Environmental Monitoring, Evaluation, and Protection in New York: Linking Science and Policy

October 14th-15th, 2009

Albany Marriott - 189 Wolf Road - Albany, NY



This conference brings together scientists and policy makers to share information on environmental research in New York State and its implications for making and evaluating policy. The New York Energy \$mart\$SM Environmental program supports policy-relevant research in order to enhance understanding of energy-related environmental issues. The program will highlight the latest research on air quality and related health issues, ecosystem responses to atmospheric pollutants, climate change issues, and environmental issues related to renewable and emerging technologies.





Environmental Monitoring, Evaluation, and Protection in New York: Linking Science and Policy

2009 Conference Agenda

Albany Marriott - 189 Wolf Road - Albany, NY

Wednesday, October 14th

REGISTRATION
Welcome and Opening Remarks
Frank Murray - President and CEO, NYSERDA
Pete Grannis - Commissioner, NYS Department of Environmental
Conservation
Overview of NYSERDA's Environmental Research Program
Janet Joseph - Director, Clean Energy Research and Market
Development, NYSERDA
•
State of the Environment: Major Energy-Related Environmental Issues of
the 21st Century
Ravi K. Srivastava, Chief, U.S. Environmental Protection Agency,
Air Pollution Technology Branch, National Risk Management
Research Laboratory

10:00 - 10:30 am

BREAK

10:30 - 12:00 pm

Session Chair: Sandra Meier, Senior Project Manager, NYSERDA

Energy-Related Environmental Science and Policy: Challenges and

Strategies



Assessment of Market-Based Trading Programs (**Tom Bourgeois**, Pace Energy and Climate Center)

NYSERDA's Experience with Market-Based Energy and Environmental Programs (**Kevin Hale**, NYSERDA)

New York State Energy Plan (Karl Michael, NYSERDA)

12:00 - 1:15 pm **LUNCH** - Networking

1:15 - 2:45 pm Concurrent Sessions SESSION A - Session chair: Stuart
Findlay, Aquatic Ecologist, Cary
Institute of Ecosystem Studies
Are New York's Ecosystems
Recovering from the Adverse Effects
of Mercury and Acid Deposition?
An Aquatic Perspective

Acid Deposition Impacts, Monitoring, and Trends in Adirondack Lakes and Streams (**Karen Roy**, NYS Department of Environmental Conservation) <u>SESSION B</u> - Session chair: Ellen Burkhard, Senior Project Manager, NYSERDA

Air Quality and Health

PM Supersite Revisited - Queens College 2009 Summer Field Intensive Study (**Ken Demerjian,** University of Albany, Atmospheric Sciences Research Center)

2009 Conference Agenda

Wednesday, October 14th (cont.)

Concurrent Sessions (continued)



Cardiac Rehab Unit photo from the University of Rochester Medical Center

SESSION A (continued)

Critical Loads of Nitrogen and Sulfur for Aluminum Mobilization in Adirondack Soils (**Gregory**Lawrence, U.S. Geological Survey)

Lawrence, U.S. Geological Survey) Long-Term Impacts of Acidic Deposition on Brook Trout in

Honnedaga Lake, New York (**Daniel Josephson**, Cornell University)

Mercury Cycling and Bioaccumulation in a Central Adirondack Stream Ecosystem (**Karen Murray**, U.S. Geological Survey)

SESSION B (continued)

Applying the Northeast Regional Multi-Pollutant Policy Analysis Framework to New York (**John Graham**, Northeast States for Coordinated Air Use Management)

Ultrafine Particles and Cardiac Responses (**Mark Utell**, University of Rochester Medical School)

2:45 - 3:15 pm

BREAK

3:15 - 5:00 pm Concurrent Sessions





Aerial photo from www.glsweetnam.com

SESSION A- Session chair: Christine Goodale, Assistant Professor, Cornell University

Are New York's Ecosystems
Recovering from the Adverse Effects
of Mercury and Acid Deposition?
A Terrestrial Perspective

Mercury Bioaccumulation in Terrestrial Food Webs (**David Evers**, Biodiversity Research Institute)

Climatic Impacts on Watershed
Biogeochemistry: Nitrogen,
Sulfur, and Mercury Dynamics
(Myron Mitchell, SUNY College
of Environmental Science and
Forestry)

Acid Deposition Effects on Adirondack Ecosystems: Linkages Among Streams, Soils, and Sugar Maple Health (**Scott Bailey**, U.S. Forest Service) SESSION B - Session chair: Ellen Burkhard, Sr. Project Manager, NYSERDA

Improving Emissions Estimates in New York State

Recommendations from the
Regional Workshop on Emissions
Estimates (**Susan Wierman**,
Mid-Atlantic Regional Air
Management Association)

Estimating Emissions on High Electric Demand Days: A Workshop Summary (**Rob Sliwinski**, NYS Department of Environmental Conservation)

Wood Smoke in Upstate New York: A New Technique for Improved Spatial Modeling (**Michael Brauer**, University of British Columbia)

Environmental Monitoring, Evaluation, and Protection in New York: Linking Science and Policy

2009 Conference Agenda

Wednesday, October 14th (cont.)

