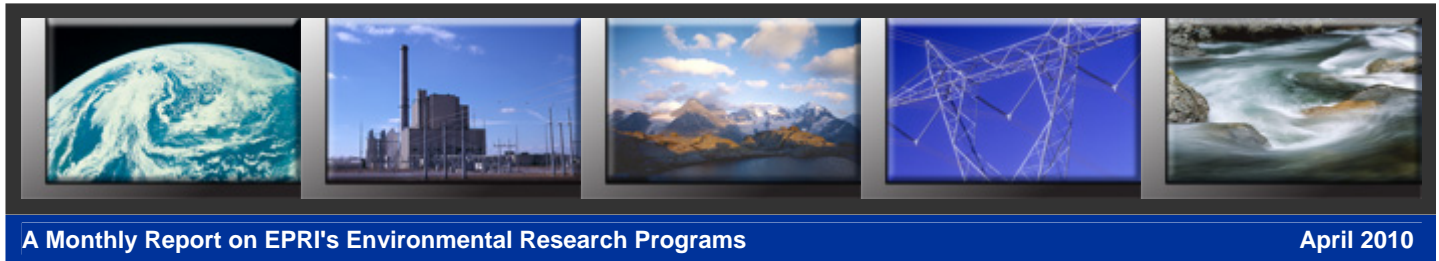


## Environment Quick News



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.

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Dear Environment Sector members:

We have just returned from a very successful set of Environment Advisory Meetings in Orlando, Florida. Over 200 of you gathered to review the results of our recent work, reflect on our industry's R&D needs, and plan the content and priority of our future work. Much of our past and current research is being put to use as Congress, the EPA, and the states consider changes that will impact environmental compliance for all aspects of electric generation, transmission, and delivery.

The highlight of our week was this year's Technology Transfer Awards dinner. This ceremony provided an opportunity to showcase 11 outstanding examples in which partnerships between EPRI and our members have furthered the use of specific environmental research in the past year. The Delivery and Applications Committee of the Environment Sector Council reviews nominations submitted by EPRI members and staff and selects the recipients. Thirty-eight individuals representing 14 member companies received awards this year. The 2009 recipients are

- Laura Suzanne Fisher from the Tennessee Valley Authority, for use of EPRI work in National Ambient Air Quality Standards Comments
- Scott Patulski, Marc Nelder, Bill Roeder, and Bob Shaw from We Energies, for Ergonomic Interventions for Electrical Workers in Power Plants Digital Manual
- Lee Boughey, Mac McLennan, and Barbara Walz from Tri-State G&T Association, for use of EPRI results in Greenhouse Gas Management Planning
- Tom Webb, American Electric Power; Don Lierman, Entergy; Mike Horvath, FirstEnergy; Cam Wheeler, Progress Energy; and David Morris, Southern Company, for work on Sustainable Coal Combustion Product Management
- Marge Galvin-Karr, Ron Lewis, and Jay Perkins from Duke Energy, for Pilot-Scale Vertical Flow Wetland to Treat Flue Gas Desulfurization Wastewater
- Kurt Anderson and Lowell Neudahl from Minnesota Power, for Reservoir Water Level Fluctuations and Mercury Cycling
- Cindy Brandt from Integrys Energy Group, for Alternate Condensable Particulate Matter Methods Research
- David Renew, John Swanson, and Hayley Tripp from National Grid, for Electromagnetic Field Research
- John Acklen, Pat Barnes, Emilie Dohleman, Chris Gerety, Stanley Gibbons, Ted McCarty, Perry Minor, and Mike Prescott from PNM Resources, for Mineral Oil Spill Evaluation System Use
- Donald Govel, Bill Slade, and Nelson Yip from Consolidated Edison of New York, for Climate Policy Risk Assessment

- Elizabeth Hellman, Kevin Howard, Pete Kutzora, Dave Lee, and Rob Muehlenkamp from We Energies, for Flue Gas Desulfurization Wastewater Treatment Technology Evaluation

We congratulate all of the winners on their fine achievements, and we thank them for working to ensure their companies get the highest value from EPRI research. You can link to many of these application Success Stories in the New Marketing Communications section below.

We hope that you will join us in San Antonio, Texas for our next set of Environment Advisory meetings, to be held the week of September 27. In the meantime, we look forward to “seeing you” on one of our many program and project webcasts scheduled continuously throughout the year.

