisions about energy investments are influenced by information or assumptions about energy sources/systems and their relative environmental, social, and economic impacts. How can better comparisons be made? Who are credible sources for these comparisons?

11. Agriculture and Bioenergy - Achieving Sustainability
Room: Hemisphere B

Session Co-Chairs: ***Rick Cruse***, Professor, Iowa State University Program in Sustainable Agriculture; ***Robin Graham***, Group Leader, Ecosystem and Plant Sciences, Environmental Sciences Division, Oak Ridge National Laboratory, U.S. Department of Energy
Discussants: ***Nathanael Greene***, Senior Policy Analyst, National Resources Defense Council; ***Paul Lasley***, Professor and Chair, Rural Sociology, Iowa State University; ***Lee Lynd***, Professor of Engineering, Adjunct Professor of Biology, Dartmouth College

Biofuels is one of the fastest growing areas of energy production. What are the potentials for bioenergy? What is needed for a secure and sustainable system for energy feedstock production?

12. Setting Research Priorities: Who? How? Why?
Room: Continental B

Session Chair: ***Gerry Stokes***, Vice President for International Partnerships, Battelle Memorial Institute
Discussant: ***Jerry Ekmann***, Associate Director, National Energy Technology Laboratory, U.S. DOE

How are decisions made about research priorities? What are the processes and pressures? What are the opportunities for transformative research regarding energy sources, uses and processes? How can advances in other fields of science such as biotechnology, nanotechnology and information technology be incorporated into developing better energy solutions?

Sessions on Expanding Understanding

13. Professional Education and Capacity Building Room: Meridian C

Session Chair: ***Hilary Inyang***, Duke Energy Distinguished Professor and Director, Global Institute for Energy and Environmental Systems, University of North Carolina at Charlotte
Discussants**:** ***Roger Ebbage***, Director, Energy Programs, Lane Community College; ***Ellen Kabat-Lensch***, Director, Advanced Technology Environmental Education Center

Workers with a large numbers of scientific, technical, social, and other skills are needed to advance energy production and use to a more sustainable and secure position? What are the skill sets and professions needed? How do community colleges, colleges and universities provide the educated workforce to meet these needs?

14. Consumer and Decisionmaker Education Room: Oceanic A

Session Chair: ***Carol Werner***, Executive Director, Environmental and Energy Study Institute
Discussants: ***Jill Abelson***, Energy STAR, U.S. EPA; ***Cyrus Bhedwar***, State Energy Program Manager, Georgia Environmental Facilities Authority; ***Jim Kundell***, Director, Vinson Institute of Environmental Policy, University of Georgia

Although energy is now a "hot topic" for consumers and policy makers, neither the American public nor most politicians have particularly high knowledge about energy issues and options. One result is that the range of the debate about energy supply and demand is rather limited and often not based on scientific knowledge. What options and opportunities exist for educating decisionmakers and consumers? What works well and should be expanded?

15. K-12 Energy Education Room: Polaris A

Session Chair: ***Blanche Sheinkopf***, President, The Sheinkopf Group - Energy and Education Consulting
Discussants: ***Karen Anderson***, Green Schools Program Manager, Montgomery County Public Schools; ***Sharon Cooke***, Former Chief of Education Programs, Washington DC Energy Office; ***Katy Hatcher***, ENERGY STAR K-12 National Manager, U.S. E.P.A.; ***Robert Kobet***, President, Sustainaissance International; ***Joanne Spaziano***, Cranston Public Schools, Rhode Island; National Teacher Advisory Board, National Energy Education Development (NEED)

There are relatively few curricula and programs directed towards educating K-12 students about energy. What works well and can be expanded upon? What are the needs for a major new national scale energy education program aimed at young people

16. Why do People Make the Decisions They Do? - Capitalizing on the Social Sciences Room: Horizon B

Session Co-Chairs: ***Katy Janda***, Assistant Professor, Environmental Studies Program, Oberlin College; ***Christopher Payne***, Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory
Discussants: ***Paul Stern***, Director, Committee on the Human Dimensions of Global Change, National Academy of Sciences

What can social sciences contribute to understanding how decisions relating to energy are made? What are the areas where better information can lead to improved decisionmaking? How can social science research be better incorporated into energy planning?

