

### **EPRI CEO Gives Low-Carbon Presentation to Wall Street Utilities Group**

Steve Specker, EPRI's President and Chief Executive Officer, spoke in New York City on June 5 about challenges facing the energy industry executives as they consider electric generation technologies and options in a carbon-constrained world. His presentation was made to an audience of 75 members of the Wall Street Utilities Group, which comprises the leading financial analysts in the utility sector. He compared the costs of various generation options, including renewables, such as wind and biomass, nuclear, natural gas, pulverized coal and gasification. He also addressed how the key uncertainties — the price of natural gas, cost of CO<sub>2</sub> and spent fuel storage — affect near-term decisions on new electricity generation. A multimedia summary of the "Generation Technologies in a Carbon-Constrained World," is available at [www.epri.com](http://www.epri.com). For more information, contact Clay Perry at 202-293-6184 or [clperry@epri.com](mailto:clperry@epri.com).



### **EPRI CEO Discusses 21<sup>st</sup> Century Electricity Demand**

On May 23, the Alliance to Save Energy sponsored its third annual "Great Energy Efficiency Debate" which included many distinguished panelists, including Steve Specker, EPRI President and Chief Executive Officer. The Washington, D.C., event addressed issues such as supply, future grid development and the electric industry's regulatory structure before 350 representatives of utilities, manufacturers, large energy users, and consumer, environmental and public interest groups. Specker participated in a panel discussion on energy efficiency. He cited the need for technology investment and energy efficiency initiatives, declaring that there is an opportunity to improve the efficiency of electricity utilization by connecting day ahead real-time price signals to devices. For more information, contact Barbara Tyran at 202-293-7513 or [btylan@epri.com](mailto:btylan@epri.com).



### **EPRI Continues Integration by Realigning EPRI Solutions**

EPRI announced in early May that it would begin the process of integrating EPRI Solutions' technical personnel and laboratory facilities into the unified organizational structure. Bringing EPRI Solutions into EPRI is the final step in a series of integrations designed to reduce the complexity and processes at the Institute. The Institute's "family of companies" had already been consolidated from seven into two (EPRI and EPRI Solutions). The integration of the two creates one EPRI. "EPRI will continue to provide all of the services previously offered by EPRI Solutions," said Mike Howard, senior vice President of Research & Development and former President and CEO of EPRI Solutions. "In addition, we will provide new services as we identify opportunities to more effectively transfer EPRI's vast technical portfolio." For more information, contact Clay Perry at 202-293-6184 or [clperry@epri.com](mailto:clperry@epri.com).



### **EPRI Names Mansoor Vice President of PDM Sector**

Arshad Mansoor has been named Vice-President of the Power Delivery & Markets sector, effective July 1. Mansoor formerly led the Power Electronics (PEAC) Applications Center and more recently EPRI Solutions' power delivery group for many years. He is based in the Knoxville, Tenn. office, where he is leading the integration of EPRI Solutions into EPRI, a process that will be completed by Jan. 1, 2007. For more information, contact Clay Perry at 202-293-6184 or [clperry@epri.com](mailto:clperry@epri.com).



**EPRI Study Finds Expandable Capacity at Yucca Mountain**

An EPRI study indicates the disposal capacity for spent nuclear fuel at the proposed Yucca Mountain repository might be in a range of 260,000 to as much as 570,000 metric tons, about nine times the amount of spent fuel that could be stored there under the existing limit. John Kessler, manager of EPRI's high-level waste and spent fuel management program, summarized the results in early April during a presentation to the Nuclear Regulatory Commission. His briefing was reported in the April 10 issue of Electricity Daily. For more information, contact John Kessler at 704-595-2249 or [jkessler@epri.com](mailto:jkessler@epri.com).

**EPRI Urges Caution on Mercury Source-Receptor Modeling**

The National Oceanic & Atmospheric Administration, in collaboration with others, has conducted preliminary modeling on mercury deposition to the Great Lakes Basin and the Chesapeake Bay region. This modeling has reported that local sources such as power plants are contributing significantly to mercury deposition in these areas. EPRI urged caution of the modeling results because they:

- Ignore the contribution of mercury sources outside North America to U.S. deposition
- Use mercury atmospheric chemistry that omits several key reactions, biasing the results toward deposition closer to sources
- Provide no test model fit to national deposition data that would validate modeling performance

For more information, contact Leonard Levin at 650-855-7929 or [llevin@epri.com](mailto:llevin@epri.com)

**EPRI Addresses Senate Energy Committee's Climate Change Workshop**

EPRI's Rich Richels was among panelists who provided testimony on the climate change issue and how Congress might approach a mandatory trading program to control U.S. greenhouse gas emissions. Richels emphasized that a cap-and-trade system may accomplish some objectives, such as slowing the near-term growth of emissions, during his comments before the Senate Energy Committee on April 4. He cautioned, however, that lawmakers should not expect such a system to provide the technologies that would be needed to adequately address climate change issues long-term. For more information, contact Richels at 202-872-9222 or [rrichels@epri.com](mailto:rrichels@epri.com).