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## AIR QUALITY

### Air Quality Area News

#### *EPRI Research Presented at International Workshop on Amine Emissions*

Eladio Knipping presented an overview of EPRI’s research on health and environmental impacts of future power plant emissions at the Environmental Impact of Amine Emission During Post Combustion Capture workshop, held Feb. 16 in Oslo, Norway. Organized by the International Energy Agency Greenhouse Gas Research and Development Program, the workshop’s objectives were to describe current amine emissions environmental research and identify knowledge gaps. The use of amines for the post-combustion capture of CO<sub>2</sub> may result in the release of a small fraction of the solvent or its degradation products into the atmosphere, with poorly understood environmental consequences. Presentations from the workshop may be downloaded from the workshop [website](#). For more information, contact Eladio Knipping, (202) 293-6343, [eknippin@epri.com](mailto:eknippin@epri.com), or Annette Rohr, (650) 855-2297, [arohr@epri.com](mailto:arohr@epri.com).

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

#### *Baltimore Study Refines Estimates of Emissions From Lawn and Garden Equipment*

An EPRI study to improve the emissions inventory for non-road mobile sources calculated emissions for lawn and garden equipment in the Baltimore area. The results differed in several ways from those calculated by the U.S. Environmental Protection Agency’s emissions model, NONROAD. Lawn and garden equipment was chosen for the study because it is a significant source of volatile organic compounds (VOCs) in urban areas. The EPRI study found that emission estimates were up to 56% lower than those estimated using NONROAD. In addition, weekend emissions estimates for VOCs were 2.6 times higher than the weekday estimates—a pattern that was not replicated by the NONROAD model. Such errors in VOC estimates can hinder the ability of air quality models to replicate differences in weekend-weekday ozone levels and may create large uncertainties in air quality policy making. Future research will determine the applicability of the Baltimore results to other regions. For more information, contact Stephanie Shaw, (650) 855-2353, [sshaw@epri.com](mailto:sshaw@epri.com).

#### *How Power Plant Emission Reductions Effect Nitrogen Deposition—A Case Study*

Vijayaraghavan, K., et al. “A case study of the relative effects of power plant nitrogen oxides and sulfur dioxide emission reductions on atmospheric nitrogen deposition,” *Journal of the Air and Waste Management Association*, 60 (3), 287–293, 2010, doi:10.3155/1047-3289.60.3.287. In this EPRI study, the Community Multiscale Air Quality model was used to simulate the effect of NO<sub>x</sub> and SO<sub>2</sub> emission reductions at a specific coal-fired power plant on nitrogen deposition to Escambia Bay and its watershed. The benefits to the bay from the single power plant emission reductions were then compared with the overall benefit due to regional Clean

Air Interstate Rule controls. For more information, contact Eladio Knipping, (202) 293-6343, [eknippin@epri.com](mailto:eknippin@epri.com).

### ***EPRI Hosts Webcast on Winter Nitrate Study***

On Mar. 4, EPRI Air Quality staff conducted a webcast to bring member companies up to date on the status of the Winter Nitrate Study. The webcast covered

- initial sampling and data validation processes;
- literature reviews on nitrate chemical pathways, for potential inclusion in the modeling portion of the study;
- evaluation of several thermodynamic models; and
- discussion of proposed project expansion to additional monitoring sites in Wisconsin for winter 2010-2011.

Materials from the webcast are available to Program 91 members. For more information, contact Stephanie Shaw, (650) 855-2353, [sshaw@epri.com](mailto:sshaw@epri.com).

### ***Paper Compares Vascular Effects From Gases, Particles, and Mixtures***

See story under Program 92.

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

### ***Field Exposure System Simulates Aerosols in Coal-Fired Power Plant Toxicology Study***

Field results from EPRI's "Toxicological Evaluation of Realistic Emissions of Source Aerosols" study show that both primary and secondary (aged) aerosols were successfully simulated using stack emissions from three coal-fired power plants. A series of increasingly complex test aerosols were generated and used for subsequent animal inhalation experiments: primary emissions only; sulfuric acid aerosol from oxidation of SO<sub>2</sub>; sulfuric acid aerosol neutralized by ammonia; and neutralized sulfuric acid plus secondary organic aerosol formed from alpha-pinene. Analysis of the generated aerosols showed:

- Primary particle mass concentration varied by power plant and depended primarily on the ratio of SO<sub>2</sub> to NO<sub>x</sub> emissions, which is driven by coal composition and type of emission controls used.
- The highest particle mass concentrations were found in the aged neutralized-sulfuric acid-secondary organic aerosols.
- Sulfate and organic carbon were the major components in the aged aerosols, with trace elements making up only a small fraction of the total.

