

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
AMERICAN SOCIETY FOR ENGINEERING EDUCATION (ASEE)
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AIChE)
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (AAAS)

DECEMBER 2008

ENGINEERS FORUM ON SUSTAINABILITY

FOCUS ON CLIMATE CHANGE CONTINUES

This issue of the Forum Newsletter contains several articles which address climate change issues and challenges. The National Academies have launched a new study on "America's Climate Choices." The Pew Center has produced a series of reports entitled "Climate Change 101." And CAETS has published a statement on Delta Technology which addresses the impact of global climate change on delta zones. The Newsletter also includes summaries of the fine presentations that were made at the September Forum meeting, and a variety of other sustainability-related articles.

The next meeting of the Forum is scheduled for Friday, January 16, 2009, in the Lecture Room of the National Academy of Engineering in Washington, D.C. The Forum will meet from 9:00 A.M. to Noon, and the AAES International Activities Committee will meet in the same room from 1:00 P.M. to 4:00 P.M. All Forum attendees are invited to join the afternoon session as well.

Please mark your calendar. You will be e-mailed a copy of the Forum agenda separately. We look forward to seeing you on January 16.

Al Grant, Forum Chair
Darlene Schuster, Forum Co-Chair

Inside this issue:

ACADEMIA

Sustainability at Carnegie Mellon

PROFESSIONAL ORGANIZATIONS

PERSI Overview and Update
CAETS Statement on Delta Technology
ASME Water Management Technology
Vision
AAAS Sustainability Update
AIChE Institute for Sustainability Hosts
Industry Sustainability Leaders

INTERNATIONAL

First International Congress on
Sustainability Science and Technology
The Role of the Engineers in Meeting 21st
Century Societal Challenges,

OTHER ORGANIZATIONS

Overview of the National Academies' Energy
Study
The LEED-EB Experience at National
Geographic
Pew Center Publishes Climate Change 101
America's Climate Choices Study Launched

UPCOMING SUSTAINABILITY EVENTS

ACADEMIA

SUSTAINABILITY AT CARNEGIE MELLON

(Ed. Note: This article was abstracted from a paper prepared by Vanessa Schweizer of Carnegie Mellon University. It was included in an AASHE Pre-Conference Workshop on "Living Laboratories for Sustainability" and AAAS was editor of the collection of papers for the Workshop).

The Carnegie Mellon University: Steinbrenner Institute for Environmental Education and Research (SEER) is an umbrella organization of 18 academic research centers at Carnegie Mellon. It serves as the "virtual water cooler" for these centers and has a small staff of two directors - an executive director and a faculty director. It also acts as a "single voice" Carnegie Mellon's environmental research and education programs. SEER is an endowed organization made possible through a generous gift by Carnegie Mellon alumnus and trustee W. Lowell Steinbrenner. The research centers that are part of SEER are as follows:

- Carnegie Mellon Electricity Industry Center (CEIC)
- Center for Atmospheric Particle Studies (CAPS)
- Center for Building Performance and Diagnostics
- Center for International Corporate Responsibility
- Center for Iron and Steelmaking Research
- Center for Risk Perception and Communication
- Center for Sensed Critical Infrastructure (CenSCIR)
- Center for Sustainable Engineering
- Center for the Study and Improvement of Regulation
- Center for the Advancement of Applied Ethics and Political Philosophy (CAAPEP)
- Climate Decision Making Center
- Design Decisions Laboratory
- Green Design Institute
- Institute for Green Oxidation Chemistry
- Remaking Cities Institute (RCI)
- STUDIO for Creative Inquiry
- The Western Pennsylvania Brownfields Center
- WaterQUEST (Quality in Urban Environmental Systems)

Projects by SEER affiliated research centers run the gamut of campus, local community, and region as lab. For example, CenSCIR is making Carnegie Mellon one of the most "sensed" campuses in the world. CAAPEP has successfully institutionalized campus-level deliberative polls to inform institutional decision-making. CAPS, RCI, the Western Pennsylvania Brownfields Center, STUDIO, and WaterQUEST all have projects based in the local community. CEIC has many projects based in the region. In support of the work being done in these centers, SEER has four ongoing initiatives of its own: Graduate Fellowships, Corporate Partnerships, Seed Grant Programs, and Fellowships of Journalists.

