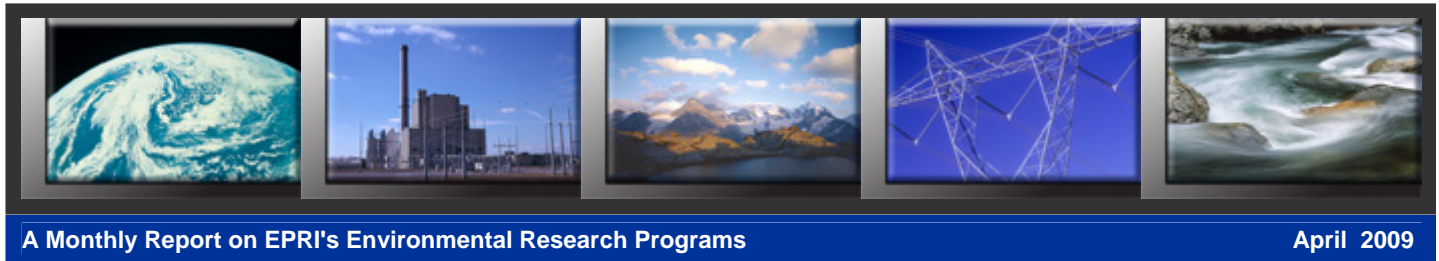


Environment Quick News



Program members can use their epri.com ID and password to download Acrobat PDF files of EPRI technical reports. For assistance, contact the EPRI Customer Assistance Center at (800) 313-3774.

Dear Environment Sector members:

We recently completed our advisory meetings in San Diego, and we were extremely pleased by the attendance and enthusiasm at the meetings. Despite the fragile economy and cost reductions within your companies, it was heartening to hear that EPRI meetings and our research programs are considered high value and perhaps even more critical given changes in the Administration and Congressional action on energy and climate.

We had the opportunity to attend many of the Area Council meetings, interact with you during breaks and at the reception, and participate in the Sector Council meeting. One of the key take-home messages for us is that our current research portfolio is robust, although some issues, such as climate, water, and now EMF and T&D issues, seem to rise a bit higher than the rest. While you advised us to emphasize some areas and reduce others, there were no major changes in overall emphasis nor any programs that need to be sunsetted.

Our next formal meeting with you is in Boulder in October. In the interim, each of the programs will have webcasts, meetings, or other means to keep you informed of research progress. We will also be implementing our plans to address issues raised in the last Member Satisfaction Survey, such as working on means to assist you in applying and using the results of our work. Any ideas you have in this regard would be most welcome.

Have a terrific Spring.

Bryan Hannegan
Vice President, Environment
bhannegan@epri.com
(650) 855-2858

Michael Miller
Director, Environment
mmiller@epri.com
(650) 855-2455

Tina Taylor
Director, Env. Business Development
tmtaylor@epri.com
(650) 855-2819

EPRI Technology Transfer Awards Recognize Member Applications of Research

EPRI's Technology Transfer Awards are made annually to recognize outstanding examples of partnerships between EPRI and its members that have furthered the use of specific Environment Sector research. The 2009 recipients are

- Michalene Reilly from Hoosier Energy Rural Electric Coop, Jack Preston from SCANA, and Dave Michaud from We Energies;
- John Dominey, John Jansen, Larry Monroe, Justin Walters, and Dwain Waters from Southern Company;
- Lou Hosek from American Electric Power and Michael Herz from Pacific Gas & Electric;
- Doug Fulle and Boyd Vaughan from Oglethorpe Power;
- Frank Dombrowski from We Energies;
- Keith Finley and Allen Stowe from Duke Energy and Jack Preston from SCANA;
- Russell Noble from Southern Company; and
- Kyle Davis from PacifiCorp.

For more details, visit the Technology Transfer box on the [Environment](#) home page.

Presentations From 2009 Winter Environment Council Meetings Posted

Presentations from the March 2009 meetings of the Environment Sector and Area Councils are now available on epri.com. Please use your epri.com ID and password to sign in first, then use [this link](#) and select the Meeting Materials tab. Documents may be restricted to members who fund the specific programs.

Program 42: Air Toxics Health and Risk Assessment***Mercury Exposure Unlikely Cause of Autism Rise Among Texas Schoolchildren***

Lewandowski, T.A., et al. "An evaluation of surrogate chemical exposure measures and autism prevalence in Texas" (E231880), accepted for publication in the *Journal of Toxicology and Environmental Health Part A*. Statistical analyses reported in this paper suggest that "mercury emissions are not consistently associated with autism prevalence in Texas school districts," and that previously reported associations may be due to chance or confounding factors. For more information, contact Sharan Campleman, (650) 855-2331, scampleman@epri.com.