A paper on the field study results is in press and will appear with papers on the toxicological results in a special issue of *Inhalation Toxicology* later this year. For more information, contact Annette Rohr, (650) 855-2297, [arohr@epri.com](mailto:arohr@epri.com).

### ***New Technique Used to Examine Air Pollution and Mortality***

An EPRI study is revisiting the relationship between air pollution and daily mortality in the elderly using a mathematical modeling technique that allows new insights into the relationship. Incorporating what is known as a Kalman filter into the model, researchers have reevaluated Philadelphia mortality data from the 1970s and 1980s using daily total suspended particulate data from the same period. The approach defines a subset of the elderly called the frail population and attempts to answer the question: how much is life span being shortened by air pollution? Researchers found that the impact on the frail population lifespan is very small—on the order of days. A paper on the Philadelphia study has been accepted for publication, and work is continuing to expand and improve the model. Future research will apply the improved model to the newer, 10-year Aerosol Research and Inhalation Epidemiology Study data set. For more information, contact Ron Wyzga, (650) 855-2132, [rwyzga@epri.com](mailto:rwyzga@epri.com).

### ***Paper Compares Vascular Effects From Gases, Particles and Mixtures***

Campen, M.J., et al. "A comparison of vascular effects from complex and individual air pollutants indicates a role for monoxide gases and volatile hydrocarbons," *Environmental Health Perspectives*, doi:10.1289/ehp.090120, 2010. This paper examines different vascular effects in mice that were exposed to several atmospheric pollutants (nitric oxide, nitrogen dioxide, carbon monoxide) and mixtures of pollutants

(combustion emissions from gasoline, diesel, coal, and hardwood). The EPRI study found that gasoline and diesel emissions caused vascular changes, which could be recreated by exposure to carbon monoxide, nitric oxide, and, to a lesser extent, volatile hydrocarbons. These results support a role for traffic-related pollutants in cardiopulmonary disease. For more information, contact Annette Rohr, (650) 855-2297, [arohr@epri.com](mailto:arohr@epri.com), or Eladio Knipping, (202) 293-6343, [eknippin@epri.com](mailto:eknippin@epri.com).

## GLOBAL CLIMATE CHANGE

[Visit the Global Climate Webpage](#)

### Global Climate Change Area News

#### *Save the Date—EPRI Global Climate Change Research Seminar*

On May 18–19 in Washington, D.C., EPRI's Global Climate Change Group will be holding its fifteenth annual research seminar aimed at communicating the latest global climate research findings. EPRI and invited experts will be discussing the following topics:

- the international and U.S. outlooks after Copenhagen
- stabilization and implications for the energy sector
- overcoming barriers to carbon capture and storage
- understanding uncertainty
- the outlook for natural gas, renewable energy, and nuclear
- energy efficiency, energy policy, climate policy, and the electric sector
- greenhouse gas emission offsets
- reducing emissions from deforestation and forest degradation—monitoring and verification

Representatives of industry, government, academia, and other organizations concerned with global climate change are invited to attend. For more information, contact Christina Kemp, (650) 855-2044, [ckemp@epri.com](mailto:ckemp@epri.com).

### Program 103: Greenhouse Gas Reduction Options

#### **Amazon Avoided Deforestation Project Expands Efforts**

In cooperation with Woods Hole Research Center and the Environmental Defense Fund, EPRI is expanding its supplemental project on Amazon avoided deforestation. The project began in fall 2009 and is designed to

- expand carbon capacity building efforts in the Brazilian Amazon rainforest, and
- conduct analyses to support future implementation of projects to reduce emissions from deforestation and degradation.

Increased EPRI-member participation in the project has led to new tasks being added. These tasks are designed to more quickly develop the institutional and market infrastructure necessary so indigenous peoples in Brazil may be able to supply compliance-quality forest carbon offsets to the world's evolving carbon markets. For more information, contact Adam Diamant, (510) 260-9105, [adiamant@epri.com](mailto:adiamant@epri.com).

#### **Climate Policy and Nuclear Generation**

Victor Niemeyer gave a global climate policy presentation to EPRI's Nuclear Sector Council at its recent winter meeting. His discussion covered the challenges and opportunities of present climate policy, and how nuclear, coal with carbon capture and storage technology, and renewables will all compete to displace emissions from existing coal generation if stringent caps are placed on CO<sub>2</sub> emissions. Niemeyer's presentation, "[Climate Policy Implications and Opportunities for Nuclear Generation](#)," may be downloaded from the Global Climate website. For more information, contact Victor Niemeyer, (650) 855-2262, [niemeyer@epri.com](mailto:niemeyer@epri.com).

