

U.S. Environmental Protection Agency (EPA) Board of Scientific Counselors (BOSC)

Air and Energy (A-E) Subcommittee

Teleconference Meeting Summary

March 22, 2019

Dates and Times: March 22, 2019, 3:00 p.m. to 5:00 p.m. Eastern Time

Location: Teleconference

Executive Summary

On March 22, 2019, the EPA BOSC A-E subcommittee convened via teleconference to finalize the A-E subcommittee report. A-E program staff members were available during the teleconference to address questions and provide input regarding the revised A-E Strategic Research Action Plan (StRAP) and specific areas of input from the BOSC. The meeting format consisted of open dialogue, subcommittee questions, and EPA responses to their questions.

Mr. Tom Tracy, Designated Federal Officer (DFO) for the BOSC A-E subcommittee, opened the call and introduced A-E subcommittee members, EPA staff, and three public attendees: Johanna Bell from the Association of Idaho Cities, Roger Caiazza from Environmental Energy Alliance of New York, and Kristin Marshall from The Boeing Company. Dr. Alan Vette, National Program Director for the A-E Research Program, and Mr. Tracy welcomed the subcommittee and thanked them for reviewing the revised A-E StRAP and making appropriate changes to the subcommittee report in response to the StRAP revisions and EPA-provided charge questions.

Dr. Charlette Geffen, Chair of the A-E subcommittee, explained that subcommittee members would review the draft report and discuss potential changes in response to the revised StRAP. She noted that several members already submitted comments reflecting potential changes. She also heightened the goal of solidifying subcommittee recommendations that are actionable by the A-E program and clarifying the weight of different recommendations. Finally, Dr. Geffen stated that she and Ms. Sandra Smith, Vice Chair of the A-E subcommittee, drafted the conclusions section of the report, but they encouraged feedback to ensure that their conclusions reflected the key messages of A-E program staff. Dr. Geffen suggested that the group review each section of the advisory report based on reviews of the revised StRAP.

Subcommittee Discussion of Air and Energy Subcommittee Report

Background and Introduction

Dr. Geffen asked if the subcommittee agreed with the material in their report through the middle of page 9, where the charge question responses began. Ms. Smith suggested updating the background section to capture recommendations made regarding the earlier StRAP draft that the subcommittee felt were now reflected in the revised version. Dr. Geffen agreed, and no subcommittee members objected.

Charge Question 1a - Does the research outlined for the 2019–2022 timeframe support the relevant Agency priorities as described in the EPA and ORD Strategic Plans?

Dr. Louie Rivers mentioned that he really liked the paragraphs that Dr. Geffen drafted, specifically the explicit callout to environmental justice.

Dr. Jennifer Hains expressed concern with a sentence in the first paragraph of the Subcommittee Response to Charge Questions section which read as follows, “The A-E program vision, while well-articulated, must beware of becoming too ‘customer focused.’” Dr. Hains could not discern whether ‘customer focused’ was warning against the public or industry influencing the A-E program, and she emphasized that the subcommittee should be open to the public’s concerns. Dr. Geffen proposed the group clarify the text. The intent of the original sentence was to encourage the A-E program to balance responsiveness to stakeholders with leading-edge science.

Dr. Jeffrey Arnold agreed, and said that the sentence was meant to express that responding to immediate concerns could prevent the A-E program from responding to emerging issues. Dr. Arnold agreed that the text “customer focused” was unclear, and he agreed with Dr. Hains that they should remove the line in question. Dr. Geffen suggested revising the text to say, “We encourage the A-E program to ensure they balance the interest of partners with those of the environmental science research community.” Following Dr. Hains’ approval, Dr. Geffen said that they would be able to review and edit the final subcommittee report.

Charge Question 1b - Each ORD research program undertook a rigorous engagement process to provide additional detail on specific EPA program and region, state, and tribal needs, the results of which are summarized in the StRAP objectives and explanations of research topics and areas. How well does the proposed research program respond to these partner-identified needs?

Dr. Geffen noted that Dr. Constance Senior suggested the subcommittee delete Recommendation 1b.2 because the A-E program addressed it in the revised StRAP.