SEER was established in 2004. The greatest challenge for SEER is how to be supportive of its 18 member centers without being "in the way." SEER often assists member centers with networking, fundraising, publicity, and other administrative details. Additionally, as Carnegie Mellon's "single voice" for academic initiatives related to sustainability, SEER acts as a champion and one-stop shop for sustainability information about Carnegie Mellon.

For more information about creating "Living Laboratories for Sustainability," contact Sarah Banas at sbanas@aaas.org.

PROFESSIONAL ORGANIZATIONS

PERSI OVERVIEW AND UPDATE

Practice, Education and Research for Sustainable Infrastructure (PERSI) is an initiative of the U.S. engineering community. Participation is open to all organizations that produce, use, research or educate for infrastructure practices, and are interested in the work of PERSI

PERSI's vision is that sustainable infrastructure supports a high and sustainable quality of life for all people in a changing world. PERSI's mission is to advance and incorporate concepts and knowledge of sustainability into the standards and practices used throughout the life cycle of infrastructure systems. PERSI will not itself produce standards and practices, but will help its member organizations address sustainability consistently in their practices and standards.

The ultimate objectives of PERSI are to: 1) Provide the practices needed for sustainable renewal of America's infrastructure to respond to marketplace values and meet society's needs; 2) Embed sustainability provisions in the practices regularly used for planning, design, construction, commissioning, operation, maintenance, renovation and removal of infrastructure; 3) Assist educational programs in architecture, construction, engineering, planning and related technologies, in incorporating principles for sustainable infrastructure in their curricula, strengthen K-12 education to improve public understanding of sustainability and infrastructure, and to attract qualified youth to infrastructure careers; 4) Establish an enduring program of research to provide critically needed knowledge for improvement of practices for sustainable infrastructure; and 5) Engage the U.S. infrastructure community in international efforts for sustainability.

The immediate objectives of PERSI are to assess current practices and knowledge and develop agendas for:

1. Implementation of best available practices.
2. Development of improved practices to exploit available knowledge.
3. Research to fill important gaps in knowledge, and
4. Education of current and future infrastructure professionals and technicians.

PERSI's task committees have been active:

The Committee on Measurements of Sustainability continues development of the framework for life-cycle assessment of infrastructure sustainability. An improved version was presented at the World Sustainable Building Conference in Australia in September, 2008, and will be posted on the PERSI website when the proceedings are published. (An earlier version is now available on the PERSI website).

The Committee on Geometrics for Sustainability has developed a report dealing with the potential uses of geometrics in sustainability and infrastructure, the available national geospatial databases, and the challenges of information sharing, data base compatibility and education. It is posted on the PERSI website.

The Committee on Planning for Sustainability is preparing a Workshop on Defining Agendas for Sustainable Infrastructure, for early 2009. The overview is posted on the PERSI website.

PERSI is exploring a memorandum of agreement with the Sustainable Building Alliance. The Alliance is a non-profit, non-partisan international network of assessment organizations, national building research centers and technical assessment organizations that is intended to accelerate the international adoption of sustainable practices through the promotion of shared methods of building performance assessment ratings. The SB Alliance initiative is supported by the UNESCO Chair for Sustainable Buildings, the sustainable building and construction initiative UNEP-SBCI

and the World Federation of Assessment Organizations (WFTAO) The technical working group currently represents 24 countries from all over the world. The Alliance website is www.sballiance.org . For more information about PERSI and its activities, visit www.persi.us

CAETS STATEMENT ON DELTA TECHNOLOGY

CAETS is the International Council of the Academies of Engineering and Technological Societies, Inc. At its 38th Annual Meeting in Delft and The Hague, in June, 2008, it developed a statement focused on sustainable development of the world's deltas, which will accommodate an estimated 70% of the global population by 2050. The statement is entitled "Delta Technology for a Sustainable and Habitable Planet."

The statement includes the following findings:

Delta areas have major economic potential because of their strategic locations close to seas and waterways. The ground is fertile and rich in minerals and raw materials. But their vulnerability is increasing because of rising sea levels, extreme river levels, subsiding soft soils, and increasing pressure on space and environment.

Delta zones are frequently subject to intense human intervention, including pressures derived from activities of productive sectors with great economic impact, such as agriculture, fishing, tourism and energy. Living in delta zones means living with uncertainty. In many instances, it is desirable to forego initial development or further development of such regions, but the reality is that many people currently live in delta regions, and their number is increasing every day.