Levin Delivers Mercury Seminar at Harvard

In his recent presentation at Harvard University, "[The Micrometeorology of Environmental Mercury](#)," Leonard Levin discussed methods for determining surface mercury fluxes. For more information, contact Leonard Levin, (650) 855-7929, llevin@epri.com.

Program 91: Assessment Tools for Ozone, Particulate Matter, Regional Haze and Atmospheric Deposition***Study Provides Insights Into Properties of Atmospheric Aerosols***

A study in Great Smoky Mountains National Park evaluated the adequacy of measurements and equations used to estimate aerosol light extinction. The study used extensive field and laboratory measurements made at Look Rock, TN, a site in the Interagency Monitoring of PROtected Visual Environments (IMPROVE) network. This study evaluated some of the key assumptions in the revised IMPROVE equation, which uses PM-2.5 chemical concentrations to calculate light scattering. A paper on these results has been accepted for publication in the *Journal of Geophysical Research*. For more information, contact Naresh Kumar, (650) 855-2990, nkumar@epri.com.

Program 92: Assessment of Air Quality Impacts on Health and the Environment

Tire Particles Induce Lung Toxicity

EPRI's Technology Innovation (TI) project to examine the effects of tire particles on *in vivo* systems has completed experiments for both <10 µm and <2.5 µm tire particle (TP) sizes. The findings indicate the presence of acute tissue damage in the lungs within 24 hours of exposure. These and other results indicate that tire particles result in significant lung toxicity, and that the mechanisms are different for the two size fractions. A paper, "Lung toxicity induced by intratracheal instillation of size-fractionated tire particles," has been submitted to a peer-reviewed publication. For more information, contact Annette Rohr, (650) 855-2765, arohr@epri.com.

Seasonal Effects of Concentrated Ambient Particles Identified

One portion of the Tri City Concentrated Ambient Particle Study is comparing alterations in cardiac function induced by concentrated ambient particles (CAPs) during both winter and summer months in Detroit, MI. The ambient samples were representative of a mixture of industrial processes, steel foundries, waste and sludge incineration, coal-fired power plants, and motor vehicle emissions. The study found that during the summer, heart rate variability (HRV) decreased while heart rate (HR) increased. Neither SO₂ nor S (as a proxy measure for sulfate) showed significant associations with HRV, so the effects may be from local, rather than regional, PM-2.5 contributions. In contrast, the winter study found that HRV increased while HR decreased. The winter influences on HRV also appear to be from local sources. These findings were presented in a poster at the Mar. 15–19 Society of Toxicology Annual Meeting in Baltimore, MD. For more information, contact Annette Rohr, (650) 855-2765, arohr@epri.com.

Veterans Study Evaluates Mortality and Air Pollution

Lipfert, F.W., R.E. Wyzga, Jack D. Baty, J. Phillip Miller. "Air Pollution and Survival within the Washington University–EPRI Veterans Cohort: Risks Based on Modeled Estimates of Ambient Levels of Hazardous and Criteria Air Pollutants" (E228078). This study looked at the relationships between mortality and vehicular traffic density, ambient levels of twelve hazardous air pollutants, nitrogen oxide, sulfur dioxide, and sulfate. The study concluded that the survival rates are strongly associated with air pollution, especially in urban areas. Although there is some evidence of a link between mortality and traffic density, sources of these pollutants other than traffic may also be implicated. The results suggest that both gaseous and particulate species are contributing factors, including hazardous air pollutants such as benzene, formaldehyde, diesel particulate, nitrogen oxide, and elemental carbon, as well as sulfur dioxide. In addition, the study concluded that sulfates from fossil fuel combustion were not a contributing factor to mortality rates. This study is significant because it implicates pollutants that are not routinely measured or examined, suggesting that these pollutants should be considered if the air pollution–health issue is ever to be resolved. A paper on this research has been accepted for publication by the *Journal of the Air & Waste Management Association*. For more information, contact Ron Wyzga, (650) 855-2577, rwyzga@epri.com.

Air Quality Area News

EPRI Comments on Integrated Science Assessment for Particulate Matter

EPRI provided EPA with comments on the First External Review Draft of the [Integrated Science Assessment for Particulate Matter](#). The public comment period ended Mar. 13. Staff comments have been sent to P91 and P92 members. For more information, contact Annette Rohr, (650) 855-2765, arohr@epri.com.