Dr. Senior raised Recommendation 1c.1, and her workgroup did not feel EPA expressed outreach methods well in the original StRAP but EPA’s distributed materials to the subcommittee and revised StRAP provided a clearer description of the program’s outreach. Dr. Geffen said that there would be four recommendations in the section in response to Charge Question 1b after removing Recommendation 1b.2.

Dr. Arnold suggested that the subcommittee review Recommendation 1b.3. Dr. Geffen asked if Dr. Senior and her workgroup would be open to moving Recommendation 1b.3 to a suggestion. Dr. Senior and Dr. Hains agreed.

Charge Question 1c - Does the StRAP, including the topics, research areas, and proposed outputs, clearly describe the strategic vision of the program? Given the environmental problems and research objectives articulated, please comment on the extent to which the StRAP provides a coherent structure toward making progress on these objectives in the 2019–2022 time frame.

Dr. Geffen said that Dr. Mitchell suggested that the subcommittee delete the second suggestion because the revised StRAP addressed it. Dr. Arnold said that he thought that the suggestion reflected the StRAP well.

Dr. Vette and Dr. Arnold both expressed confusion about what the first suggestion meant. Dr. Vette proposed a short summary addressing air pollutants under the first suggestion. He asked if the subcommittee was referring to emissions control strategies or other approaches. Dr. Arnold thought they collapsed several instances where they requested explanation into a single summary, but he did not think it was connected. Dr. Arnold proposed that they eliminate the first suggestion.

Dr. Vette stated that the revised StRAP could benefit from the development of a priority listing and how they fit the overall vision of EPA and the A-E program. He specifically wanted clarity about where the priorities came from (i.e., the Agency or the A-E program). Dr. Arnold clarified they meant A-E program priorities.

Dr. Vette commented on the next bullet, “Mechanisms need to be developed to facilitate access...” He agreed mechanisms themselves would be developed in conjunction with the development of research implementation plans, taking things below the strategic plan level. Dr. Geffen said that she thought that Dr. Vette’s point was very helpful.

Dr. Michael Kleinman asked if it would be helpful to expand the point to address access of research communities and A-E partners (e.g., the broader research community, universities, and others) to datasets. Dr. Arnold agreed. He raised that they should be aware of the Office of Research and Development’s (ORD) limits for making information available. Dr. Arnold reminded the subcommittee to keep recommendations under ORD’s purview. EPA might find it useful if the subcommittee included text about a collaborative lead with an appropriate program in EPA. Drs. Kleinman and Vette said that Dr. Arnold’s suggestion would be helpful. Dr. Vette raised that the line demarcating ORD’s limits would depend on circumstances and suggested the subcommittee include that text within their suggestions.

Dr. Andy Miller, Associate Director for Climate, A-E Research Program, reminded members that there are ORD- and EPA-level strategies for open data. Dr. Arnold asked if they could resolve the issue by collaborating with internal EPA partners. Dr. Miller applauded the idea. Dr. Arnold asked Dr. Geffen if they had included a phrase about internal collaboration with EPA programs to ensure the recommendation demonstrated that the subcommittee was cognizant of how that would happen internally. Dr. Geffen agreed, and the topic was included as a suggestion. However, she raised that the subcommittee discussed how they did not want the A-E program to respond to a recommendation happening elsewhere. She emphasized that the subcommittee should be aware of how engagement with the broader community could be useful to the A-E program. Dr. Arnold said that he thought that it would be appropriate to include a reminder that engagement with the broader community is an important part of their mission.

Charge Question 1d - Recognizing ORD’s focus on addressing identified partner research needs, in the presence of reduced scientific staff and resources, are there any other critical emerging environmental needs or fields of expertise and/or new research methods where this program should consider investing resources?

Mr. Bart Croes thought that the subcommittee should remove Recommendation 1d.1 because extramural research components were discussed starting on page 22 in the revised StRAP. Drs. Annette Rohr and Dr. Rivers agreed.

Charge Question 1e - What are some specific ideas for innovation (including prizes/challenges) and market-based approaches that the program could use to advance solutions to existing and emerging environmental problems?