## **Program 50: Manufactured Gas Plant Site Management**

### ***Jeff Clock Presents EPRI Research at Sediment Conference***

In an invited presentation at the 2010 ARCADIS Sediment Conference, held Feb. 10–11 in Ft. Lauderdale, FL, EPRI's Jeff Clock described ongoing monitoring of a reactive capping system for contaminated sediments at a former manufactured gas plant site on the Hudson River in New York State. The cap was deployed in May 2009 and has, to date, effectively sequestered nonaqueous-phase liquids (NAPLs) in the sediments. More than 90 industry professionals attended the conference, which featured 16 platform presentations and 12 poster sessions. For more information, contact Jeff Clock, (845) 608-0642, [jqclock@epri.com](mailto:jqclock@epri.com).

## **Program 59: Power Plant Toxics Characterization**

### ***EPRI Offers Quality Control Review of Hazardous Air Pollutants Stack Testing Data***

EPRI will perform a quality control review of hazardous air pollutants (HAPs) stack testing data collected at coal- and oil-fired power plants participating in the Environmental Protection Agency's (EPA's) Information Collection Request. EPRI will review the measurement data provided by all utilities that choose to participate in the project. The purpose of this effort is to identify questionable measurements (outliers) so that the facilities can identify, and if necessary correct, those data before submittal to EPA. EPA will use the data to develop Maximum Achievable Control Technology (MACT) standards for HAPs, including trace metals, acid gases, and organic compounds such as dioxins and furans. A final MACT standard is expected by November 2011. EPRI will kick off this industrywide effort in April. Participants are to send their data (via a custom spreadsheet) directly to EPRI in time to meet EPA's first submission deadline in early July. Each participant will receive a data quality control report, and EPRI will summarize its overall findings in a report to EPA and participants. This is a joint effort sponsored by the Power Plant Toxics Characterization and Integrated Environmental Control programs and will require supplemental financial support to complete. For more information, contact Paul Chu, (650) 855-2362, [pchu@epri.com](mailto:pchu@epri.com), George Offen, (650) 855-8942, [goffen@epri.com](mailto:goffen@epri.com), or Naomi Goodman, (650) 855-2193, [ngoodman@epri.com](mailto:ngoodman@epri.com).

## **Program 54: Fish Protection at Steam Electric Power Plants**

### ***Fish Protection Performance With Three Types of Traveling Water Screens***

*Laboratory Evaluation of 2.0 mm Fine-mesh Traveling Water Screens for Protection of Larval Fish: Exclusion and Survival Studies* (EPRI Product 1020663). This Technical Update presents the results of 2009 research that examined the fish protection performance of three types of traveling water screens for cooling water intake structures. The project's objectives included monitoring (1) the retention of larval fish on 2.0 mm screens, and (2) survival following transfer to a fish return system. Fine mesh traveling screens are a key technology that the U.S. Environmental Protection Agency is considering for reducing entrainment of early life stages of fish as part of its revised Clean Water Act §316(b) rulemaking for existing power plants with once-through cooling. The results indicated that larval fish morphometry can be used to predict retention thereby eliminating potentially expensive field monitoring. The 2.0 mm screens significantly out-performed finer mesh screens (0.5-1.0 mm) tested in previous EPRI research (see EPRI report [1015578](#)). The fish species tested to date are relatively hardy and results, therefore, may not apply to sensitive species that tend to dominate actual power plant entrainment. For more information, contact Doug Dixon, (804) 642-1025, [ddixon@epri.com](mailto:ddixon@epri.com).

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

### ***Western Water Availability Constraints on Electric Power***

On Feb. 23–24, Public Service Company of New Mexico hosted an EPRI workshop in Albuquerque on "Western Water Availability Constraints on Electric Power." Presenters from EPRI, electric utilities, government agencies, national labs, universities, and consultants gave presentations on key water issues for western power companies. The purpose of the workshop was to identify common issues among the utilities, prioritize them, and determine technological and scientific knowledge gaps in addressing those issues.

Because water is a shared resource, attendees agreed that all stakeholders in the watershed must work collaboratively and make use of potential synergies. A steering committee was formed from EPRI and utility attendees to plan a meeting with western water utilities to develop collaborative strategies and research to achieve greater efficiency in use of both water and electricity. The workshop is targeted for October and will be hosted by Southern California Edison. In addition to western electric and water utilities, federal and state agencies, national laboratories, water sector research organizations, environmental groups, and universities will be invited. For more information, contact Robert Goldstein, (650) 855-2154, [rogoldst@epri.com](mailto:rogoldst@epri.com).

