

**United States Environmental Protection Agency (U.S. EPA)
Science Advisory Board (SAB)/Board of Scientific Counselors (BOSC)
Teleconference for the Air Climate and Energy Breakout Group
July 3, 2014
Meeting Minutes**

Date and Time: July 3, 2014, 10:00 a.m. – 12:00 p.m. Eastern Time

Location: By telephone.

Purpose: To: (1) provide SAB and BOSC members with a briefing on the EPA Office of Research and Development's (ORD's) Air Climate and Energy (ACE) Program and ORD's initial thinking regarding its 2016-2019 Strategic Research Action Plan and (2) allow members to discuss ORD's charge to their committees and preparations for the SAB-BOSC face-to-face meeting on July 24–25, 2014.

Meeting Participants:

SAB/BOSC Members (See rosters for the SAB¹ and BOSC Executive Committees²)

Dr. T. Taylor Eighmy, Breakout Group Chair	Dr. Richard Poirot
David Allen, SAB Chair	Dr. William Schlesinger
Dr. Viney Aneja	Dr. Sandra Smith
Dr. Ingrid Burke	Dr. Gina Solomon
Dr. Lisa Dilling	Dr. Peter Thorne
Dr. H. Christopher Frey	Dr. Paige Tolbert
Dr. Francine Laden	Dr. Peter Wilcoxon

SAB Staff:

Dr. Angela Nugent, SAB Staff Office, Designated Federal Officer (DFO)
Mr. Aaron Yeow, DFO for the ACE Breakout Group

Other Attendees:

Dr. Dan Costa, National Program Director for ACE
Dr. Andrew Miller, ORD Associate Director for Climate, Air, Climate, and Energy Research Program
Attachment A lists members of the public who requested the call-in information for this meeting.

Meeting Materials:

<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/652cb2b7e6f2fddb85257cf2006f9422!OpenDocument&Date=2014-07-03>

Meeting Summary:

Convene the meeting

Dr. Angela Nugent, Designated Federal Officer (DFO), formally opened the teleconference and noted that this federal advisory committee meeting of the SAB had been announced in the Federal Register on June 18, 2014 (79 FR 34738-34739). She noted that the meeting had been announced as a briefing/planning meeting so that members of the SAB and BOSC could prepare for a July 24-25, 2014 meeting in Washington, DC to develop advice for the EPA on strategic research directions. The SAB and BOSC has established an SAB/BOSC Breakout Group to focus particularly on ORD's Air Climate and Energy (ACE) research programs.

Dr. Nugent noted that the EPA SAB is an independent, expert federal advisory committee chartered under the authority of the Federal Advisory Committee Act (FACA). The SAB is empowered by law - the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA) - to provide advice to the EPA Administrator on scientific and technical issues that inform EPA's decisions. The BOSC is a separately chartered committee established to provide ORD with advice on technical and management issues associated with its research programs. The DFO noted that the Federal Register notice announcing the meeting had provided the public with an opportunity to provide written and oral comment. There were no advance requests for oral comment and no written comments submitted in advance of the meeting.

The meeting generally followed the agenda.³

Goals and agenda for the meeting

Dr. Taylor Eighmy welcomed the group and thanked SAB Staff, SAB and BOSC members, representatives of the agency, and members of the public participating. He described the purpose of the teleconference, which was to prepare for more extensive discussions on July 24-25, 2014 about ORD's strategic planning for the ACE program.

Presentation on the ACE Program

Dr. Dan Costa, National Program Director for the ACE Research Program, began his discussion by thanking members for their service. He looked forward to their early input into the development of the ACE Strategic Research Action Plan (StRAP) for 2016-2019. He gave a slide presentation⁴ that: (1) described elements of Goal 1 (Addressing Climate Change and Improving Air Quality) from the EPA's Strategic Plan 2014-2018; (2) provided a conceptual model of the relationship of air, climate and energy; and (3) provided the problem and vision statements for the program. He then described how the ACE program does its work, taking input from ACE partners within the EPA and stakeholders outside the EPA. He identified key overarching priorities, budget trends, ACE research objectives and topics, along with near-term targeted research aims and long-term mission-driven research aims related to the research topics.

He gave examples of ACE projects that related to the research topics, with examples of "signature projects," e.g., changing the paradigm for air pollution monitoring and methodologies to better understand multipollutant exposures and health effects. He described: (1) the program's efforts to build a relevant research portfolio through many different kinds of information

exchanges; (2) the calendar for planning and reviewing the portfolio; (3) ACE support to EPA Regions; and (3) integration across ORD. He provided a “big picture” of Air and Climate Research within ORD and a proposed approach to sustainable energy evaluation, focusing on systems, scenarios and life cycles.