Dr. Hains asked if it was possible that reinvigorating the Science to Achieve Results (STAR) program might cost money that the A-E program did not have. Dr. Art Werner mentioned that one of their recommendations suggested cost sharing. Dr. Vette said that it was beyond the A-E program's control to prompt the Small Business Innovation Research (SBIR) and STAR programs. He said that if the SBIR and STAR programs were funded and viable, the A-E program would try to benefit from them. He suggested the subcommittee heighten those programs as means to achieve the work and vision.

Dr. Geffen thought that the emphasis should be on reinforcing rather than reinvigorating. Dr. Werner agreed, and the word "supporting" would be better than "reinvigorating." Dr. Kleinman suggested they include a phrase such as "look for opportunities to reinvigorate" or "think creatively about ways in which the Agency can reinvigorate the programs." He said that the SBIR and STAR programs benefit the Agency and its mission, and there should be an effort to redirect some resources into the programs. Dr. Arnold agreed.

Dr. Arnold noted it would be beneficial to include the importance of prioritizing problems. The program has some control over its priorities, but not over things that do not currently have resources. He thought the subcommittee should suggest things it feels strongly about that influence the budget and priorities of the A-E program where they do not have control.

Dr. Arnold emphasized that the subcommittee has an outside view of the Agency, and the subcommittee recommends maximizing opportunities within ORD. Dr. Geffen agreed with Dr. Arnold's comments. She added that other things to remember would be mechanisms to encourage more cost sharing and partnering, as well as topical areas that speak to emerging areas where the A-E program might or might not have resources to address. She also noted that the program should consider a way to engage the next generation in the kinds of science that will be important in the future.

Dr. Miller suggested that the subcommittee be careful on how they talk about SBIR. He said that it is a requirement by law for a certain percentage of EPA's research budget go towards SBIR. To say "reinvigorate" ignores that it is ongoing. He said that there might be opportunities for him and his colleagues to interact with the SBIR program to provide input and identify partnering opportunities.

Dr. Arnold agreed. He asked if it would be better to say something like "continue to be on lookout to expand historical SBIR work" and provide generic examples of what those new opportunities would be. Dr. Miller applauded the idea. Dr. Arnold said that he liked the idea of tying together opportunities with emerging work.

Summary of Charge Question Responses

Dr. Kleinman raised the last sentence of the report, "The subcommittee believes the A-E StRAP articulates and organizes an ambitious and achievable program." He asked if it be possible to include context that the A-E program is doing the best they can with limited resources available,

rather than giving the impression that their work is adequate, and they could not do more if provided additional resources. Other subcommittee members agreed. Dr. Geffen suggested that he might also want to look at the introductory paragraph and see if there are opportunities to insert context at the front of the Conclusions section as well.

Conclusions

The edits from the teleconference will be compiled into the draft BOSC A-E StRAP review reports. The BOSC EC will convene in June 2019 to review and consider the subcommittees' recommendations and finalize the overall BOSC report, which will include reviews of each of ORD's research programs.

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Meeting Charge Questions

The draft charge can be accessed at https://www.epa.gov/sites/production/files/2018-12/documents/strap_charge_to_bosc.pdf.

Meeting Participants

BOSC Air and Energy Subcommittee Members:

Charlette Geffen, *Chair*
Sandra Smith, *Vice Chair*
Viney Aneja*
Jeffrey Arnold
Bart Croes
Jennifer Hains
Cara Keslar*
Michael Kleinman
Myron Mitchell*
Louie Rivers III
Annette Rohr
Constance Senior
Art Werner

**did not attend*

EPA Designated Federal Officer (DFO): Tom Tracy, *Office of Research and Development*

Other EPA Attendees:

Stacey Katz, *Office of the Assistant Administrator, Office of Research and Development*
Andy Miller, *Associate Director for Climate, Air and Energy Research Program*
Tom Long, *Acting Assistant Laboratory Director, Air and Energy Research Program*
Gail Robarge, *Office of the Assistant Administrator, Office of Research and Development*
Laurel Schultz, *Associate Director for Program Planning and Coordination*
Alan Vette, *Acting National Program Director, Air and Energy Research Program*

Public Attendees:

Roger Caiazza, *Environmental Energy Alliance of New York*
Kristin Marshall, *The Boeing Company*
Johanna Bell, *The Association of Idaho Cities*

Contractor Support (ICF):

Camryn Lieb