GLOBAL CLIMATE CHANGE

[Visit the Global Climate Webpage](#)

Program 103: Greenhouse Gas Reduction Options

Niemeyer Discusses Research on Impacts of Climate Policy on Retrofit Investments

At the March Environment and Generation Sector and Area Council Advisory Meetings, EPRI's Victor Niemeyer presented results of EPRI's analyses of the impacts of climate policy on fossil generation plant retrofit investments. The analyses will help utilities quantify the potential value of retrofit investments aimed at

keeping existing coal generating units compliant with increasingly strict air quality standards for SO₂, NO_x, and mercury, as well as possible requirements for fish protection, which could involve cooling towers retrofits—all in the context of potential state, regional, or national policies to limit CO₂ emissions. If climate policy greatly shortens the economic lives of these assets, the returns on retrofit investments will be much less than would be expected under current market conditions. The methodology is described in a new Supplemental Project Notice, "[Assessing the Impact of Climate Policy on Retrofit Investment in Fossil Generation](#)" (1018685). For more information, contact Victor Niemeyer, (650) 855-2744, niemeyer@epri.com.

EPRI Research on Climate Change and Forestry Presented at Advisory Meetings

Because tropical deforestation is a leading source of global greenhouse gas (GHG) emissions and is a key driver of global climate change, the March advisory meetings included several presentations (available to funders only) related to climate change and forestry and land use change. EPRI's Steven Rose spoke on "[Modeling Land Use for Climate and Energy Analyses](#)." His presentation emphasized the importance of modeling land use both as a source of emissions and as a sector that can be impacted by physical changes in climate. Diane Fitzgerald, Managing Director, Environment and Safety at American Electric Power, discussed her company's [international forestry experiences](#), including lessons learned. She stated that international forestry offsets are a tangible, and potentially cost-effective, means to address climate change. Adam Diamant's [presentation](#) addressed the prominent role of tropical deforestation in climate change and discussed the EPRI Supplemental Project Opportunity "[Creating Greenhouse Gas Emission Offsets from Avoided Deforestation in the Amazon's Xingu River Basin](#)" (1018060). This new EPRI project focuses on demonstrating the potential to achieve large-scale, cost-effective GHG emissions offsets by implementing projects to reduce emissions from deforestation and degradation. For more information, contact Adam Diamant, (510) 260-9105, adiamant@epri.com, or Steven Rose, (202) 293-6183, srose@epri.com.

Global Climate Change Area News

Development of EPRI's US-REGEN Regional Energy-Economic Model Under Way

EPRI researchers have begun work on a regional modeling project intended to develop a U.S. regional energy-economic model that will assess the impact of new climate policies on the electric power sector, the energy system, and the economy. The U.S. Regional Economy, GHG, and Energy Model (US-REGEN) will be a top-down model of the U.S. economy with process detail for the electric power industry. Its analysis time frame will extend to 2050 and include all GHGs. Twelve U.S. regions (9 census regions plus California, Texas, and Florida) will be used for the analyses, which will include regional energy needs; regional differences in generating costs and resources, especially for renewables and carbon capture and storage; and land use modeling to clarify implications of bioenergy. Initial analyses and results are planned for late 2009 or early 2010. Although U.S. and regional analyses will have first priority, it will be possible to link results with the MERGE model for assessment of U.S. regional impacts of international policies following the U.S. Climate Change Conference in Copenhagen (COP15) in December. For more information, contact Francisco de la Chesnaye, (202) 293-6347, fdelachesnaye@epri.com.

LAND AND GROUNDWATER

Program 49: Coal Combustion Products—Environmental Issues

Sulfur Emission Controls Impact Properties of Coal Combustion Product

Two reports characterize physical and chemical properties of coal combustion products (CCPs) from coal-fired power plants with sulfur emission controls. These properties affect CCP reuse in cement and concrete applications or disposal in landfills.

- [Impacts of Sodium-Based Reagents on Coal Combustion Product Characteristics and Performance](#) (1015776)—characterizes CCPs incorporating sodium-based sorbents injected into flue gas for sulfur dioxide or sulfur trioxide control.
- [Characterization of Spray Dryer Absorber Products for Use in Cement and Concrete Applications](#) (1015779)—characterizes spray dryer absorber products containing calcium formed by the reaction of lime or limestone slurry with flue gas sulfur dioxide.

Report 1015576 is available at no additional cost to program 49 and 78 participants. Report 1015779 is available at no additional cost to program 78 participants. For more information, contact Ken Ladwig, (262) 754-2744, keladwig@epri.com.

