

New York State Energy Research and Development Authority

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



2013 EMEP Conference
Holiday Inn, Wolf Road
Albany, New York
November 6 & 7



Environmental Monitoring, Evaluation, and Protection in New York:

Linking Science and Policy

2013 Agenda



Wednesday, November 6

8:00 - 9:00 AM REGISTRATION

9:00 - 9:30 AM WELCOME AND OPENING REMARKS

- Janet Joseph (Vice President for Technology and Strategic Planning, NYSERDA)
- Jared Snyder (Assistant Commissioner, NYS Department of Environmental Conservation)

9:30 - 10:30 AM KEYNOTE

- Congressman Paul D. Tonko (U.S. House of Representatives, NY 20th District)

10:30 - 10:45 AM BREAK

10:45 - 12:00 PM ENERGY-RELATED ENVIRONMENTAL SCIENCE AND POLICY: CHALLENGES AND STRATEGIES

Moderator: Mark Watson (NYSERDA)

- Richard Haeuber (U.S. Environmental Protection Agency, Clean Air Markets)
- Ward Freeman (U.S. Geological Survey, NY Water Science Center)
- William Schlesinger (Cary Institute of Ecosystem Studies)

12:00 - 1:15 PM LUNCH

1:15 - 2:45 PM SESSION A: AIR QUALITY & HEALTH EFFECTS (concurrent with Session B)

Moderator: Praveen Amar (Clean Air Task Force)

- The association between PM components and human health with focus on organic components - Ron Wyzga (Electric Power Research Institute)
- Source-oriented toxicity to inform toxicity-oriented emissions regulations - Anthony Wexler (University of California, Davis)
- The air quality impact of Superstorm Sandy and the mitigation strategies that could have helped - Dirk Felton (NYS Dept. of Environmental Conservation)

1:15 - 2:45 PM SESSION B: ECOSYSTEM EFFECTS OF ACID AND MERCURY DEPOSITION AND CLIMATE CHANGE (concurrent with Session A)

Moderator: Doug Burns (U.S. Geological Survey)

- The latest on Adirondack soils and streams as acidic deposition continues to decrease - Gregory Lawrence (U.S. Geological Survey)
- Influence of winter climate change on forest biogeochemistry - Pam Templer (Boston University)
- Catskills fish community changes and recovery: A study pre- and post-Hurricane Irene - Scott George (University at Albany)
- Causes, consequences, costs and policy ramifications of nitrogen pollution on Long Island, NY - Carl LoBue (The Nature Conservancy)

2:45 - 3:15 PM BREAK

3:15 - 4:45 PM SESSION C: ENERGY EFFICIENCY AND PRODUCTION IMPROVEMENTS FOR AGRICULTURE (concurrent with Session D)

Moderator: Dr. John C. Sager (NASA-Kennedy Space Center [retired], Independent Controlled-Environment Consultant)

- Capturing the light: The new wave in food production - Tessa Pocock (Rensselaer Polytechnic Institute)
- Capturing waste heat from biogas-powered generators for conductive cooling on New York State dairy farms - Joseph Usack and Kristy Perano (Cornell University)
- Counting and accounting for changes in agricultural practices that reduce greenhouse gas emissions: Capturing the potential of organic farming practices - Sarah Johnston (NYS Dept. of Agriculture and Markets)
- Mitigation of greenhouse gas emissions from dairy facilities using anaerobic digestion technology - Jennifer Lynne Pronto (Cornell University)

3:15 - 4:45 PM SESSION D: ALTERNATIVE TOOLS AND APPROACHES FOR ENVIRONMENTAL RESEARCH, MONITORING, AND DATA (concurrent with Session C)

Moderator: Stuart Findlay (Cary Institute of Ecosystem Studies)

- Determining sources of mercury exposure in terrestrial songbirds - Evan Adams (Biodiversity Research Institute)
- Smart forests for the 21st Century: How cyber technology and big data are changing environmental science - Lindsey Rustad (U.S. Forest Service)
- Assessing the societal benefits of healthy forest ecosystems with the Forest Ecosystem Services Toolkit - Colin Beier (SUNY College of Environmental Science and Forestry)
- Using our over-sampled environments to design efficient monitoring programs - Mark Green (Plymouth State University and U.S. Forest Service)