17. Innovative Uses of Information Technology Room: Continental A

Session Chair: ***Cutler Cleveland***, Director, Center for Energy and Environmental Studies, Boston University

How can information technology be better used to improve understanding about energy and to advance better decisions about energy? How can NCSE's new Energy Portal be developed in a way to serve improved decisionmaking?

18. Business Approaches to a Sustainable Energy Future Room: Horizon A

Session Co-Chairs: ***Charles J. Bennett***, Global Corporate Citizenship Research Group, The Conference Board; ***Meredith Whiting***, Senior Research Fellow, The Conference Board
Discussants***:*** ***Byran Jacob***, Environmental Technologies Manager, The Coca-Cola Company; ***Franklyn A. Ericson***, Manager, Environmental Operations & Central Services, S.C. Johnson & Sons

Some businesses are taking considerable leadership in reducing energy use and cutting emissions of greenhouse gases. What are the motivations and actions of these businesses? How can these commitments and practices be spread to other companies and also be used to advance national action towards a more sustainable and secure future?

19. Global and U.S. Perspectives on the Prospects for Renewable Energy
Room: Amphitheater

Session Co-Chairs: ***Michael Eckhart***, President, American Council on Renewable Energy (ACORE); ***David Hales***, Council for Sustainability Policy, Worldwatch Institute
Discussants: ***Henry (Hank) Habicht II,*** CEO, Global Environment & Technology Foundation; ***Bill Holmberg***, Chairman, Biomass Coordinating Council, ACORE; ***Howard Learner***, Executive Director, Environmental Law & Policy Center; ***Griffin Thompson***, Agency for International Development, United States State Department; ***Tom Weirich***, Business Development Associate, ACORE

This session will cover policy, markets, industry, and technology, and will provide perspectives on key issues, opportunities and outlook for renewable energy.

Biographies of Plenary Lecturers

Thursday Morning Keynote Address:

Ross J. Pillari is President & CEO of BP America Inc. located in Warrenville, IL and a Group Vice President, BP plc, headquartered in London, UK.

In addition to his role as the senior BP executive in the U.S.A., he is also the Group Vice President responsible for the Western Hemisphere Region of the BP Group, including North America, Latin/South America and the Caribbean.

Mr. Pillari joined Standard Oil of Ohio in 1972. He served in a variety of posts including Manager, Wholesale Nitrogen Marketing (Chemicals), President of Truckstops of America, General Manager of Marine Transportation, and Vice President of Wholesale Marketing and Distribution.

Following the acquisition of Standard by BP in 1987, he moved to London to become General Manager of the Benelux Refining Division. After returning to the USA in 1990 as Vice President of Retail Sales, he moved back to London in 1992 as Chief of Staff for Group Research and Engineering at the Sunbury Research Center. In 1993 he moved to Australia as Director of Marketing for Australasia. In June 1996 he returned to the USA in a dual role of Senior Vice President, Marketing and Oil Director - BP Oil USA.

In 1997 he returned to London as Group Vice President, Downstream Marketing. In this role he was responsible for BP's global marketing operations. Following the merger with Amoco and the acquisition of ARCO he became the Group Vice President for the USA, UK, and Continental European retail operations, and in 2001 he was named President & CEO, BP America Inc. and Head of the Western Hemisphere Region for BP plc.

Mr. Pillari is a member of the Board of Directors of The American Petroleum Institute, The Chicago Symphony Orchestra, The Foreign Policy Association, The Alliance to Save Energy, and a member of The Baker Institute Energy Forum. He is also a member of the Chicago Commercial Club and serves on the Naperville School Superintendent's Advisory Board. He is a graduate of Case Western Reserve University and the Stanford Executive Program. He resides in Naperville, IL with his wife and three children.

Friday Morning Keynote Address:

Dian Ogilvie is Senior Vice President and General Counsel, and Chief Environmental Officer for Toyota Motor Sales (TMS), U.S.A., Inc. She also serves on Toyota's seven-member executive committee.

Mrs. Ogilvie is responsible for overseeing all legal affairs for TMS, serves as the chief environmental officer, and oversees internal audit, state government affairs, risk management and the environmental coordination office. Previously, as group vice president and assistant general counsel, Mrs. Ogilvie was responsible for all business and corporate law matters and corporate governance.

Prior to joining Toyota in 1985, Mrs. Ogilvie worked as an attorney handling corporate litigation at the law firm of O'Melveny & Myers in Los Angeles, and as a law clerk for U.S. District Court Judge William Matthew Bryne Jr.

