

**Panel on Public Affairs Meeting**  
**June 4, 2010**  
**529 14<sup>th</sup> Street, NW, Suite 1050, Washington DC**

**Members present:**

R. Socolow, V. Narayanamurti, J. Dorfan (via phone), D. Moore  
W. Barletta, M. Bowen, P. Coleman, J. Dahlburg, R. Falcone, F. Houle (via phone), R. Jaffe, T. Kaarsberg, L. Krauss (via phone), G. Long, P. Looney, K. Schwab, P. Zimmerman

**Advisors/Staff present:**

K. Kirby, M. Lubell, J. Russo, F. Slakey

**Members Absent:**

R. Byer, J. Davis, J. Drake, W. Jeffrey, J. Onuchic

**Guests:**

George Crabtree (via phone), Ted Hodapp, Don Prosnitz (via phone), Jeff Urbach

**Call to Order**

**R. Socolow called the meeting to order at 8:23 AM.**

**Welcome, Introductions, & Approval of Minutes**

R. Socolow welcomed the group and asked for comments on the February minutes. None were provided. A motion to approve the minutes, with edits, was requested.

**Action:** D. Moore moved to approve the minutes of the February 5, 2010 POPA meeting. Motion was seconded by W. Barletta.

*The motion to approve the minutes passed unanimously.*

**Subcommittee Business**

**Physics & the Public**

L. Krauss introduced his subcommittee's proposal for a POPA literature survey, which may lead to an APS Statement, regarding the abuse of physics in the public arena. Misrepresentations of science in recent publications, particularly in the field of quantum mechanics, have served to mislead and defraud the general public. The subcommittee proposed a brief effort to review the current literature and develop a draft statement on the issue. It is anticipated that the effort could be concluded within six months, with no net cost to POPA.

**Commentary:** R. Jaffe asked whether such a statement would do any good. It was noted by several members that people will continue to believe what they want, despite what scientists say to the contrary. J. Dahlburg supported the subcommittee's proposal because the final product will counter "web science" – the idea that a statement is true

just because it appears on the web and has received several hits. L. Krauss said that there are many people who have reached out looking for an authoritative view on this topic. R. Falcone said it would be objectionable if the final statement's main thrust was to stop people from making money. He also doesn't want APS to be perceived as an organization bent on squashing novel physics ideas. W. Barletta said we should look into whether these ideas are innovative. Perhaps the APS could provide a clearinghouse where the public could come for a disinterested opinion. P. Coleman agreed that there might be an educational opportunity presenting itself. F. Slakey said the primary value of such a statement might not be with the public. A statement could be used in the courts, within amicus briefs. L. Krauss said that he would like to focus on quantum mechanics because it seems to be the branch of physics most abused; it is also the focus of most of the public feedback he receives. He said that he would like the statement to have a large-scale impact on the public. Several members commented that a statement might not be the best end product; a statement could end up being too narrow, or too broad, in its scope and be perceived inaccurately. F. Slakey cautioned that if we plan to influence the public or the courts, we will have to issue a statement.

**Action:** J. Dahlburg moved to proceed with a literature survey, as described in the subcommittee's proposal, and to have the subcommittee report back to POPA at the next meeting (October 1, 2010). At that meeting, POPA will decide whether or not to proceed with the following options:

- A formal POPA policy statement;
- A resource website;
- Cessation of the proposal activity.

The motion was seconded by P. Zimmerman.

*The motion was approved unanimously.*

## National Research Policy Subcommittee

### **Balance between basic science & the nation's needs**

W. Barletta raised the question of whether a balance between basic science and the needs of the nation can be achieved. Can a balance between fundamental research and applied science be found? V. Narayanamurti indicated that he had spoken with Bill Brinkman, Director of the Office of Science at the U.S. Department of Energy. Brinkman said the DOE would like APS to weigh in on the issues he is being faced with. DOE is not getting its share of the budget. A doubling of the budget is in very serious jeopardy and both DOE and the physical sciences will be affected. V. Narayanamurti said that POPA needs to determine what role the APS can play. He suggested an APS statement supporting the physical sciences.

**Commentary:** R. Falcone & M. Lubell spoke about the difficulties DOE is currently experiencing. Lubell also mentioned that this is a topic that PPC (Physics Policy Committee) will need to be involved with; we should consider a joint working group/task force (PPC-POPA) to tackle the issue. F. Slakey asked Lubell to clarify the topic the joint task force would focus on, if one is created. M. Lubell offered two: (1) the balance between addressing short-term issues (applied/technological issues) and the investment for the long-term; (2) the balance between national labs and universities. It was

suggested that a joint task force of POPA and PPC report back at the October meeting with a constructive look at these issues. Several members provided feedback. Some felt that there is virtue in having POPA involved and that the Panel has something to add to the discussion; others felt our involvement would look self-serving. Some commented that this topic is clearly within the jurisdiction of PPC and the Committee should be charged with handling it. If a proposal for an APS statement comes out of PPC's efforts, it will be brought back to POPA for review in the end anyway. It was agreed that POPA has an interest in the topic but that PPC should lead the way in investigating the issues. Interested parties should be involved in the discussion at the next PPC meeting. The following members indicated they would consider participating: W. Barletta, V. Narayanamurti, P. Looney, P. Zimmerman, J. Dahlburg, R. Falcone, J. Dorfan, R. Socolow.