**EPRI Provides Testimony on PHEVs To House Panel**

EPRI's Mark Duvall testified on May 17 at a hearing of the House Science Subcommittee on Energy on Plug-in Hybrid Electric Vehicles (PHEV). The hearing explored the possible benefits of PHEVs – such as their potential to address national issues of oil dependence, high energy costs and vehicle emissions; and the anticipated technology challenges that need to be addressed, such as battery weight, reliability in weather extremes and cost. Prior to the hearing, Duvall was interviewed by the Washington Post. EPRI's role in developing PHEV technology was highlighted in June issues of The Economist magazine and Automotive News. For more information contact Duvall at 650-293-6180 or [mduvall@epri.com](mailto:mduvall@epri.com).



**EPRI Explores Generation Options in House Testimony**

On May 18, EPRI's John Novak testified at a House Energy Subcommittee on Energy and Air Quality hearing. Novak emphasized the importance of keeping all generation options open; the need for R&D; major uncertainties in investment decisions in generation; the opportunity to develop low-carbon portfolio options by 2020; and, the role of electricity in a carbon-constrained future. EPRI also provided a summary of R&D priorities. For more information, contact John Novak at 202-293-6180 or [jnovak@epri.com](mailto:jnovak@epri.com).

**EPRI Completes North America Tidal In Stream Energy Conversion Studies**

EPRI's Roger Bedard has completed technical and economic feasibility studies for tidal generation in Alaska, Washington, California, Massachusetts and Maine and the Canadian provinces of New Brunswick and Nova Scotia. The technical and economic studies are available at [www.epri.com/oceanenergy/](http://www.epri.com/oceanenergy/). Bedard was interviewed in May and June by KTVU-Channel 7 (San Francisco), Boston Globe, Maine Today, Bangor Daily News, Bellingham Herald (Washington), Discovery Reports Canada, Canadian Broadcasting Corporation (CBC) and the Chronicle Herald (Canada) (5/8-6/27) in connection with the research. For more information, contact Heather Lynch at 650-855-2017 or [hlynch@epri.com](mailto:hlynch@epri.com).

**EPRI Study Focuses on Remote Monitoring of Substation Assets**

A recently published EPRI report assesses the benefits of including remote monitoring with the various security technologies used to provide physical security to substation facilities and equipment. The report includes guidelines on what physical security technologies and remote monitoring can be used for specific types of security requirements. Remote monitoring provides near-real-time security information on the access points to substation facilities as well as the status and condition of equipment to determine if it has been tampered with or is not functioning properly. For more information, contact Thomas Kropp at 650-855-2251 or [tkropp@epri.com](mailto:tkropp@epri.com).

**EPRI Examining Feasibility of Direct Current IT Systems**

As energy prices remain persistently high, the Electric Power Research Institute (EPRI) is examining whether businesses should update their IT systems with more energy efficient systems by eliminating the conversion of direct current (DC) power to alternating current (AC) power. An increasing number of microprocessor-based electronic devices use DC power, converted from standard AC supply. EPRI is working on a series of projects to examine whether eliminating DC-AC converters can be more efficient and practical. EPRI has published "DC Power Production, Delivery, and Utilization," a white paper that reviews the potential for increased reliance on DC power systems, as well potential challenges to its adoption. For more information, contact Heather Lynch at 650-855-2017 or [hlynch@epri.com](mailto:hlynch@epri.com).

**EPRI Research Leads to Revision of Rulemaking for Pressurized Thermal Shock**

A recent Nuclear Regulatory Commission Paper, SECY-06-124, requested approval to amend requirements for protection of pressurized water reactors against Pressurized Thermal Shock (PTS), a process that could lead to vessel cracking if the core were rapidly cooled while still pressurized. EPRI research has shown that previous regulations and regulatory guidance established in the early 1990's to address this potential safety concern have been overly conservative. The PTS rule impacted the operating margins, reactor vessel life projections and ability to renew plant licenses for many plants.

EPRI's Materials Reliability Program, working with the Nuclear Energy Institute and NRC's Office of Nuclear Regulatory Research, developed the data and risk evaluation methods necessary to support a revision to the PTS rule that would relax PTS screening criteria. Improvements to the existing analyses provided by EPRI include updated event frequencies, more realistic flaw assumptions, improved understanding of fracture and embrittlement and more thorough evaluation of uncertainty. The value to the nuclear industry is approximately \$100 million for each plant that could not meet the current rule but will be able to meet the new PTS screening criteria for license renewal. Core fuel management to reduce irradiation of the vessel could result in annual savings of \$600,000 to \$3 million. For more information contact Jack Spanner, 704-595-2065 or [jspanner@epri.com](mailto:jspanner@epri.com).



### **EPRI Launches Research on Use of Biomass for Electricity Generation**

EPRI has launched a new research project to explore the potential role of biomass as a renewable fuel for electricity generation that also can help to reduce greenhouse gas emissions. Biomass, mostly residues and by-products of forest and wood products industries, is the largest non-hydro renewable energy source today and is expected to make up a much more significant portion of electricity supply in the future. The new project will assess the potential of biomass as a generation fuel for electricity and identify key research needs, including economic assessment, biomass crop and carbon accounting, biomass combustion and gasification technology. For more information contact Adam Diamant at 510-260-9105 or [adiamant@epri.com](mailto:adiamant@epri.com).

Content Editors:

Clay C. Perry, 202.293.6184; [clperry@epri.com](mailto:clperry@epri.com)

Heather Lynch, 650.855.2017; [hlynch@epri.com](mailto:hlynch@epri.com)