Follow-up questions from the Breakout Group members

After Dr. Costa concluded his presentation, members asked several questions. Dr. Costa provided the following answers in response:

- ORD is interested in research related to air modeling, monitoring and multi-pollutants as they pertain to hazardous air pollutants (HAP), but the HAP work currently is “secondary” to research on criteria air pollutants. He noted that virtually all near-road work involves air toxics and there are examples of other efforts, such as health research for acrolein related to near-road. ORD is not currently looking at the “full panoply” of air toxics research topics. It is focused mostly on renewable fuels and fugitive kinds of emissions.
- Slide 8 should have listed the Department of Energy (DOE) as an external partner. EPA interacts with DOE within the Committee on Environment and Natural Resources (CENR). Because of fiscal reasons, the responsibilities of the agencies must be kept distinct. DOE’s approach to energy research has focused on technology development. The EPA translates DOE information into information relevant to the EPA’s mission. For example, EPA takes the results of DOE research on the changing landscape of energy and, through lifecycle analysis, develops a better understanding of impacts on human health and the environment. ORD focuses on areas that the EPA has legislative responsibility for and uses observational data and modeling that come from outside the agency to anticipate “the kinds of things EPA will have to deal with.”
- Similarly, in the area of climate research, ORD does not develop broad global models, but instead takes modeling results from outside organizations, such as the National Oceanic and Atmospheric Administration, and conducts further research and/or analysis to develop information that can be used at the regional, state and community levels. ORD would address, for example, how changing climate forecasts would affect nitrogen deposition. The EPA must plan carefully, because its climate budget is only twenty million dollars, a small fraction of the total federal climate investment. ORD works closely especially with the Office of Water regarding their research priorities related to the water/climate nexus and the ACE program actively coordinates with ORD’s Safe and Sustainable Water Resources program. Dr. Andrew Miller, ORD Associate Director for Climate, Air, Climate, and Energy Research Program, noted that ORD’s program office partners are beginning to mainstream climate research. Other research programs are integrating climate into their planning.
- ORD does not currently have work specifically underway related to how renewables such as solar and wind are integrated into decision analysis. ORD does take information and research results from other sources and “funnel them” into decision tools, such as programs for making land-use decisions based on science inputs. ORD itself, does not measure solar and wind contributions.
- ORD is anticipating efforts to work with other CENR partners, such as DOE and the U.S. Department of Agriculture (USDA), to develop “reasonable” energy scenarios to help ORD

focus modest resources and FTEs especially as it relates to impacts to alternative energy sources, distribution strategies, and conservation. Dr. Costa noted that CENR's air subcommittees are themselves repositioning to take climate into consideration. ORD would like to work more actively with those partners regarding scenarios of use to the agency, but "hasn't made great strides" yet. Most efforts are driven by principal investigators and leaders to move those kinds of efforts forward. Dr. Miller added that, outside CENR, ORD scientists do interact with the Energy Modeling Forum, the electrical industry, USDA, the National Renewable Energy Laboratory and a variety of other player. It is a challenge to choose among so many possible scenarios. There is an effort in the U.S. Global Change Program to develop common scenarios, but it is not an obvious or straightforward process. .

- In a response to a question about where ORD would invest resources in social science, Dr. Costa responded that ORD's investment in social science is currently at a "nascent level." He hoped to be able to replace a couple of social science post-doctoral fellows who will be leaving the agency. A promising areas of research is decision making, i.e., what makes communities thrive vs. not thrive based on the information they have. He would like to develop a relationship with Duke University and the University of North Carolina to help ORD formulate an approach. He noted that a recent Request for Applications (RFA) for ACE research centers has the goal of expanding the kinds of science addressing air pollution problems to include social science capabilities. The EPA's extramural Science to Achieve Results (STAR) program has flexibility to bring in scientific expertise beyond what the EPA has in house.
- Out of a total ACE research budget of \$97, \$18 million goes to grants. Of the remaining approximately \$70 million, approximately \$80 million covers salaries for ACE employees. There is only a small amount, perhaps \$9-10 million to support the work of the 230 ACE investigators.
- He noted that ORD is a "mission-, end-game-driven program" that works within its legislative constraints. Communicating what ORD can and cannot do can be a challenge. Many times, the public doesn't understand the limits of ORD funding and legislative authorities, and ORD must make sure its communications make those limits clear.

Discussion of ORD's Charge to the SAB and BOSC and preparations for the face-to-face meeting

Dr. Eighmy reviewed the ACE charge questions relevant to the Breakout Group discussion on July 24, 2014. The relevant charge questions are 2a, 2b, 2c, and 3. Written comments are due to the DFO by July 21, 2014. He noted that members are also asked to provide comments on questions 1, 8, and 9. Discussion of the Climate Roadmap will occur during a plenary session on July 25, 2014, and are not the direct responsibility of the breakout group.

Taylor expressed again expressed thanks for participants' involvement in the call.

The teleconference was adjourned at 11:35 p.m.

/Signed/

Respectfully Submitted,

/Signed

Certified as Accurate,

Dr. Angela Nugent
SAB Designated Federal Officer

Dr. Taylor Eighmy
Acting Breakout Group Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by committee members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the panel members. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

Attachment A: Members of the public attending the public teleconference:

Carol Braverman, EPA

Dan Costa, EPA

Casey Dietrich, CQ Transcriptions

Annette Guiseppi-Elie, DuPont Engineering, Corporate Remediation Group

Maria Hegstad, Inside EPA

Julie Hyman, EPA

Dale Johnson, SBC Global

James Johnson, EPA

Robert Kavlock, EPA

Jennifer McPartland, EDF

Paul Price, Dow

Linda Wilson, New York State

Materials Cited

The following meeting materials are available on the SAB website,

<http://www.epa.gov/sab>, at the page for the [July 3, 2014](#) :

<http://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/652cb2b7e6f2fddb85257cf2006f9422!OpenDocument&Date=2014-07-03>

¹ Roster for the Chartered SAB

² Roster for the BOSC Executive Committee

³ Agenda

⁴ Air Climate & Energy (ACE): Building a Foundation of Science to Support Policy and Solve Problems, Presentation by Dan Costa