### ***EPRI and Federal Agencies Coordinate Research on Ecosystems Services***

A memorandum of understanding (MOU) was recently executed between EPRI, the U.S. Environmental Protection Agency, and the U.S. Department of Agriculture to coordinate ecosystem services research in the Upper Mississippi and Ohio River Basins. The goals are to

- support collaborative efforts for data collection and analysis,
- explore ecosystem service management barriers and methods to overcome them, and
- support demonstration projects that inform sustainable approaches for ecosystem service use.

A Framework for Cooperation will be developed that will define and guide the specific collaboration under this MOU. For more information, contact Jessica Fox, (650) 855-2138, [jfox@epri.com](mailto:jfox@epri.com).

### ***Environmental Credit Stacking Survey Sent to U.S. Market Practitioners and Regulators***

EPRI, the World Resources Institute, Stetson University College of Law, and the University of Kentucky, developed an electronic survey on environmental credit stacking that was sent in mid-January 2010 to market practitioners and agencies across the United States. The growing markets in carbon sequestration, water quality trading, and wetland and species banking have brought attention to the need for understanding protocols, case studies, and opinions for how credits can be stacked among these different markets. This survey is part of the Ohio River Basin Trading Project, which is investigating the feasibility of stacking greenhouse gas offsets and water quality credits. The survey will collect the current involvement in credit stacking by credit sellers and purchasers, exchanges and brokers, researchers and academic institutions, and regulatory agencies. The resulting analysis and its associated case studies will lay the foundation for developing a peer-reviewed publication summarizing the current state and viable opportunities for credit stacking in the U.S. For more information, contact Jessica Fox, (650) 855-2138, [jfox@epri.com](mailto:jfox@epri.com).

## **Program 56: Effluent Guidelines and Water Quality Management**

### ***Office of Management and Budget Reviewing Effluent Guidelines Information Collection Request***

The Office of Management and Budget (OMB) is reviewing the [Information Collection Request \(ICR\)](#) drafted by the Environmental Protection Agency (EPA) to support development of new effluent guidelines limiting the surface water release of pollutants from steam electric power plants. The draft ICR incorporates recent comments by EPRI, industry trade associations, and environmentalists. If approved by OMB, the ICR will require owners of an estimated 734 power plants to provide “economic data and technical information about flue gas desulfurization (FGD) wastewater, ash handling, process equipment cleaning operations, wastewater treatment, surface impoundment and landfill operations, and nuclear operations.” For more information, contact Paul Chu, (650) 855-2362, [pchu@epri.com](mailto:pchu@epri.com).

## **Program 58: Waterpower**

### ***EPRI Plans Hydrokinetic Electricity Generation and Fish Symposium***

EPRI is organizing a symposium on “Hydrokinetic Electricity Generation and Fish: Asking the Right Questions, Getting Useful Answers” to be held as part of the Sept. 12-16, 2010 American Fisheries Society Annual Meeting in Pittsburgh, PA. Generation of electricity from moving water (tidal currents and other instream, unimpounded flows) is known as hydrokinetic generation. This emerging form of generation offers a potentially significant contribution to renewable energy portfolios. Because hydrokinetic electricity generation does not require impoundment of the waterbody, it presents a new set of potential environmental impacts (including impacts on fish) that differs from that of conventional hydropower. The symposium will bring together people involved in this emerging form of electricity generation to share existing information and identify critically

important information needs. For more information, contact Paul Jacobson, (410) 489-3675, [pjacobson@epri.com](mailto:pjacobson@epri.com).

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## T&D ENVIRONMENTAL ISSUES

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### **Program 60: EMF Health Assessment and Radio-Frequency Safety**

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

#### ***Radio-Frequency Exposure From Residential Automatic Meter Reader Systems***

[A Perspective on Radio-Frequency Exposure Associated With Residential Automatic Meter Reading Technology](#) (EPRI Product 1020798). Automatic Meter Reader (AMR) systems are rapidly replacing manual meter reading. AMR systems are components of Advanced Metering Infrastructure (AMI), a vital element of the smart grid that will improve power system service quality and efficiency by enabling measurement and transmission of detailed time-based information. This Technical Update addresses questions about radio-frequency exposure related to AMI in residential settings. The Update notes that even if an AMI unit were to continuously operate it would still have exposures in a home far below Federal Communication Commission limits for the public. For more information, contact Rob Kavet, (650) 855-1061, [rkavet@epri.com](mailto:rkavet@epri.com)

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## OCCUPATIONAL HEALTH AND SAFETY