Program 50: Manufactured Gas Plant Site Management

Predicting the Effectiveness of In Situ Coal Tar Solidification/Stabilization

An Integrated Approach to Evaluating In-Situ Solidification/Stabilization of Coal Tar Impacted Soils (1018612).

This Technical Update explains the test methods and assessment approaches needed to predict the implementability and effectiveness of in situ coal tar solidification/stabilization at individual former manufactured gas plant sites. For more information, contact Jeff Clock, (845) 608-0642, jclock@epri.com.

Naphthalene Exposure Studied in Rat and Monkey Respiratory Cells

Shields, C.D., et al. "Formation of covalently bound adducts from the cytotoxicant naphthalene in nasal epithelium: Species comparisons" (E228057), submitted for publication in a peer-reviewed journal. Studies reported here describe the effects of naphthalene on cells in rat and rhesus monkey respiratory systems. Such species comparisons advance basic scientific understanding of potential human respiratory responses to naphthalene, with an emphasis on understanding the mechanisms by which naphthalene could be carcinogenic. EPRI notes that more work is needed to determine whether processes that are key to cytotoxicity occur in humans, and if so, whether these processes occur at realistic exposure levels. For more information, contact Annette Rohr, (650) 855-2765, arohr@epri.com.

Program 59: Power Plant Toxics Characterization

EPRI Providing Key Information in Response to Anticipated Maximum Achievable Control Technology Standards on Hazardous Air Pollutants

EPRI is working with its members to plan for the anticipated regulation of hazardous air pollutants (HAPs), including mercury, other trace metals, acid gases, and trace organics. With the recent vacatur of the Clean Air Mercury Rule, EPA is developing Maximum Achievable Control Technology (MACT) standards that will apply to HAPs emissions at individual coal-fired power plants. To simplify monitoring and permit requirements for MACT application, EPA is evaluating the use of emission surrogates for various HAPs. For example, particulates may become a surrogate for trace metals, such as arsenic, that are associated with fly ash, while sulfur dioxide may become a surrogate for the acid gas, hydrogen chloride. To address these and other MACT issues, EPRI will critically review its existing HAPs database, focusing on information relevant to regulatory development, such as whether surrogate emissions correlate with potentially regulated HAPs. As necessary, EPRI may conduct additional field studies to fill data gaps. Members will have the opportunity to discuss findings and formulate plans in conference calls to be held over the next several months. For more information, contact Paul Chu, (650) 855-2812, pchu@epri.com.

LARK-TRIPP Software Scheduled for Release in Late April

EPRI has scheduled release of its LARK-TRIPP Toxics Release Inventory (TRI) reporting software in late April to accommodate testing with EPA's TRI-ME reporting software for Reporting Year (RY) 2008. The release of TRI-ME RY 2008 was delayed when legislation signed by President Obama on March 11, 2009 required more-detailed reporting of certain chemical releases. For more information, contact Naomi Goodman, (650) 855-2193, ngoodman@epri.com.

Evaluating Methods for Measuring Condensible Particulate Matter

Current research in the PISCES program evaluates methods for measuring condensible particulate matter in flue gas. Researchers have compared the performances of "dry" impingers, water-filled impingers, and a controlled condensation system. Preliminary results of these studies provide valuable information with which to evaluate a proposed modification to EPA Method 202 published on March 25, 2009 in the *Federal Register*. This modification substitutes a dry impinger for the first water-filled impinger, adds a filter after the second impinger, and eliminates several optional measurement techniques. EPRI's studies indicate that the proposed Method 202 reduces, but does not eliminate, a significant positive bias associated with oxidation of dissolved sulfur dioxide to sulfuric acid in the impingers. Laboratory tests also indicate that the new method captures

less of the sulfuric acid than does the controlled condensation system. For more information, contact Naomi Goodman, (650) 855-2193, ngoodman@epri.com.

Improving Performance of Sorbent Traps for Mercury Measurement

[Evaluation of Sorbent Trap Materials and Methods for Flue Gas Mercury Measurement](#) (1016799). This report evaluates the performance of sorbent trap materials and methods for long-term mercury monitoring and for auditing the relative accuracy of continuous mercury monitors. For more information, contact Naomi Goodman, (650) 855-2193, ngoodman@epri.com.

WATER AND ECOSYSTEMS

Program 54: Fish Protection at Steam Electric Power Plants

Three New Projects To Begin in 2009

EPRI will undertake three new projects in 2009, based on prioritization results at the March Advisory Council Meeting.