Thus, the management of the natural and manmade systems in these areas and of their adaptation to global climate change requires an integrated application of all aspects of delta engineering.

The statement includes four recommendations:

1. A sustainable development of deltas in accordance with naturally occurring forces, interactions and materials, in order to preserve the environment and meet the future requirements of the global population.
2. Full development of simulation, forecasting and sensor technologies in the context of Delta Technologies, including the introduction of local - and global-scale monitoring and diagnostic systems applicable to real-time warning systems.
3. The development of a worldwide system of knowledge sharing for application to delta-region decision making; and an advanced risk management framework to include risk assessment, risk mitigation and risk-based communications.
4. Social and technical sciences should work closely together to increase awareness of the challenges humanity is facing in the enlightened use of deltas; to inform and educate the public and to find support for the necessary research, development and data collection to promote innovative solutions; and to shorten the time lag between availability and applications of new technologies.

For more information about CAETS, visit www.caets.org .

ASME WATER MANAGEMENT TECHNOLOGY VISION

Michael Tinkleman, PhD, Director, Research, ASME, reported in the ASME Water Management Technology Vision and Roadmap, at the September 26, 2008 meeting of the Forum. He said that the Vision was that by 2012, ASME will be recognized as a key resource in the development and

integration of water management technology solutions that enable the sustainable use and reuse of water.

The challenges to be addressed in achieving this vision include the following:

- Lack of effective price signals for water and wastewater treatment services prevents market forces from shaping consumption.
- Limited incentives and recognition for excellence in water management practices.
- Guidance on best management practices (BMP) for energy-efficient, nonpotable wastewater reuse is not readily available.
- Limited training materials regarding industrial water management technology best practices.
- No neutral forum for sharing water-related knowledge across multiple disciplines.
- Mechanical engineers are not being attracted to water management technology.

- Research funding for efficient water use has not been a high priority for funding agencies.

Research and Development activities identified as top priority include: (1) Develop best practices to measure energy and water use, (2) Evaluate water reuse and recycle efforts in commercial and industrial applications, and (3) Establish best management practices (BMPs) for industrial nonpotable water reuse.

Top priority Implementation activities include: (1) Enhance water reuse and recycle efforts in commercial and industrial applications through BMP workshops, (2) Cross-fertilize codes, standards and technologies from one industry to others (e.g., nuclear industry, military specification and space shuttle pumps), and (3) Identify lessons learned by the nuclear industry, such as high performance pumps that can be applied to the water/wastewater area.

Other top priorities include a wide range of education, outreach and training activities. For more information, contact TinklemanM@asme.org

AAAS SUSTAINABILITY UPDATE

The American Association for the Advancement of Science (AAAS), a co-sponsor of the Forum, is dedicated to collaboration across scientific disciplines. Sustainability is a common theme throughout AAAS' program activities. In addition to the Roger Revelle Fellow in Global Stewardship, as many as a quarter of the AAAS Science and Technology Policy Fellows are involved in an ad hoc sustainability group. The Center for Science, Technology, and Congress regularly tracks climate change policy and has held briefings on such topics as biofuels, adaptation, and mitigation. Sustainability has also been incorporated in the Education Directorate, including the creation of a K-12 curriculum guide for teaching climate change.

More recently, AAAS has created a Center for Science, Technology and Sustainability to bring together scientists and engineers from developed and developing countries to address fundamental issues at the nexus of social and environmental development. A key activity of the Center is the Forum on Science and Innovation for Sustainable Development, an online network highlighting important programs, resources and events, and linking scholars, managers, and decision makers interested in conducting and applying science and technology to support a sustainability transition. Traffic to the website has tripled over the past year, attracting on average 400 visitors a day. Over 40% of these visitors are international.

Another ongoing project for the Center is a review of university-based science and technology for sustainability ("sustainability science") programs aimed at stimulating dialogue on how such programs might develop and interact, not only in the U.S., but globally. In late 2006, AAAS invited

program directors to submit information about their program's structures, goals, and their respective challenges and successes. The 49 responses that were received by mid-January 2007 formed the basis for a Roundtable discussion at the AAAS Annual Meeting in February, which covered approaches to tackling common challenges that plague sustainability science programs. A discussion at the 2008 Annual Meeting focused on additional strategies for collaboration between these universities, including linking Fellows and exchanging research methodologies. This discussion will continue at the 2009 AAAS Annual Meeting in Chicago in February, 2009.