**Action:** W. Barletta moved that POPA recommend that the APS establish a joint working group between PPC and POPA to address the question, "How can the DOE achieve a balance and coordination between basic science and the urgent drive toward making contributions to the nation's need for applied science and technology?"

The motion was seconded by J. Dahlburg.

***The motion was approved unanimously; M. Bowen and T. Kaarsberg abstained.***

*\*\*\*Note – W. Barletta and R. Socolow volunteered to participate, via phone, in Monday's PPC meeting.*

### **National Security Subcommittee**

W. Barletta indicated that the National Security Subcommittee held a teleconference to discuss a possible follow-on study to the *Technical Steps to Support Nuclear Arsenal Downsizing* report. F. Slakey clarified that the follow-on would be in the form of a workshop. The aim of the workshop would be to investigate opportunities for enhanced cooperation in the nuclear supply arena. There seems to be an opportunity for a disinterested facilitator to help the industry create a confidential database of information, similar in fashion to databases created by the Space Data Association, the NTSB Near-Miss Program, etc. Companies selling potentially proliferation-related technology currently have no way of tracking whom they are selling their wares to or whether other materials have been purchased by these same buyers elsewhere. The workshop would propose to examine these matters and determine whether we are in a position to analyze the nuclear problem and craft a solution. It would consist of 15 people, led by J. Davis and P. Zimmerman and would cost \$10K to run.

**Commentary:** R. Socolow asked if this was a U.S. or international initiative. F. Slakey said it was international. The voice we have internationally is Oerlikon (a manufacturer of industrial vacuums). J. Dahlburg asked why this would be an APS initiative, as it seems to be outside of the purview of APS and POPA. F. Slakey said it is within the umbrella of AIP.

**Action:** W. Barletta moved that POPA, as follow-on to its study, *Technical Steps to Support Nuclear Arsenal Downsizing*, organize a workshop to catalyze industrial cooperation in the nuclear supply arena to share proprietary data concerning “suspicious” requests and proprietary analysis concerning potentially proliferation-related technology.

The motion was seconded by P. Zimmerman.

*The motion passed unanimously.*

## Energy & Environment Subcommittee

### Direct Air Capture Study

R. Socolow presented a review of the Direct Air Capture study’s findings. He said that the study committee came to the conclusion that a modest research program should be recommended. General discussion ensued.

**Commentary:** R. Jaffe said that the report serves as a good primer but that it backs away from what should be the conclusion; we should withdraw from putting any money into this issue. F. Slakey said the recommendations presented in the executive summary do not correspond with the substance of the report. R. Socolow countered that the recommendations are pedagogical and should be used to affect enthusiasm for the topic’s relevance. It isn’t a report that should be carried by POPA to Congress. M. Lubell cautioned that Washington is a black & white world; it doesn’t deal with nuance well. These recommendations will be read as support for funding. The approach taken in the report is good for an academic discussion, but it will not fly in Washington. The executive summary, and specifically the recommendations section, will be the most read portion of the report. It was agreed that this section has to be reconsidered and that the study committee needs to be clear on what it is recommending. The executive summary must correspond to the findings within the report. R. Socolow said he would like to work with M. Lubell on this section. V. Narayanamurti agreed that the issues should be worked out now so we are ahead of the curve when the external review is complete. P. Looney added, if the recommendations are not clear and actionable they will be looked over. R. Socolow said if the report is better for taking out the recommendation, the study group will consider taking that action.

**Action:** R. Socolow, M. Lubell, W. Barletta, J. Dahlburg and P. Looney will work on revising the executive summary over the course of the next month.

### Electric Grid Study

G. Crabtree presented a review of the Electric Grid study’s findings and recommendations. A draft report was circulated for review. The executive summary presented recommendations which fell under four headings, including: “General,” “Energy Storage,” “Transmission,” and “Business Case.” POPA members provided general feedback and possible areas where the study group might make minor edits.