- An assessment of engineering issues associated with a national retrofit of fine-mesh or narrow-slot screens to all Phase II power plants in the United States. This assessment will include operational and maintenance issues, potential biological performance, and improvements in civil structures (such as potential expansion of intakes). Several sites that currently use such screens have been selected, and EPRI expects to arrange site visits this spring to gather site-specific information on how they work. Interim results, expected by summer, will be used to support EPRI's comments on the revised draft Phase II rule.
- An expansion of current research on how design features of fish return systems (e.g., flume material, flume angles and numbers of bends, velocity) affect survival of fish eggs, larvae, and juveniles that are returned to the water body. Results will be available in 2010.
- An expansion of ongoing evaluations of fine-mesh screen performance to include a mesh size of 2 millimeters. Laboratory testing will take place this year; results will be available by March 2010.

For more information, contact Doug Dixon, (804) 642-1025, ddixon@epri.com.

Program 55: Strategic Water Issues: TMDLs, Availability, Climate

New Senate Bill on Integrating National Water and Energy Policies

Senators Bingaman (D-NM) and Murkowski (R-AK) introduced SB 531, the [Energy and Water Integration Act of 2009](#), which directs a number of federal agencies to study and report on issues related to the interdependencies between water and energy development. Some of SB 531's requirements for the various agencies are:

- ***Energy-water study:*** requires a National Academies study to assess the water consumed in different types of electricity generation
- ***Power plant water and energy efficiency:*** directs DOE to identify best available technologies and other strategies to maximize water and energy efficiency in producing electricity
- ***Water conservation and energy savings study:*** directs the Bureau of Reclamation (BOR) to evaluate energy use in storing and delivering water from BOR projects and to identify ways to reduce such use through conservation, improved operations, and renewable energy integration
- ***Brackish Groundwater Desalination Facility:*** establishes a requirement for BOR to develop research priorities for this existing facility, including renewable energy integration with desalination technologies
- ***Energy use for water assessment:*** establishes a requirement for the Energy Information Administration to continually report on the energy consumed in water treatment and delivery activities
- ***Energy-Water Roadmap:*** directs the Secretary of Energy to develop an Energy-Water Research and Development Roadmap to address water-related challenges to sustainable energy generation and production

If SB 531 becomes law, EPRI expects its completed, ongoing, and planned research to serve as important resources for the above agencies. EPRI research will also be critical for members and others in the electricity

industry as new requirements for water management, conservation, and reuse are established. For more information, contact Robert Goldstein, (650) 855-2593, rogoldst@epri.com.

Update Published on Tiered Analysis of Water Sustainability

Tiered Analysis of Water Sustainability: Status Update (1015538). This report presents a preliminary analysis of a “toolkit” of methods for evaluating water availability constraints, and options to address those constraints, for both existing and future electric power generation. For more information, contact Robert Goldstein, (650) 855-2593, rogoldst@epri.com.

TMDL Technical Evaluation Framework Available

TMDL Technical Evaluation Framework (1015580). This report describes an approach to help guide electric power companies through the technical and strategic aspects of a TMDL review. Use of the roadmap will maximize the likelihood that a TMDL outcome is based on sound science and is equitable for all parties. For more information, contact Robert Goldstein, (650) 855-2593, rogoldst@epri.com.

Report on Modeling Nutrient Trading in the Ohio River Basin

Program on Technology Innovation: Modeling Nutrient Trading in the Ohio River Basin (1018691). This TI-funded report describes in-depth analyses of two watersheds in the Ohio River Basin, the Muskingum and Scioto watersheds. The analyses explored potential water quality trading activities and scenarios using EPRI’s WARMF model, which can simulate hydrology and water quality, particularly for nitrogen. For more information, contact Jessica Fox, (650) 855-2138, jfox@epri.com.

Program 58: Waterpower

DOE Signs Off on EPRI Grant; Engineering Design for Fish-Friendly Turbine Begins

DOE has signed off on the grant award to EPRI for engineering design work on the Alden Concepts/NREC “fish-friendly” hydropower turbine. Initial work on the engineering design for the turbine has begun, and a preliminary design is expected by the end of 2009. In 2010, a model (~1/10th scale) of the turbine will be built for testing and fine tuning. Full-scale testing will begin in 2011. For more information, contact Doug Dixon, (804) 642-1025, ddixon@epri.com.