Mrs. Ogilvie studied at Pomona College and received her Bachelor of Arts degree with high honors in history from the University of California, Riverside, and she was elected to Phi Beta Kappa. Mrs. Ogilvie earned a master's degree in history from the University of Arizona in Tucson, and she received her juris doctor degree from the University of California, Los Angeles (UCLA) in 1975. While in law school, Mrs. Ogilvie served as chief article editor of the UCLA Law Review, was Order of the Coif, and named Graduate Woman of the Year in 1975.

Currently a member of the American Bar Association, the Women Lawyers Association of Los Angeles, the General Counsel Roundtable, and the Sierra Club, Mrs. Ogilvie was recognized as one of the 100 Leading Women in the Automotive Industry by Automotive News in 2000 and 2005. Mrs. Ogilvie serves on the boards of the Toyota U.S.A. Foundation, the Los Angeles Automotive Training Center and the Constitutional Rights Foundation.

She resides in Hermosa Beach, Calif., and has two sons and three granddaughters.

NCSE Lifetime Achievement Award Recipient:

Russell Train is an environmental statesman whose half-century of accomplishments and leadership have shaped the field of worldwide conservation. As one of the pioneering architects of many of the laws and regulations that have protected our environment for more than 30 years, and as a founder, president, and chairman of the World Wildlife Fund (WWF), Mr. Train has been a tireless advocate for the environment, unmatched in his efforts to protect our precious natural heritage.

After graduating law school, Mr. Train specialized in tax law, and was eventually appointed by President Eisenhower to be a judge on the U. S. Tax Court. His interests turned towards the environment while on safari in Africa in the 1950s. There, he developed an appreciation of the need for conservation. In 1959, he founded the Wildlife Leadership Foundation, through which he attempted to help the emerging nations of Africa establish an infrastructure of professional resource management to create effective wildlife parks and reserves. Soon after, he resigned from his position on the tax court to accept an offer to be president of the Conservation Foundation. A research, education, and information-oriented institution, during Mr. Train's tenure it stressed citizen participation, supported demonstration projects, and sponsored a major conference on environmentalism in international economic growth. Train also focused the foundation on finding methods to insert greater environmental awareness into federal policy-making processes.

Mr. Train re-entered government service in 1968, when President Lyndon Johnson appointed him to the National Water Commission. He remained active in policymaking under Nixon, and in 1970 he was appointed to be the first head of the Council on Environmental Quality (CEQ). During his tenure, Mr. Train was instrumental in developing many important environmental policies, including policies on clean air and water, toxic substances, safe drinking water, surface mining and endangered species. In 1973, he became the second administrator of the Environmental Protection Agency, a position he held until 1978. Mr. Train helped shape an era of bipartisan concern for the environment that resulted in enactment of many significant laws.

Mr. Train also served in many international roles. From 1970 - 1977, Mr. Train was the U.S. representative to the NATO Committee on the Challenges of a Modern Society. In 1972, he headed the U.S. delegation to the U.N. Conference on the Human Environment, the Ocean Dumping Convention Conference, and two conferences in London which negotiated conventions on the control of oil spills at sea and tanker design. Also in 1972, he served as the President's personal representative to the meeting of the International Whaling Convention at which the U.S. proposed the moratorium (now in effect) on commercial whaling. In 1973, he headed the U.S. delegation, which negotiated the Convention on the Trade in Endangered Species (CITES). From 1972 - 1977, Mr. Train chaired the U.S. side of the U.S. - U.S.S.R. Environmental Cooperation Agreement and negotiated several other bilateral environmental agreements.

After his distinguished career in public service, in 1978 Mr. Train assumed the presidency of WWF, which he had helped co-found in 1968. In his more than 25 years of leadership at WWF - first as president, then in 1985, as chairman, and now as chairman emeritus - he has advanced its many conservation goals while making a profound difference in the lives of people around the world.

Mr. Train has received numerous awards and honors for his exemplary service, including the Presidential Medal of Freedom; the Aldo Leopold Medal of the Wildlife Society; Conservationist of the Year Award of the National Wildlife Federation; Public Service Medal of the National Academy of Science; the Heinz Family Foundation Chairman's Medal; the Keystone Center Leadership Award; and the Order of the Golden Ark (Netherlands). He is also the recipient of many honorary degrees.