The Center also coordinates with AAAS affiliates and friends. Center staff serves as co-convenor for the Disciplinary Associations Network for Sustainability, sit on the National Academies' Roundtable on Science and Technology for Sustainability, and serve on the Advisory Council for the Association for the Advancement of Sustainability in Higher Education (AASHE).

For more information, visit www.sustainabilityscience.org.

AICHE INSTITUTE FOR SUSTAINABILITY HOSTS INDUSTRY SUSTAINABILITY LEADERS

The Institute for Sustainability hosted sustainability leaders in industry at the first Sustainability Index Roundtable, held in Philadelphia, PA on November 18, 2008. Two important initiatives of the Institute for Sustainability are the creation of an industry consortium called the Center for Sustainable Technology Practices (CSTP) and the development of an evaluation methodology, called the AIChE Sustainability Index (sm). On November 19, sustainability experts from the chemical processing industry discussed these initiatives in general as well as the specific role of managing sustainability and the utility of measurements. The forum provided an open avenue to discuss these pre-competitive issues.

The Sustainability Index has been developed for the chemical process industry and is being expanded to the industrial sectors for electric power generation and the industrial construction. It was developed by industry experts and advisors in sustainability including the National Council on Science and the Environment and the World Bank. It is being published in Chemical Engineering Progress. While silent on individual company performance, it serves as a useful benchmark for companies to enable a better understanding of current sustainability practices. It also allows measurement of the progress of companies and sectors with time.

The Sustainability Index Roundtable was followed by the annual meeting of the Center for Sustainable Technology Practices. CSTP discussed their pre-competitive projects as well as identified needs for future projects. At this meeting issued version 1 of the CSTP Sustainability Guide, which is a detailed guide on how to address sustainability considerations in business functions. Their focus is on implementation and development of sustainability best practices across the value chain and throughout a company's organizational structure.

During the meetings, the Sustainable Engineering Forum announced the INDUSTRIAL PRACTICE IN SUSTAINABLE ENGINEERING AWARD. The award will recognize individuals or teams who have made outstanding contributions over a long-term basis pertinent to sustainable engineering development in the practice of process/product design or manufacturing. This award focuses on applicants from small, medium, or large companies. Contributions may include paradigms for sustainable development and/or general application of new practices. The applicant or a member of the team, must be a member of AIChE Sustainable Engineering Forum at the time of application. See <http://www.iche.org/About/Awards/Division.aspx> for application material; due on February 10, 2009.

INTERNATIONAL

First International Congress on Sustainability Science and Technology

USEPA is bringing together International experts to the First International Congress on Sustainability Science and Engineering. The Congress, will be held on August 9 to 12 in Cincinnati, Ohio and is sponsored by US EPA and cosponsored by NIST, NSF, University of Kentucky, Sustainable Engineering Forum—AIChE, and is supported by ASME, US EPA OPPT/Green Chemistry Program, ACS Green Chemistry Institute, and IChemE. The AIChE Institute for Sustainability is the organizer of the Congress.

The purpose of the Congress is to provide a common platform to practitioners of various physical and ecological sciences, engineering fields, economics, and social sciences for exchanging emerging ideas about ways and means of protecting the environment and its resource depletion so that humans can achieve sustained economic growth and societal benefits through generations. Products, processes and systems for sustainability are among the major focus of this conference. Sustainability has become a common currency in describing proactive plans and solutions in many scientific, engineering, and social science disciplines with no consensus on what sustainability means. This congress is purposefully designed to bring experts from various disciplines so that it fosters an understanding of different points of view as they relate to products, processes and systems involving sustainability principles. Over time the expectation is that the exchange of ideas through effective dissemination means will lead to uniquely identifiable common sustainability goals, approaches and methodologies that are radically different to begin with. For instance, various sustainability metrics are used by the experts. The congress deliberations will lead, over time, to import of metrics used in one discipline to another so that a comprehensive set of metrics can be developed and used by all for a chosen system. The particular disciplines encouraged to participate in this conference are chemistry, biological sciences, ecology, engineering (chemical, civil, mechanical, and material, environmental, architectural), agriculture, biotechnology, nanotechnology, power and energy technologies, economics, public health and safety, and social sciences.