Water and Ecosystems Area News

Summer Water and Ecosystems Area Meeting Scheduled for June

The Water and Ecosystems Area Advisory Council Meeting will be held June 17–18 at Alden Research Laboratory facilities in Holden, MA. Workshop topics include updates on

- closed-cycle cooling retrofitting;
- effluent guidelines, including a regulatory update;
- water quality trading; and
- fish protection, including a tour of the Alden lab and fine-mesh testing equipment and procedures; EPA’s 316(b) Phase II rule development team will also be invited to attend the meeting and visit the Alden labs.

Registration is available on epri.com under Events. For more information, contact Kent Zammit, (805) 481-7349, kezammit@epri.com.

T&D ENVIRONMENTAL ISSUES

Program 57: ROW: Siting, Vegetation Management, and Avian Issues

EPRI Completes Fifth Integrated Vegetation Management Assessment

EPRI will complete its fifth integrated vegetation management (IVM) assessment at Northeast Utilities in late April and is seeking other project participants. All assessments completed under the project will support a 2010 workshop on overall IVM assessment results. IVM helps companies prevent, monitor, and control undesirable plants and plant communities in power line corridors. Companies participating in EPRI’s project receive a confidential report based on an IVM assessment completed in about three months by a third-party

contractor. The report includes detailed findings on IVM field performance and recommendations for improvement. For more information, contact John W. Goodrich-Mahoney, (202) 293-7516, jmahoney@epri.com.

Herbicide Efficacy Study Starts on Oahu

In March, Hawaiian Electric Company and EPRI began research to compare how well different herbicide mixtures control invasive plant species along transmission rights-of-way on the island of Oahu. In test and control plots, researchers will apply historic, current, and new herbicide mixtures to foliage and stumps of hard-to-control invasive species such as silk trees, swamp mahogany, ironwood, and African tulip trees. A new herbicide, Milestone® (Dow AgroSciences), appeared in production trials to provide better vegetation control than previous mixes, and it may be even more effective when applied with the sticking agent NuFilm (Miller Chemical and Fertilizer Corporation) to keep it from washing away during rain or overhead irrigation. Researchers will use before and after photographs; records of plant diameter, height, and condition; and site descriptions to assess treatment efficacy six to eight weeks after herbicide application. For more information, contact John W. Goodrich-Mahoney, (202) 293-7516, jmahoney@epri.com.

Program 60: EMF Health Assessment and Radio-Frequency Safety

[Visit the EMF Health Assessment and RF Safety Public Webpage](#)

EPRI Develops Integrated Job-Exposure Matrix for Electric Utility Workers

Bracken, T.D., et al. "An Integrated Job-Exposure Matrix for Electrical Exposures of Utility Workers," accepted for publication in the *Journal of Occupational and Environmental Hygiene*. This paper presents a job-exposure matrix that addresses all utility worker exposures associated with electrical work, including exposures to magnetic fields (mainly), electric fields, nuisance shocks, imperceptible contact currents, and electrical shocks and burns. Previous occupational exposure assessments have characterized exposure to magnetic fields but have paid less attention to electric fields and little or no attention to nuisance shocks, contact currents, and electrical shocks and burns. Using previously collected information for jobs, tasks, and work environments, researchers classified all exposures into low, medium, and high levels for 22 job categories. They report the highest exposures in job categories involving tasks on or close to electrical equipment: cable splicers, electricians, line workers, and substation operators. For more information, contact Rob Kavet, (650) 855-1061, rkavet@epri.com.

OCCUPATIONAL HEALTH AND SAFETY

Program 62: Occupational Health and Safety

Study Characterizes Nanoparticles in the Workplace at Coal- and Gas-Fired Power Plants

[Program on Technology Innovation: Nanoparticles at Coal and Gas Fired Power Plants](#) (1016820). This Technical Report provides information about the presence, concentration, composition, and characteristics of nanoparticles at typical work locations in modern power plants. Nanoparticles—particles with diameters less than 100 nanometers—are of potential interest because they can penetrate deep into the lungs, and it is important to know to what degree they are present in work environments during coal and natural gas combustion. For more information, contact Gabor Mezei, (650) 855-8908, gmezei@epri.com.

Feasibility Study Evaluates Hexavalent Chromium Exposure Data

[Hexavalent Chromium Air Sampling Data from Welding and Steel Cutting: A Feasibility Study](#) (1016821). Workers who weld and cut chromium-containing metals may be exposed to hexavalent chromium. To characterize these exposures, the Occupational Safety and Health Administration regulations permit the use of objective data in lieu of exposure monitoring. This Technical Report describes results of a feasibility study to determine if such data can be gathered and organized in an industrywide database. The initial results demonstrated that appropriate data can be obtained; thus, the study is continuing this year. For more information, contact Gabor Mezei, (650) 855-8908, gmezei@epri.com.