His legacy continues through the Russell E. Train Education for Nature Program, which is helping produce the next generation of conservation leaders. He and his wife Aileen reside in Washington, DC, where Mr. Train remains active in the WWF as well as numerous other organizations.

John H. Chafee Memorial Lecturer:

Ralph J. Cicerone, president of the National Academy of Sciences, is an atmospheric scientist whose research in atmospheric chemistry and climate change has involved him in shaping science and environmental policy at the highest levels nationally and internationally.

Dr. Cicerone's research has been recognized through several honors and awards. His research was recognized on the citation for the 1995 Nobel Prize in Chemistry awarded to University of California, Irvine colleague F. Sherwood Rowland. The Franklin Institute recognized his fundamental contributions to the understanding of greenhouse gases and ozone depletion by selecting him as the 1999 laureate for the Bower Award and Prize for Achievement in Science, one of the most prestigious American awards in science. In 2001, he led a National Academy of Sciences study of the current state of climate change and its impact on the environment and human health, requested by President Bush and in 2002 was awarded the Roger Revelle Medal by the American Geophysical Union. In 2004, the World Cultural Council honored him with another of the scientific community's most distinguished awards, the Albert Einstein World Award in Science.

Early in his career, Dr. Cicerone held faculty positions in electrical and computer engineering at the University of Michigan. In 1978 he joined the Scripps Institution of Oceanography at the University of California, San Diego as a research chemist. From 1980 to 1989, he served as senior scientist and director of the atmospheric chemistry division at the National Center for Atmospheric Research in Boulder, Colorado. In 1989 he was appointed the Daniel G. Aldrich Professor of Earth System Science at the University of California, Irvine and chaired the department of earth system science from 1989 to 1994. Dr. Cicerone served as the dean of physical sciences for the next four years at University of California, Irvine, then as Chancellor of the University from 1998 to 2005.

Dr. Cicerone is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He has served as President of the American Geophysical Union, the world's largest society of earth scientists, and received its James B. Macelwane Award in 1979 for outstanding contributions to geophysics. He has published hundreds of refereed and conference papers and has presented invited testimony to the U.S. Senate and House of Representatives on a number of occasions.

Dr. Cicerone received his bachelor's degree in electrical engineering from the Massachusetts Institute of Technology where he was a varsity baseball player. He then received master's and doctoral degrees in electrical engineering from the University of Illinois, Urbana.

Exhibition

The Exhibition will take place Thursday, January 26 from 8:00 am- 5:30 pm and Friday, January 27 from 8:00 am- 1:00 pm.

Exhibits 1-18 are in the Amphitheater Foyer
Exhibits 19-23 are in Hemisphere A

1. EE Just Environmental Leadership Institute
2. Forest Service
3. Union of Concerned Scientists
4. 3M
5. BP
6. American Association for the Advancement of Science - Science and Technology Policy Fellowships
7. Millennium Institute
8. U.S. Environmental Protection Agency
9. Island Press
10. National Aeronautics and Space Administration
11. Toyota
12. U.S. Geological Survey
13. Alcoa
14. American Chemical Society/Green Chemistry Institute
15. National Oceanic and Atmospheric Administration
16. SC Johnson, A Family Company
17. National Park Service
18. ESRI
19. National Council for Science and the Environment/Earth Portal
20. Professional Supply Inc.
21. Minerals Management Service
22. U.S. EPA Climate Change and Waste Program
23. Natural Resources Conservation Service

Poster Session Titles & Authors

The Poster Session will take place Thursday, January 26 from 8:00 am- 5:30 pm and Friday, January 27 from 8:00 am- 1:00 pm.