All presentations are plenary, and the talks will be a mix of solicited and unsolicited contributions. The duration of the Congress will be three full days. The presenters and attendees will be from all three sectors: industry, academy, and the Government. The international character will highlight the global nature of sustainability issues that are being discussed today.

The Conference will encourage broad-based implementation of sustainability concepts and their measurement in industrial practice. Selection criteria for solicited and un-solicited papers will include accomplishment and clarity of how sustainability as a paradigm is addressed or could be addressed. The best of the best will be represented in this congress and outcomes from the Congress will provide a benchmark for the state of sustainability science in 2009. Selected papers from this congress will be published as an edited book.

Perspectives of industrial sustainability outcomes
Sustainability as a scientific paradigm for solutions
Measuring sustainability
Value chain sustainability
Solutions for fossil and non-fossil power
Solutions for sustainable transportation
Sustainable design and architecture
Sustainable material/product designs
Sustainable processes from an LCA viewpoint
Modelling for sustainability
Standards and science-based guidance for sustainability

Confirmed plenary speakers include:

Vision: Roland Clift, President-elect of the International Society for Industrial Ecology

Consumer Products Perspective: Shekhar Mitra, Proctor & Gamble Global Vice President for Research and Development

Automotive Industry: Fujio Cho, Toyota CEO of Global Operations

IT Perspective: Chandrakant Patel, Hewlett Packard, HP Feloo and Director of the Sustainability IT EcoSystem Lab.

For additional information, see www.aiche.org/ICOSSEAug09.

THE ROLE OF ENGINEERS IN MEETING 21ST CENTURY SOCIETAL CHALLENGES

Brajendra Mishra, Professor and Associate Director, Kroll Institute, Colorado School of Mines, presented an overview of the AIME International Workshop related to sustainability. AIME and its 4 Member Societies, SPE, TMS, SME, and AIST¹, are hosting The Role of the Engineers in Meeting 21st Century Societal Challenges, Engineering Solutions for Sustainable Development: Materials and Resources - An International Workshop. It will be held on July 22nd-24th, 2009 at the Ecole Polytechnique Federale university in Lausanne, Switzerland. The American Society of Civil Engineers (ASCE) and the American Institute of Chemical Engineers Institute for Sustainability have agreed to co-sponsor this event.

With impending and burgeoning societal issues affecting both developed and emerging nations such as India and China, the global engineering community has a responsibility and an opportunity to truly make a difference and contribute. This workshop will focus on what materials and resources are integral to meeting basic societal needs in critical areas such as: energy, transportation, housing, food and water, recycling and health, the engineering answers for cost effective and sustainable pathways, and the development of the strategies needed for enabling the effective utilization of engineering solutions and the global engineering community. Attendees will receive proceedings, a white paper/report with policy/study recommendations, and a resource reference book². It will be an opportunity for engineering societies as well as global organizations with a stake in the world's future to share the collective perspectives on the engineering grand challenges that face our world today.

Keynote speakers from a range of organizations have been invited, including Harvard University and United Nations Framework Convention on Climate Change. Formal invitations and more detailed information can be found at time, you would like more information or have suggested speakers/participants, please contact AIME Associate Executive Director, Michele Gottwald at Gottwald@aimehq.org.

OTHER ORGANIZATIONS

OVERVIEW OF NATIONAL ACADEMIES' ENERGY STUDY

At the December 26, 2008 Forum meeting, Peter D. Blair, PhD., Executive Director, Division on Engineering and Physical Sciences, National Research Council, presented an overview on the status of the National Academies' Study "America's Energy Future: Technology Opportunities, Risks and Trade-offs." By way of background, he noted that the National Academies initiated the study in 2007 to inform the national debate about the nation's energy future. The study is designed to provide authoritative estimates of the current contributions and future potential of existing and new energy supply and demand technologies, their associated impacts, and projected costs. Three independently operating panels have been organized to examine three

classes of technologies for which there are considerable uncertainties and disagreements about prospective cost and performance; namely (1) energy efficiency, (2) alternative transportation fuels (such as biofuels), and (3) renewable electric power generating technologies.