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### **Program 62: Occupational Health and Safety**

#### ***Scientific Advisory Committee Recommends Creation of an Industrywide Exposure Database***

The Scientific Advisory Committee (SAC) for Occupational Health and Safety met Feb. 18–19 in Palo Alto to review current research on ergonomics, injury surveillance, and welding exposures, and to recommend new research in areas such as heat and noise exposure. An important recommendation for new research supports systematic data collection to create an industrywide exposure database. As summarized at the March Advisory Meeting in Orlando, FL by SAC member Dr. Leeka Kheifets of the University of California at Los Angeles, the database would

- leverage collected data,
- identify high-risk occupations,
- allow member companies to share knowledge of control technologies, and
- help the industry prepare for future, more-stringent standards expected from the Occupational Safety and Health Administration.

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

#### ***Researchers Study Tasks Performed by Utility Workers to Minimize Risk of Musculoskeletal Disorders***

- Saginus, K.A., et al. “Dynamic modeling of hand push force to close a disconnect switch at switching stations and substations.” In [Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting](#), Oct. 20–23, San Antonio, TX, 2009; 53(14):902–906 (EPRI Product E233892). This paper describes a methodology for modeling the dynamic force exerted by utility workers when closing disconnect switches by hand. This repetitive, physically demanding task exposes workers to an increased risk of musculoskeletal disorders (MSDs) of the upper extremities.
- Weiszczyk, S.M., et al. “[Height of industrial hand wheel valves affects torque exertion](#),” *Human Factors*, 2009; 51(4):487–496 (EPRI Product E233896). In this study, workers were able to exert the greatest torque on hand wheel valves located overhead, compared with those located at chest or knee height. To minimize workers’ risk of MSDs, this finding suggests that design engineers should avoid locating hand wheel valves at knee height or lower.
- Stone, A., et al. “Case study for workers in fossil-fueled generating stations,” [Work: A Journal of Prevention, Assessment & Rehabilitation](#) (2010, in press) (EPRI Product E233897). Using a collaborative approach, two ergonomics teams identified specific job tasks associated with increased risk of MSDs and proposed task-specific ergonomic interventions. The teams observed utility electricians or plant operators and mechanics while they worked in the field and participated in controlled laboratory tests.

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

## New Supplemental Project Opportunities

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### **Environment**

- [Environmental Aspects of Renewable Energy Interest Group](#) (EPRI Product 1020786)

### **Program 103: Greenhouse Gas Reduction Options**

- [Assessing the Implications of Energy and Environmental Policy for Generation Asset Strategy](#) (EPRI Product 1020883)

### **Program 57: Row: Siting, Vegetation Management, and Avian Issues**

- [Tree-Conductor Air Gap Spark-Over Distances](#) (EPRI Product 1020858)

### **Program 62: Occupational Health and Safety**

- [Ergonomics and Worker Safety for Construction, Operations, and Maintenance of Wind Turbines](#) (EPRI Product 1020910)

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

## New Marketing Communications

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### **Environment**

- [Environment 2009 Annual Overview](#) (EPRI Product 1020864)

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

- [EPRI and Tennessee Valley Authority Provide Critical Scientific Input to Air Quality Standards for NOx and SOx](#). Success Story (EPRI Product 1020767)

### **Program 102 : Global Climate Policy Costs and Benefits**

- [Consolidated Edison Company Uses EPRI Climate Policy Risk Assessment to Validate Business Model Under Future Greenhouse Gas Controls](#), Success Story (EPRI Product 1020758)

### **Program 49: Coal Combustion Products – Environmental Issues**

- [EPRI and its Members Inform Regulatory Process on Sustainable Management of Coal Combustion Products](#), Success Story (EPRI Product 1020865)

### **Program 50: Manufactured Gas Plant Site Management**

- [Manufactured Gas Plant Research](#), Fact Sheet (EPRI Product 1020853)

### **Program 59: Power Plant Toxics Characterization**

- [Responding to the EPA Information Collection Request for Electric Utility Steam Generating Units: ICR Part III Electronic Data Reporting](#) (EPRI Product 1020914)

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

- [Ohio River Basin Trading Project - Quarterly Update, Winter 2010](#) (EPRI Product 1020769)

### **Program 56: Effluent Guidelines and Water Quality Management**

- [EPRI, We Energies Test Technologies to Reduce Mercury and Selenium in Wastewater](#), Success Story (EPRI Product 1020840)

- [Duke Energy and EPRI Enhance Passive Treatment Method to Reduce Selenium Levels in Power Plant Wastewater](#), Success Story (EPRI Product 1020768)