Concurrent Sessions (continued) SESSION A (continued)
Mercury and Acid Deposition

Research – A Recap of

Current Efforts and Knowledge (Charles Driscoll, Syracuse

University)

Poster Introductions, by Topic (30-second introductions)



Atmospheric Deposition of Sulfur, Nitrogen, and Mercury, and Ecosystem Response (20 Posters)

Assessing and Mitigating the Environmental Impacts of Alternative Energy (9 Posters)

Climate Change (5 posters)

Air Quality and Health (26 posters)

Power Generation-Related Research (7 Posters)

5:00 - 6:30 pm

POSTER RECEPTION

Thursday, October 15th

8:30 - 10:00 am

Session chair: Carl Mas, Project Manager, NYSERDA

Climate Change in New York State



10:00 - 10:30 am

Climate Change in New York State (**Cynthia Rosenzweig**, Columbia University; **William Solecki**, Hunter College; **Art DeGaetano**, Cornell University)

New York State Greenhouse Gas Abatement Cost Curves (**Randy Strait**, Center for Climate Strategies)

Session chair: Amanda Stevens, Assistant Project Manager, NYSERDA Carbon Capture and Sequestration: An Emerging Technology for Mitigation

Characterization of Potential Carbon Sequestration Targets in New York State (**Brian Slater**, NYS Museum)

Carbon Dioxide Capture and Sequestration: Developing a Regulatory Strategy for New York State (**Robert Singer**, Ecology and Environment)

10:30 - 10:50 am

BREAK

2009 Conference Agenda

Thursday, October 15th (cont.)

10:50 - 12:00 pm



Session chair: Praveen Amar, Director of Science and Policy, Northeast States for Coordinated Air Use Management (NESCAUM)

Alternative Ways to Understand and Assess the Impacts of Atmospheric Pollutants

Use of Critical Deposition Loads to Inform Environmental Protection Strategies (**Tim Sullivan**, E&S Environmental Chemistry)

Capturing the Value of Ecosystem Services - (**Jon Erickson**, University of Vermont)

Achieving Risk- and Results-Based Multipollutant Air Quality Management (**William Pennell**, NARSTO)

12:00 -1:15 pm

LUNCH

1:15 - 2:50 pm



Session chair: Judy Jarnefeld, Senior Project Manager, NYSERDA Bioenergy: Opportunities and Challenges in New York

Total Fuel Cycle Analysis for Biofuels in the State of New York
(James Winebrake, Energy and Environmental Research Associates)
Analyzing the Potential for Sustainable Bioenergy Feedstock Production in New York State (Peter Woodbury, Cornell University)

Transformation of the Austrian High-Efficiency Biomass Heating Market (**Christiane Egger**, Energy Agency of Upper Austria) Biogas Digester Potential (**Tom Fiesinger**, NYSERDA)

2:50 - 3:10 pm

BREAK

3:10 - 4:25 pm



Offshore Wind Power: Environmental Impacts, Trade-Offs, and Progress (**Jeremy Firestone**, University of Delaware)

Marcellus Shale Natural Gas: The Resource, Environmental Impacts, and Proposed Regulatory Requirements (**John Marti**n, NYSERDA; **Jack Dahl,** New York State Department of Environmental Conservation)
Plug-In Vehicles: A New Way of Thinking about the Electric

NYSERDA

Grid (**John Halliwell**, Electric Power Research Institute)

4:25 - 4:45 pm

Session chair: Sandra Meier, Senior Project Manager, NYSERDA

Closing - Conference Participant Feedback (open mic) and Closing

Remarks

Liz Thorndike, Member of the NYSERDA Board

NYSERDA's EMEP Program: Supporting the Scientific Foundation for Sound Energy and Environmental Policies

It is my pleasure to welcome you to NYSERDA's sixth biennial Environmental Monitoring, Evaluation and Protection (EMEP) conference. This conference brings together scientists and policy makers to share information on energy-related environmental research in New York State and to discuss implications for policy. Many of the researchers presenting at this conference have been supported by the **New York Energy Smart**SM program.

NYSERDA's EMEP program provides policy-relevant research aimed at three primary goals:

- Enhancing the understanding of electrical energy-related pollution and its impacts on the environment and human health;
- Characterizing relative impacts of electrical energy production sources; and
- Evaluating ways to mitigate the impacts of electrical energy use and production.

We know energy production and use pose significant burdens on our environment. Yet we also know that energy is absolutely vital to the overall well being of our society. This conference provides an opportunity to exchange information and identify research needs to help ensure that our energy and environmental policies are informed and supported by the latest scientific findings.

Thank you for joining us.

Francis J. Munay, of

Sincerely,

Francis J. Murray, Jr.

President and CEO

New York State Energy Research and Development Authority

2009 CONFERENCE SPONSORS:

