The overall effort is being carried out in two phases. Phase one is organized as a foundational analysis to provide a technical base that narrows uncertainty in the cost, performance, and possible impacts of existing and prospective energy technology alternatives. The principal goal of Phase 1 is to supply an authoritative technical basis for articulating energy policy options that can be productively considered, debated and decided by the nation. Phase two is envisioned as developing technology and policy strategies for America's energy future. The Phase two portfolio of studies, to be conducted at the Academies and in other organizations, will address reduction of greenhouse gas emissions, transportation policy, the prospects for major increases in the use of biofuels and other alternative fuels in the U. S., energy research and development priorities, strategic energy technology development, policy analysis, and many related subjects.

The Phase one reports are scheduled to be published shortly. For information on the study, visit <http://www.nationalacademies.org/energy>.

THE LEED-EB EXPERIENCE AT NATIONAL GEOGRAPHIC

At the September 26, 2008 Forum meeting, Richard Neal, Chief Building Engineer, National Geographic Society, reviewed the Society's LEED-EB experience. The National Geographic Society Headquarters Complex in Washington, D.C., one of the world's largest scientific and educational non-profit organizations, is the first project to be certified under the LEED for Existing Buildings Rating System. The Headquarters Complex is comprised of four interconnected buildings ranging from 20 years to 100 years old.

The management team developed a capital budget that included major mechanical system infrastructure upgrades, space consolidation, security enhancements, and building and human resources management systems improvements. Policy development and implementation were key components of this LEED-EB project. Included were green site and building maintenance, construction waste management plans, and materials selection policies. A hybrid/alternative fuel vehicle incentive, giving employees one-month free parking and subsequent discounted parking, was added to the Society's Parking Policy.

The process involved determining the baseline of operations for the complex, then systematically developing and upgrading the entire complex. The challenges were the age of the buildings and the need for several major HVAC system improvements. An energy savings performance contract was used to implement the HVAC system improvements. This approach allowed the \$5.5 million HVAC system improvements to be carried out with a guarantee that the expected energy savings would be achieved. To respond to the concern of applying LEED-EB in older buildings, the team used a holistic approach to ensure that emphasis on crucial areas was not overlooked. With more efficient heating, cooling and interior lighting systems, energy use was reduced by 20%. In addition, water utility expenses decreased by 18%.

The return on investment has been documented at the increased market value of the property by \$4 for every \$1 invested. The Society added \$24 million in value from the LEED certification from higher appraised value, raising tenant rents, lower operating costs, increased credit ratings and lower interest rates on debt instruments.

For more information, contact Richard Neal at www.rneal@ngs.org.

PEW CENTER PUBLISHES CLIMATE CHANGE 101

In an effort to inform the climate change dialogue, The Pew Center on Global Climate Change and the Pew Center on the States have developed a series of brief reports entitled Climate Change 101: Understanding and Responding to Global Climate Change. These reports are meant to provide a reliable and understandable introduction to climate change. They cover climate science and impacts, technological solutions, business solutions, international action, recent action in the U.S. states, and action taken by local governments.

The reports are summarized as follows:

The Science and Impacts - provides an overview of the most up-to-date scientific evidence and also explains the causes and projected impacts of climate change.

Technological Solutions - discusses the technological solutions both for mitigating its effects and reducing greenhouse gas emissions now and into the future.

Business Solutions - discusses how corporate leaders are helping to shape solutions.

International Action - discusses what will be needed for an effective global effort, one calling for commitments from all of the world's major economies.

State Action - highlights state efforts as they respond to the challenge of implementing solutions to climate change.

Local Action - describes the actions taken by cities and towns.

Adaptation - details how adaptation at local, state and national levels can limit the damage caused by climate change.

Cap and Trade - explains how a cap-and-trade program sets a clear limit on GHG emissions and minimizes the cost of achieving this target.

All of the reports are available for downloading as a pdf file. For more information, visit www.pewclimate.org/print2182

AMERICA'S CLIMATE CHOICES STUDY LAUNCHED

The National Academies have launched a new, congressionally requested study to be called "America's Climate Choices." This suite of activities will provide policy-relevant advice, based on scientific evidence, to guide the nation's response to climate change. Experts representing various levels of government, the private sector, and research institutions will serve on the study's four panels and its main committee. Five consensus reports will be released in 2009 and 2010. America's Climate Choices will examine and evaluate the actions and strategies available to limit the magnitude of future climate change, adapt to climate change impacts, advance climate change science, and inform effective decisions and actions.