**Program 51: T&D Facilities & Equipment: Environmental Issues**

- [PNM Resources Avoids Substation Retrofit Costs Through Oil Spill Risk Evaluation](#), Success Story (EPRI Product 1020814)
- [Transmission and Distribution Facilities and Equipment: Environmental Issues Research](#), Fact Sheet (EPRI Product 1020701)

**Program 57: Row: Siting, Vegetation Management, and Avian Issues**

- [EPRI Research on Rights-of-Way Issues](#), Fact Sheet (EPRI Product 1020852)

**Program 60: EMF Health Assessment and Radio-Frequency Safety**

- [EPRI, National Grid Collaboration Advances Electric and Magnetic Fields Science](#), Success Story (EPRI Product 1020841)

## Upcoming Events

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\* denotes EPRI sponsored or cosponsored event

### Environment Sector

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

Sept. 27–30, San Antonio, TX. Contact: Marsha Grossman, (650) 855-8760, [mgrossma@epri.com](mailto:mgrossma@epri.com).

### Energy Sustainability

**\* Energy Sustainability Interest Group Workshop**

May 3–4, Boston MA. Contact, Todd Maki, (650) 855-2162, [tmaki@epri.com](mailto:tmaki@epri.com), or Kitty Vroom, (650) 855-2255, [kvroom@epri.com](mailto:kvroom@epri.com). Workshop is open to members of the Energy Sustainability Interest Group. More information is available at the [event website](#).

**\* Webcast: Energy Sustainability Interest Group Update—Water Resource Trends and Implications for the Electric Power Industry Project**

May 12, 10 a.m. PDT. Contact: Todd Maki, (650) 855-2162, [tmaki@epri.com](mailto:tmaki@epri.com), or Kitty Vroom, (650) 855-2255, [kvroom@epri.com](mailto:kvroom@epri.com). The workshop is open to members of the Energy Sustainability Interest Group.

**\* Webcast: NYPA’s Sustainability Action Plan—An Overview**

May 17, 10 a.m. PDT. Contact: Todd Maki, (650) 855-2162, [tmaki@epri.com](mailto:tmaki@epri.com), or Kitty Vroom, (650) 855-2255, [kvroom@epri.com](mailto:kvroom@epri.com). The webcast is open to members of the Energy Sustainability Interest Group.

### Air Quality

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

May 5–7, Palo Alto, CA. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com)

**Remediation of Chlorinated and Recalcitrant Compounds**

May 24–27, Monterey, CA. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com). More information is available at the [event website](#).

**\*EPRI Air Quality Summer Seminar—Particulate Matter and Health: Evaluating Alternatives to a Mass-Based PM Standard**

May 26–27, Washington, D.C. Contact: Naresh Kumar, (650) 855-2990, [nkumar@epri.com](mailto:nkumar@epri.com). More information is available in the [Event Sheet](#).

### ***Goldschmidt™ 2010 – Earth, Energy and the Environment***

June 13–18, Knoxville, TN. Contact: Arnout Ter Schure, (650) 855-2281, [aterschu@epri.com](mailto:aterschu@epri.com). Dr. Ter Schure will chair a session on Atmospheric Oxidation of Mercury by Reactive Halogen Species. More information is available at the [event website](#).

### ***Air & Waste Management Association 103rd Annual Conference & Exhibition***

June 22–25, Calgary, Canada. Contact: Naresh Kumar, (650) 855-2990, [nkumar@epri.com](mailto:nkumar@epri.com). More information is available at the [event website](#).

### ***Joint ICACGP–IGAC Conference—Atmospheric Chemistry: Challenging the Future***

July 11–16, Halifax, Canada. Contact: Knipping, (202) 293-6343, [eknippin@epri.com](mailto:eknippin@epri.com). More information is available at the [event website](#).

### ***2010 Joint Conference of International Society of Environmental Epidemiology and International Society of Exposure Science***

Aug. 28–Sep. 1, Seoul, Korea. Contact: Annette Rohr, (650) 855-2297, [arohr@epri.com](mailto:arohr@epri.com).

### ***\* Power Plant Air Pollutant Control “MEGA” Symposium***

Aug. 30–Sept. 2, Baltimore, MD. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com). More information is available at the [event website](#).

### ***9th Annual Community Modeling and Analysis System Conference***

Oct. 11–13. Contact: Naresh Kumar, (650) 855-8758, [nkumar@epri.com](mailto:nkumar@epri.com). More information is available at the [CMAS website](#).