Scientific Advisory Committee Comments on Occupational Health and Safety Studies

The Occupational Health and Safety Scientific Advisory Committee (SAC) met for the second time in its important role of advising the program on its research portfolio. The Committee provided feedback on several ongoing projects. Below are comments from its report to the EPRI staff.

- **Occupational Health and Safety Database.** The SAC was impressed by the scope and thoroughness of the Annual Report analyses and strongly recommends that more analytical epidemiologic analyses be designed to identify in more depth the specific characteristics of work that pose injury risk.
- **Ergonomics research.** These projects are progressing well and yielding valuable new data and training materials. Ultimately, the value of the ergonomics interventions will require evaluation of injury data both before and after the interventions.
- **Occupational exposure and health studies.** Considerable progress has been made in exposure characterization, and these efforts should continue. The SAC recommends that plans be developed to systematize data collection for incorporation into industrywide job-exposure matrices that ultimately can be applied in epidemiologic research.
- **Epidemiologic research planning.** The SAC encourages identification and careful characterization of exposure-based worker groups, defined by occupations or specific exposures, for epidemiologic investigation.

For more information, contact Gabor Mezei, (650) 855-8908, gmezei@epri.com.

New Supplemental Project Opportunities

Program 42: Air Toxics Health and Risk Assessment

- [Mercury Chemistry Measurement in Power Plant Plumes: Intensive Field Study Phase 2](#) (1018735). Wet deposition measurements will continue for several years in order to characterize near-plant mercury deposition to the ground surface before and after implementation of mercury emission controls.

Program 55: Strategic Water Issues: TMDLs, Availability, Climate

- [Ohio River Basin Trading Program for Water Quality and Greenhouse Gases](#) (1018855). This project will be a first-of-its-kind regional multi-credit trading program.

For a complete list of all active Environment Supplemental Project Opportunities, [click here](#).

New Marketing Communications

Program 42: Air Toxics Health and Risk Assessment

- [Cardiovascular Outcomes as Critical Effects in the Regulation of Air Toxics Metals](#), Issue Brief (1018745)
- [Health Effects of Mercury: Status of the U.S. Regulatory Standard](#), Issue Brief (1018761)
- [Sources of Mercury Depositing in the United States](#), Issue Brief (1018762)
- [Mercury and Autism](#), Issue Brief (1018763)
- [Human and Natural Sources of Mercury](#), Issue Brief (1018857)
- [Integrated Approaches to Managing Mercury](#), Issue Brief (1018858)
- [Joint Study on Mercury Plume Chemistry Contributes to Information on Mercury Deposition](#), Success Story (1018765)

Program 91: Assessment Tools for Ozone, Particulate Matter, Regional Haze and Atmospheric Deposition

- [2008 August Mini-Intensive Gas and Aerosol Study \(AMIGAS\)](#), Issue Brief (1018636)

Program 92: Assessment of Air Quality Impacts on Health and the Environment

- [PM2.5 Reductions and Impact on Premature Death: An EPRI Perspective](#), Issue Brief (1018632)
- [Air Quality Health Research in Detroit, Michigan](#), Issue Brief (1018633)
- [Health Effects of Nitrogen Dioxide](#), Issue Brief (1018634)
- [Health Effects of Sulfur Dioxide](#), Issue Brief (1018635)

Program 50: Manufactured Gas Plant Site Management

- [Naphthalene Toxicity](#), Issue Brief (1018733)

Program 58: Waterpower

- [EPRI Analyzes Impacts of Possible EPA Rule on Closed-Cycle Cooling Tower Retrofit](#), Success Story (1018662).

Program 60: EMF Health Assessment and Radio-Frequency Safety

- [EPRI's EMF Health Assessment and RF Safety Program Delivers Value to Members](#), Success Story (1018695).

Upcoming Events

* denotes EPRI sponsored or cosponsored event

Environment Sector

*** Environment Sector and Area Council Advisory Meetings**

Oct. 5–8, Boulder, CO. Contact: Adina Kozuh, (650) 855-2991, akozuh@epri.com.

*** Environment Sector and Area Council Advisory Meetings**

Mar. 15–18, 2010, Orlando, FL. Contact: Adina Kozuh, (650) 855-2991, akozuh@epri.com.