**Commentary:** J. Dahlburg cautioned that the study group makes sure that the first action item listed in each of the four (4) sets of recommendations be the major recommendation they want to put forth. R. Socolow suggested editing the draft to include a page or two

that explains our unique take on the issue. Something to the effect of, “Other studies have said ‘X’ and this study says ‘Y’.” It was agreed that this should be included before sending the report to external review. G. Crabtree is approaching people to handle the external review. R. Socolow asked F. Slakey if the report was targeted correctly for presenting to Congress. F. Slakey said that J. Lieberman has been working with G. Crabtree on making sure that it is. Once final edits are made, a final copy of the report will be sent out to POPA members for review and a vote, via email. This vote will occur within the next few weeks.

### **Energy Critical Elements Study**

R. Jaffe provided an overview. The study group held its first workshop on April 29<sup>th</sup> at MIT. The MITei paper, a product of that meeting, will be completed by the fall. A post-workshop web conference is scheduled for mid-month, and a second workshop will be held in early September to develop the policy initiatives associated with the topic. The study group will focus on the issues raised by the potential scarcity of elements. The elements themselves will be used to create a narrative about the issues. The goal is to provide POPA with a draft report by the October meeting, February at the latest. If the October deadline cannot be met, the study group will share, at a minimum, a report outline and recommendations for POPA’s review at that meeting.

**Commentary:** R. Falcone asked whether there was an economic disadvantage to recycling. R. Jaffe indicated that the recycling issue was discussed at length; public interest in conservation does not have a sense of ownership in the rare element resources. One suggestion to sway the public’s consideration is to require a declaration of the components included in consumer purchased end-products, making them aware of the resources used and the opportunity to recycle. M. Lubell asked whether the study group expected to make a recommendation on which agency should be charged with handling this responsibility. That would be a valuable contribution. The study group will consider this question during their second workshop. R. Socolow agreed that research on substitutions should be a large part of the final report. J. Dahlburg said she’d like to see a list of ideas for research & development included. P. Looney asked if there was any talk of the materials stockpile at the Department of Defense. Again, topics as such will be considered at Workshop II.

### **APS Constitution & Bylaws Revision**

Jeff Urbach & Don Prosnitz (via phone) addressed the group. At its November 6, 2009 meeting the APS Executive Board charged the Constitution and Bylaws committee with drafting “appropriate clear guidelines in the APS bylaws to govern the process for generating and reviewing APS Council statements.” It was agreed that there should be a section in the bylaws which lays out the path by which statements are crafted, modified, and ultimately adopted by the Council. The Constitution and Bylaws committee drafted an Article, which establishes this process (Article XVI). The proposed Article was presented to the Executive Board at their April meeting. Board members were generally supportive of the approach, but suggested the proposal be discussed with POPA prior to being presented to the Council. POPA was asked to review the Article and come to today’s meetings prepared with remarks.

**Commentary:** R. Socolow referenced POPA’s more formal role in the revised process and suggested that we might need to establish a “subcommittee on statements.” T. Kaarsberg asked what the impetus was for the revision of the bylaws. J. Urbach said that

the issues encountered with the APS Climate Change Statement recently caused the Executive Board to reevaluate the process. T. Kaarsberg wondered if there couldn't be a more streamlined process for topics that don't require as intense scrutiny. P. Zimmerman agreed, touting the proposed Article as "overkill." F. Slakey counseled that the major change the revision of the bylaws creates is providing POPA with the final word on statements. R. Socolow voiced concern regarding the suggestion that any APS member can draft a statement and send it to POPA for review and a vote. J. Urbach said that POPA should develop the mechanisms by which submissions are handled.

**Action:** R. Socolow and F. Slakey will develop protocol for how to handle statement proposal submissions and provide this information to POPA, for review, prior to the next meeting. J. Urbach will relay POPA's suggestions back to the Constitution and Bylaws committee and produce a revised Article XVI prior to the next POPA meeting. A vote will be held on Article XVI at the October POPA meeting.

### Ethics Case Studies

Ted Hodapp presented Ethics Case Studies materials to the group. POPA was pleased that Ted shared the materials and it was noted by R. Socolow that the Panel is happy with what Ted's department is doing. K. Kirby indicated that she will work with Ted to get the materials out to external reviewers for commentary.

### New Business

R. Socolow presented new ideas for studies, suggested by APS member Andrew Sessler. These included:

- What role is there for inertial fusion in the commercial sector?
  - T. Kaarsberg offered to take this idea up as a white paper project, but then J. Dahlburg stated that there had recently been numerous studies on this topic and such a study wasn't needed. T. Kaarsberg withdrew her offer.
- Fusion-fission hybrid study
- How effective is the short range missile defense program?
- Small reactors study

R. Jaffe indicated that we have to exercise care in choosing the efforts POPA takes up. There are opportunity costs that need to be considered. We need to be careful in choosing topics upon which we can bring a fresh perspective.

### Next Meeting & Adjournment

The next POPA meeting will be held on **Friday, October 1, 2010.**

**Action:** A motion to adjourn the meeting was made and seconded.

*The motion to adjourn the meeting passed unanimously.*