### ***National Atmospheric Deposition Program 2010 Annual Meeting and Scientific Symposium***

Oct. 19–21, Lake Tahoe, CA. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com) or Arnout Ter Schure, (650) 855-2281, [aterschu@epri.com](mailto:aterschu@epri.com). More information is available at the [NADP website](#).

### ***American Association for Aerosol Research 29th Annual Conference***

Oct. 25–29, Portland, OR. Contact: Eladio Knipping, (202) 293-6343, [eknippin@epri.com](mailto:eknippin@epri.com).

### ***Air & Waste Management Association Symposium on Air Quality Measurement Methods and Technology***

Nov. 2–4, Los Angeles, CA. Contact: Naresh Kumar, (650) 855-2990, [nkumar@epri.com](mailto:nkumar@epri.com). More information is available at the [event website](#).

### ***American Geophysical Union 2010 Fall Meeting***

Dec. 13–17, San Francisco, CA. Contact: Stephanie Shaw, (650) 855-2353, [sshaw@epri.com](mailto:sshaw@epri.com).

## **Global Climate**

### ***\* 15th Annual EPRI Global Climate Change Research Seminar***

May 18–19, Washington, DC. Contact: Christina Kemp, (650) 855-2044, [ckemp@epri.com](mailto:ckemp@epri.com).

## **Land and Groundwater**

### ***\* EPRI/UARG Air Toxics Research Coordination Meeting***

May 5–7, Palo Alto, CA. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com).

### ***Remediation of Chlorinated and Recalcitrant Compounds***

May 24–27, Monterey, CA. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com). More information is available at the [event website](#).

### ***Air & Waste Management 103rd Annual Conference & Exhibition***

June 22–25, Calgary, Canada. Contact: Naresh Kumar, (650) 855-2990, [nkumar@epri.com](mailto:nkumar@epri.com). More information is available at the [event website](#).

### ***\* Power Plant Air Pollutant Control “MEGA” Symposium***

Aug. 30–Sept. 2, Baltimore, MD. Contact: Leonard Levin, (650) 855-7929, [llevin@epri.com](mailto:llevin@epri.com). More information is available at the [event website](#).

## **Water and Ecosystems**

### ***\* Webcast: Ohio River Trading Project Quarterly Update***

May 19, 10 a.m. PDT. Contact: Katie Vroom, (650) 855-2417, [kavroom@epri.com](mailto:kavroom@epri.com).

### ***\* Summer Water & Ecosystem Area Council Meeting***

June 23–25, Whitefish, MT. Contact: Katie Vroom, (650) 855-2417, [kavroom@epri.com](mailto:kavroom@epri.com).

### ***\* Webcast: Ohio River Trading Project Quarterly Update***

Aug. 18, 10 a.m. PDT. Contact: Katie Vroom, (650) 855-2417, [kavroom@epri.com](mailto:kavroom@epri.com).

### ***\* Symposium: Hydrokinetic Electricity Generation and Fish: Asking the Right Questions, Getting Useful Answers***

Sept. 12-16, exact date TBD, Pittsburgh, PA. Contact: Paul Jacobson, (410) 489-3675, [pjacobson@epri.com](mailto:pjacobson@epri.com). This symposium will be held as part of the American Fisheries Society Annual Meeting.

### ***\* Webcast: Ohio River Trading Project Quarterly Update***

Nov. 17, 10 a.m. PDT. Contact: Katie Vroom, (650) 855-2417, [kavroom@epri.com](mailto:kavroom@epri.com).

## **T&D Environmental Issues**

### ***The Bioelectromagnetics Society 32nd Annual Meeting***

June 14–18, Seoul, Korea. Contact: Gabor Mezei, (650) 855-8908, [gmezei@epri.com](mailto:gmezei@epri.com). More information is available at the [event website](#).

### ***Progress In Electromagnetics Research Symposium (PIERS)***

July 5–8, Cambridge, MA. Contact: Gabor Mezei, (650) 855-8908, [gmezei@epri.com](mailto:gmezei@epri.com). More information is available at the [event website](#).

### ***International Society of Arboriculture 86th Annual Conference & Trade Show***

July 23–28, Chicago, IL. Contact: John W. Goodrich-Mahoney, (202) 293-7516, [jmahoney@epri.com](mailto:jmahoney@epri.com). More information is available at the [event website](#).

### ***\* 2010 EMF Scientific Advisory Committee Meeting***

Aug. 16–17, New York, NY. Contact: Gabor Mezei, (650) 855-8908, [gmezei@epri.com](mailto:gmezei@epri.com).

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