Posters 1-18 Hemisphere A; Posters 19-31 Hemisphere B

1. SCHIMMEL, KEITH; LUSTER-TEASLEY, STEPHANIE; SHAHBAZI, ABOLGHASEM; SINGH, HARMOHINDAR; UZOCHUKWU, GODFREY; and KENNETH MURRAY. North Carolina A&T State University. **Interdisciplinary Energy and Environmental Studies Doctoral Program at North Carolina Agricultural and Technical State University**
2. JENNIE STEPHENS. Clark University. **Increasing Interest in Carbon Capture and Storage (CCS): Social, Economic, and Political Factors.**
3. GOSS-ROBERTSON, SARAH and JASON T. EBERL. Indiana University Purdue University, Indianapolis. **Elementary Ecological Education: Assessing Environmental Attitudes and Experiences across the Educational Experience.**
4. VENKATARAMAN, BHAWANI; CHAMANY, K.; MCGOWAN, A.; MORGAN, D.; VENKATARAMAN, B. and J. WILSON. Eugene Lang College, New School for Liberal Arts. **Energy and Sustainability: Development of a Team-taught Non-Science Major Course.**
5. ROBB BAJEMA. Aquinas College. **The Ecological Value of Reclaimed Coal Mine Grasslands.**
6. ROSS MCCALIB, LAUREEN and SUSAN STAFFORD. University of Minnesota. **University of Minnesota President's Initiative on the Environment and Renewable Energy.**
7. LOXSOM, FRED and NORMA VIVAR-ORUM. Eastern Connecticut State University. **The Role of Residential Windows in New England Climates.**
8. MARC MELAINA. Institute of Transportation Studies, University of California, Davis. **Initiating Hydrogen Infrastructures.**
9. LARSON, DEREK and GORDON BROWN. The College of St. Benedict/St. John's University. **Energy and Climate Change Across the Curriculum: Science and Public Policy as Elements of an Interdisciplinary Environmental Studies Program.**
10. AMOS, JOHN and DAVID J. CAMPAGNA. SkyTruth. **Development Footprint of Modern Onshore Natural Gas Production: Lessons from the Booming Jonah and Pinedale Anticline Gas Fields of Western Wyoming.**
11. AMOS, JOHN and DAVID J. CAMPAGNA. SkyTruth. **Satellite image analysis of damage to offshore oil and gas infrastructure caused by Hurricane Katrina.**
12. WARREN, KARIN and RICHARD D. BARNES. Randolph-Macon Woman's College. **Promoting Sustainable Planning at a Liberal Arts College.**
13. MUBENGA, KAMONAYI; JORDAN, NIKISA; ENGEL-COX, JILL; HOFF, RAYMOND; MCCANN, KEVIN; ROGERS, RAY and AMY ERWIN. Joint Center for Earth Systems Technology, University of Maryland Baltimore County. **The Smog Blog: Monitoring the Air Quality in the U.S.**
14. UNGER, GERI[1]; GRESSER, JULIAN[2] and GARY WNEK.[1] [1]Case Western Reserve University; [2]Alliances for Discovery, Santa Barbara, CA. **The Ten Cube Project: An International Initiative in Macro-Innovation to Accelerate Breakthroughs in the New Energy Economy.**
15. UNGER, GERI[1]; SAMID, GIDEON[2] and GARY WNEK.[1] [1]Case Western Reserve University; [2]D&G Sciences, McLean, VA **Peak-Oil When: Achieving a Global Consensus on Peak Oil.**

16. D. RICK VAN SCHOIK. Southwest Consortium for Environmental Research and Policy. **Bi-national Cooperation for Trans-boundary Energy Security.**

17. CUMMINGS, CHRIS and THOMAS P. SEAGER. Purdue University. **Development of a Renewability Indicator for a Mixed Source Fuel.**

18. CLIFFORD SINGER. University of Illinois at Urbana-Champaign. **Energy and Security: The Roles of Fossil, Nuclear, and Renewable Energy.**

19. STAUDHAMMER, CHRISTINA;[1] MONROE, MARTHA;[1] MCDONELL, LAUREN;[1] CARTER, DOUG;[1] MACIE, EDWARD;[2] and ANNIE HERMANSEN-BAEZ.[2] [1]University of Florida, School of Forest Resources and Conservation; [2]USDA Forest Service, Southern Center for Wildland-Urban Interface Research and Information. **Wood to Energy: Utilizing Interface Fuels for Bioenergy.**

20. ALAVALAPATI, JANAKI;[1] SMITH, W.H.; [1] AMACHER, G. [2] and S. MEHMOOD.[3] [1] University of Florida; [2] Virginia Polytechnic Institute and State University; [3]University of Arkansas. **A Framework to Determine Optimum Mix of Policies to Promote Bioenergy and Sustainability of Forests.**

21. INGRAM, LONNIE and WAYNE SMITH. University of Florida. **Engineering Bacterial Biocatalysts for Conversion of Lignocellulosic Biomass to Fuel Ethanol and Chemicals.**

22. KELLEY, STEPHEN; ROBINSON, DANIEL GOLDFARB, BARRY and J.B. JETT. North Carolina State University. **The Forest Biorefinery --Fueling Optimization for the Forest Products Industry.**