The provisional membership of the Committee on America's Climate Choices has been announced. The chair will be Dr. Albert Carnesale, Chancellor Emeritus of the University of California, Los Angeles. Dr. William Chameides, Dean of the Nicholas School of Environmental Studies at Duke University, will serve as Vice Chair. Committee members are chosen on the basis of their knowledge and experience, and the Committee is balanced for an overall diversity of perspectives.

The first meeting of the Committee on America's Energy Choices was held in Washington, D.C in November, 2008. The second meeting will be in Irvine, California on January 5-6, 2009. The panels will begin meeting shortly thereafter.

for more information about the study, visit <http://americasclimatechoices.org> .

UPCOMING SUSTAINABILITY EVENTS

Carbon Management: Where CO2 Capture and Storage Meets Oil and Gas Challenges. February 1-4, 2009, Dubai. <<https://owa.iea.org/events/09adb2> Conference details can be found at:<http://www.spe.org/events/09adb2>. Sponsored by SPE.

Practical Strategies for Managing CO2 Emissions — Today Not Tomorrow. February 25-26, 2009, Sonoma, CA. This SPE/AIChE joint workshop draws on upstream and downstream experts to address the boundary-spanning issues that surround greenhouse gas reduction. Scientists, engineers, and managers from both industry and academia will share ideas and solutions for executing practical strategies and lessons learned in the arenas of technology, policy, and regulation. See <http://www.aiche.org/conferences/specialty/4thSPEWorkshop.aspx>

EPA and the Institute for Sustainability announce the **First International Congress on Sustainability Science and Engineering, (ICOSSE Aug 09)**. The Congress will be held in Cincinnati Ohio, Aug. 9 to 13, 2009 and will address the multidisciplinary nature of industrial sustainability along the supply chain. The Congress is organized by AIChE's Institute for Sustainability, cosponsored by EPA, NSF, NIST, University of Kentucky, AIChE Sustainable Engineering Forum and is supported by ASME, ACS Green Chemistry Institute and IChemE. For additional information: www.aiche.org/IFS/Conferences/index.aspx Call for papers is open until February 15, 2009.

Engineering Sustainability 2009: Innovations that Span Boundaries, to be held April 19–21, 2009, in Pittsburgh, Pa. Mascaro Center for Sustainable Innovation at the University of Pittsburgh. Focus is on the cutting-edge research and practice directed at the development of environmentally sustainable buildings and infrastructure. Additional Information: www.engr.pitt.edu/msi/2009conference/confmain.htm

Sustainability: Lessons, Actions and Outlook. AIChE 2009 Spring Meeting, to be held April 26-30, 2009, in Tampa, FL. Papers are invited on topics including Sustainability in the DOE Biomass Program, Sustainable Energy, Implementing Sustainability, University/Industry Roundtable on Pre-Competitive Sustainability Research and Benchmarking Sustainability. To submit an abstract; visit www.aiche.org/spring and click on the call for papers/ptp link.

The **2009 Green Chemistry & Engineering Conference** will be held June 21-26 at the Marriott Inn and Conference Center in College Park, MD. For more information go to: http://portal.acs.org/portal/acs/corg/content?_nfpb=true&_pageLabel=PP_TRANSITIONMAIN&no_de_id=830&use_sec=false&sec_url_var=region1

AIME and its 4 Member Societies, SPE, TMS, SME, and AIST, are hosting **The Role of the Engineers in Meeting 21st Century Societal Challenges, Engineering Solutions for Sustainable Development: Materials and Resources - An International Workshop.** July 22-24, 2009 at the Ecole Polytechnique Federale University in Lausanne, Switzerland. Contact AIME Associate Executive Director, Michele Gottwald at Gottwald@aimehq.org.

For more information on this newsletter
Please contact:
Darlene Schuster
AIChE Institute for Sustainability
3 Park Avenue
New York, NY 10016
Phone: 410-458-5870; Fax 717-225-0305
E-mail: darls@aiche.org

For more information on the sponsors of
this newsletter please visit their web sites:
ASCE: www.asce.org
American Society of Civil Engineers
ASEE: www.asee.org
American Society for Engineering Education
AIChE: www.aiche.org
American Institute for Chemical Engineers
IEEE: www.ieee.org
ASME: www.ASME.org
AAAS: www.aaas.org
American Association for the Advancement of
Science