Air Quality

*** Annual EPRI/UARG Air Toxics Research Coordination Meeting**

May 6–8, Palo Alto, CA. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

9th International Conference on Mercury as a Global Pollutant

June 7–12, Guiyang, China. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

A&WMA 102nd Annual Conference & Exhibition

June 16–19, Detroit, MI. Contact: Naresh Kumar, (650) 855-2990, nkumar@epri.com. More information is available at the [event website](#).

Gordon Research Conference on Atmospheric Chemistry

Aug. 23–28, Waterville Valley, NH. Contact: Eladio Knipping, 202-293-2691, eknippin@epri.com.

Twenty-First Conference of the International Society for Environmental Epidemiology

Aug. 25–28, Dublin, Ireland. Contact: Annette Rohr, (650) 855-2765, arohr@epri.com.

National Atmospheric Deposition 2009 Annual Meeting & Scientific Symposium

Oct. 6–8, Saratoga Springs, NY. Contact: Arnout Ter Schure, (650) 855-2753, aterschu@epri.com.

Air Quality VII Conference

Oct. 25–29, Arlington, VA. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

Global Climate Change

*** 14th Annual EPRI Global Climate Change Research Seminar**

May 20–21, Washington, DC. Contact: Christina Kemp, (650) 855-2528, ckemp@epri.com. More information is available at the [event website](#).

Land and Groundwater Issues

*** World of Coal Ash**

May 4–7, Lexington, KY. Contact: Ken Ladwig, (262) 754-2744, keladwig@epri.com. More information is available at the [event website](#).

Battelle Tenth International In Situ and On-Site Bioremediation Symposium

May 5–8, Baltimore, MD. Contact: Jim Lingle, (414) 355-5559, jlingle@epri.com. More information is available at the [event website](#).

*** Annual EPRI/UARG Air Toxics Research Coordination Meeting**

May 6–8, Palo Alto, CA. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

9th International Conference on Mercury as a Global Pollutant

June 7–12, Guiyang, China. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

Air & Waste Management Association 102nd Annual Conference & Exhibition

June 16–19, Detroit, MI. Contact: Contact: Babu Nott, (650) 855-7946, bnott@epri.com. More information is available at the [event website](#).

Air Quality VII Conference

Oct. 25–29, Arlington, VA. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

*** EPRI MGP 2010 Symposium**

Jan. 27–29, 2010, San Antonio, TX. Contact: Jeff Clock, (845) 608-0642, jclock@epri.com, or Jim Lingle, (414) 355-5559, jlingle@epri.com. More information is available at the [event website](#).

Water and Ecosystems

9th International Conference on Mercury as a Global Pollutant

June 7–12, Guiyang, China. Contact: Leonard Levin, (650) 855-7929, llevin@epri.com. More information is available at the [event website](#).

Water and Ecosystems Summer Advisory Meeting

June 17–18, Holden, MA. Contact: Kent Zammit, (805) 481-7349, kezammit@epri.com.

American Fisheries Society Annual Meeting

Aug. 30–Sept. 3, Nashville, TN. Contact: Doug Dixon, (804) 642-1025, ddixon@epri.com. Doug Dixon is organizing a National Symposium on Fish Community Monitoring in Big Rivers during this meeting. More information is available at the [event website](#).

T&D Environmental Issues

The Bioelectromagnetics Society 31st Annual Meeting

June 14–19, Davos, Switzerland. Contact: Rob Kavet, (650) 855-1061, rkavet@epri.com. More information is available at the [event website](#).

*** *Mid-Year Joint Meeting of P51 (Transmission & Distribution) and P57 (Rights-of-Way)***

July 8–9, Charlotte, NC. Contact: Babu Nott, (650) 855-7946, bnott@epri.com. More information is available at the [event website](#).

*** *2009 EMF Scientific Advisory Committee Meeting***

July 20–21, Milwaukee, WI. Contact: Rob Kavet, (650) 855-1061, rkavet@epri.com.

International Society of Arboriculture 85th Annual Conference & Trade Show

July 24–29, Providence, RI. Contact: John W. Goodrich-Mahoney, (202) 293-7516, jmahoney@epri.com. More information is available at the [event website](#).

Ninth International Symposium on Environmental Concerns in Rights-of-Way Management

Sept. 27–Oct. 1, Portland, OR. Contact: John W. Goodrich-Mahoney, (202) 293-7516, jmahoney@epri.com. More information is available at the [event website](#).

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3420 Hillview Avenue, Palo Alto, California 94304-1338 • PO Box 10412, Palo Alto, California 94303-0813 USA
800.313.3774 • 650.855.2121 • askepri@epri.com • www.epri.com

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