23. DUKE, CHARLOTTE[1] and LATA GANGADHARAN. [2] [1]University College London; [2]University of Melbourne. **Salinity in Water Markets: An experimental investigation of the Sunraysia Salinity Levy, Victoria, Australia.**

24. PATTON-MALLORY, MARCIA; GEE, ED and BRYCE STOKES. USDA Forest Service. **Woody Biomass – A Renewable Energy Source from our Nation's Forests.**

25. GREENBLATT, JEFFERY[1]; SUCCAR, SAMIR[2]; DENKENBERGER, DAVID C. [3] and ROBERT H. WILLIAMS.[2] [1]Environmental Defense; [2] Princeton University; [3]University of Colorado, Boulder. **Baseload Wind Power: Partnering with Energy Storage to Compete Against Decarbonized Coal Electricity in a Greenhouse-constrained World.**

26. BURKART, MICHAEL;[1] JAMES, D.; [1] LIEVMAN, M.[2] and C. HERNDL. [2] [1]USDA-ARS, National Soil Tilth Laboratory; [2]Iowa State University. **Nitrogen Dynamics and Soil Erosion in Crop and Livestock Systems with Potential Bioenergy Stocks in Western Iowa Watersheds.**

27. WILHELM, WALLACE; ERBACH, D. C.; WRIGHT, R. J. and R. L. FIREOVID. USDA-ARS. **Impact of Residue Removal for Biofuel Production on Soil and Crop Productivity - Renewable Energy Assessment Project (REAP).**

28. VISSER, RIEN[1] and RAFAELLE SPINELLI. [2] [1] Virginia Tech; [2]Harvesting Research Group CNR, Italy. **Harvesting Woody Biomass and Transportation Logistics for BioEnergy.**

29. HOWARI, FARES; SADOONI, F. and E. ABD EL-GAWAD. United Arab Emirates University. **Review of the Unique Economic Opportunities of the Coastal Sabkhas Environment, with Special Focus on Energy.**

30. KHAN, ABDUL REHMAN and I. AL-BASSAM. Kuwait Institute for Scientific Research. **Future Light Vehicle Import in Kuwait.**

31. SADOONI, FADHIL N. and FARES M. HOWARI. United Arab Emirates University. **Challenges for the New Iraq: Energy Perspective.**

Conference Room Locations

Thursday, January 26, 1:30-5:00 pm

Breakout Sessions (Concurrent)

Meeting Rooms	
	Decisionmaking in the Real World
	1. *Financing Energy Decisions (combined with session 2)*
Meridian E	2. Public Incentives vs. Market Forces
Meridian B	3. Vehicles & Transportation
Classroom C	4. Community Planning
Classroom A/B	5. Creating Climate-neutral Campuses
Classroom D	6. Building Design
Meridian D	7. Utilities
	Guiding Research
Oceanic B	8. Earth Observation Systems and Energy Planning
Continental C	9. The Future of Energy: Projections, Uncertainty and Risk
Polaris B/C	10. Assessing Energy Impacts on the Environment and People
Hemisphere B	11. Agriculture and Bioenergy - Achieving Sustainability
Continental B	12. Setting Research Priorities: Who? How? Why?
	Expanding Understanding
Meridian C	13. Professional Education and Capacity Building
Oceanic A	14. Consumer and Decisionmaker Education
Polaris A	15. K-12 Energy Education
Horizon B	16. Why do People Make the Decisions They Do? - Capitalizing on the Social Sciences
Continental A	17. Innovative Uses of Information Technology
Horizon A	18. Business Approaches to a Sustainable Energy Future
Amphitheater	19. Global and U.S. Perspectives on the Prospects for Renewable Energy

Friday, January 27, 10:00 am - Noon

Symposia (Concurrent)

Meeting Rooms	
Meridian D/E	1. Decisionmaking in the Real World
Hemisphere B	2. Guiding Research for Impact
Horizon Ballroom	3. Assessing Energy Futures
Amphitheater	4. Climate Change: Science to Action
Polaris Suite	5. Integrating Discoveries from Other Scientific Fields (Nano, Bio, Micro, Info, Social) into Energy Science and Technology

PLEASE NOTE: Classrooms A/B and C/D are located on the Mezzanine Level (third floor). See signs for directions.