4:45 - 5:00 PM POSTER INTRODUCTIONS

5:00 - 6:30 PM POSTER RECEPTION

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Thursday, November 7

8:00 - 9:00 AM REGISTRATION

9:00 - 10:30 AM EFFECTIVE SCIENCE COMMUNICATION

Moderator: Peter Groffman (Cary Institute of Ecosystem Studies)

- Putting yourself into your science: The importance of communication and connection - Christine O'Connell (Alan Alda Center for Communication at Stony Brook University)
- "I do not like green eggs and ham!" Tips for communicating your message - Jenny Helmick (Eastern Research Group)
- Speaking science to power - Jessica Ottney Mahar (The Nature Conservancy)
- Pathways for science communication - Clarisse Hart (Cary Institute of Ecosystem Studies)

10:30 - 10:50 AM BREAK

10:50 - 12:30 PM BIOMASS

Moderator: Dr. Richard Gibbs (NYS Dept. of Environmental Conservation [retired], Biomass Consultant)

- Biomass: Current and future trends- Lisa Rector (NESCAUM)
- New test methods for energy and emissions evaluation of advanced biomass heating technologies - Tom Butcher (Brookhaven National Laboratory)
- Carbon monoxide off-gassing from stored wood pellets manufactured in the Northeastern U.S. - Al Rossner (Clarkson University, Institute for a Sustainable Environment)
- Advancing clean and efficient biomass utilization - Dan Wilson (Biomass Thermal Energy Council)

12:30 - 1:45 PM LUNCH

1:45 - 3:15 PM CLIMATE CHANGE: MOVING FORWARD IN NEW YORK STATE

Moderator: Alan Belenz (NYS Office of the Attorney General)

- Preliminary findings from the New York energy efficiency and renewable energy resources potential study - Steve Bower (Optimal Energy)
- Updated climate projections for New York State - Daniel Bader (Columbia University)
- New York Climate Change Clearinghouse - Lisa Rector (NESCAUM)
- Bridging climate science and utility systems: Resiliency planning in New York City - Candice Tsay (NYC Mayor's Office of Long-Term Planning and Sustainability)

3:15 - 3:30 PM CLOSING REMARKS

- Mark Torpey (Director of Clean Energy Research and Market Development, NYSERDA)

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



Energy production and use pose significant burdens on public health and the environment. Yet energy is absolutely vital to the overall well-being of society. The primary mission of EMEP is to increase the understanding and awareness related to the environmental impacts of energy choices and emerging energy options and provide a scientific, technical foundation for formulating effective, equitable, energy-related environmental policies and resources management practices.

The program is in the midst of its third comprehensive planning effort. Working groups of science and policy experts have been meeting and identifying critical gaps and research needs in New York State, and focusing on energy-related environmental impact issues. The research plan's potential users will include NYSERDA, other New York State regional and national research funding organizations, the scientific community, and policymakers. Implementation of the plan's recommendations will help maximize the use of limited resources to serve the needs of New York State and others.

NYSERDA facilitates change through the widespread development and use of innovative technologies to improve the State's energy, economic, and environmental well-being. In fulfilling its mission, NYSERDA's workforce reflects its public service orientation, placing a premium on objective analysis and collaboration, as well as reaching out to solicit multiple perspectives and share information. NYSERDA is committed to public service, striving to be a model of efficiency and effectiveness, while remaining flexible and responsive to its customers' needs.

We would like to extend our thanks and appreciation to our EMEP Science and Program Advisors:

Clean Air Task Force

Con Edison

Electric Power Research Institute

Energy Research Center, Inc.

Envair/Aerochem

Harvard University

H. John Heinz III Center for Science,
Economics, and the Environment

Institute of Ecosystem Studies

NASA

The Nature Conservancy

NYS Department of Environmental Conservation

NYS Department of Health

NYS Department of Public Service

NYS Department of State

NYS Office of the Attorney General

Pace University

Rensselaer Polytechnic Institute

University of Connecticut

U.S. Environmental Protection Agency

U.S. Forest Service

U.S. Geological Survey

U.S. Power Generating Company