

**Panel on Public Affairs Meeting**  
**February 5, 2010**  
**529 14<sup>th</sup> Street, NW, Suite 1050, Washington DC**

**Members present:**

R. Socolow, V. Narayanamurti (via phone), J. Dorfan (via phone), D. Moore  
W. Barletta (via video), M. Bowen, J. Dahlburg, J. Davis, J. Drake, R. Falcone, F. Houle (via  
phone), R. Jaffe, L. Krauss (via phone), G. Long, P. Looney (via phone), J. Onuchic (via phone),  
P. Zimmerman

**Guests:**

J. Browne (via phone), G. Crabtree (via phone)

**Advisors/Staff present:**

K. Kirby, J. Russo, F. Slakey

**Members Absent:**

P. Coleman, W. Jeffrey, T. Kaarsberg, K. Schwab

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| <b>Call to Order</b> |
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**D. Moore called the meeting to order at 8:15 AM.**

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| <b>Welcome, Introductions, &amp; Approval of Minutes</b> |
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D. Moore welcomed everyone. Many participated from remote locations due to inclement weather in the DC Metro area. D. Moore asked for comments on the October minutes.

**Action:** J. Davis moved to approve the minutes of the October 2, 2009 POPA meeting, as presented. Motion was seconded by J. Drake.

*The motion to approve the minutes passed unanimously.*

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| <b>Purpose &amp; Activities of POPA</b> |
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**Overview**

F. Slakey provided an overview. There are two activities that dominate POPA's time: developing statements and carrying out studies. APS statements fall under five topical areas: Education, Ethics & Values, Human Rights, Internal Policy, and External Policy. POPA's responsibility is to draft statements on any of these topical areas. It is also charged with reviewing statements adopted by Council every five years, to determine whether to archive them or keep them on the website. The other major responsibilities of POPA include conducting studies and producing reports. The process begins with a POPA subcommittee proposing a topic. Someone on POPA will volunteer to take the lead in developing a team and carrying out the study. The timetable for POPA's short reports tends to be around eight months and the budget for this type of study is about \$25K. Other larger studies can be instituted as well (ex.

APS Energy Efficiency Report). More recently, we have introduced a hybrid type of report that falls between the short report of POPA and the large scale APS study. POPA is also responsible for drafting letters under the POPA chair's name, and responding to concerns voiced by the society's membership.

### **Subcommittee & Membership Business**

D. Moore read the list of POPA Subcommittees and new members were asked to consider joining one, or more, of interest to them. (Energy & Environment, National Security, Physics & the Public, National Research Policy)

Volunteers:

Patrick Looney, Roger Falcone, Matt Bowen – Energy & Environment

Gabrielle Long – Physics & the Public

Jill Dahlburg, Roger Falcone, Matt Bowen – National Security

K. Kirby asked current members of POPA to identify possible candidates to serve on POPA in 2011. She also asked for a sentence or two on the candidates (where they are from, topical interests, etc.). Members were asked to send their suggestions to Kate via email or provide at some point today, during the meeting. The nominating committee meets in two weeks. Nominations for the next Chair of POPA would also be appreciated.

Suggestions:

*Robert Cahalam*; expert on clouds/climate issues, former high energy physics (Drake)

*Jim Treebs*; weapons physics, materials science, medical physics (Davis)

*Larry Schwartz*; retired from Schlumberger (Kirby)

*Peter Fisher*; MIT, high energy physics with broad interests, semi-practical physics, SLAC's policy committee (Barletta)

*Ray Orbach*; University of Texas, Austin; possible chair for POPA? (Slakey, Lubell)

*Tony Taylor*; General Atomics, outstanding with policy issues, fusion expert (Dahlburg)

*Dolores Etter*; Southern Methodist University, biometrics; possible chair for POPA? (Dahlburg)

*Pete Lyons*; DOE, Deputy to Pete Miller at office of nuclear energy (Slakey)

*Katherine Clay* (Slakey)

*Raymond Jeanloz*; Berkeley, JASON; possible chair for POPA? Not an APS member. (Falcone)

*Richard Muller*; Berkeley, JASON, wrote a book called "Physics for Future Presidents" (Falcone)

*Mark Jackson*; ARPA-E (Davis)

*John Ruhl*; environmental issues (Krauss)

*Chris Chyba*; PCAST, CISAC, Princeton (Socolow)

## **Nuclear Downsizing Report**

### **Discussion & Vote**

J. Davis provided background on the report that has been produced, titled *Technical Steps to Support Nuclear Arsenal Downsizing*. The report was independently reviewed by Linton Brooks, Al Carnesale, and Steve Younger. They provided commentary and came to an agreement on the report presented to POPA today. The study committee feels that this is a reasonable document that clearly states what can be done, moving forward. It does include policy recommendations.

**Commentary:** J. Dahlburg stated her issues with the report, as presented. The Panel on Public Affairs was established to facilitate communication between physicists, the government, and the public on scientific issues of concern to APS members and to the nation as a whole. This draft report includes statements that are outside of that mission. The section titled “The National Laboratory Mission” provides the following recommendation:

“While the weapons laboratories have traditionally played a role in...areas [of national security], it is critical to institutionalize this role by expanding the mission of our nuclear weapons labs to that of critical national security labs...To maintain the necessary capabilities, the nuclear weapons labs should be re-designated ‘National Security Laboratories’ and the Administration should provide a mechanism for agencies other than the Department of Energy to invest in the infrastructure, thus providing a more sustaining fiscal environment.”

J. Dahlburg indicated that she did not think that this recommendation was appropriate for the POPA report, as it deals with matters that are neither scientific nor technical. It is a statement that tells the government how to organize itself regarding its responsibility for providing for the national defense. Since neither POPA nor the APS have studied the overall implications of such a recommendation, she feels that it should not be offered. With the removal of the recommendation, the section of the report becomes purposeless and she proposed that it be omitted in its entirety.

J. Davis responded that this is simply a case of talking in code. He proposed that, instead of rejecting the section in its entirety, the recommendation text & the sidebar should be changed to ensure clarity. He provided some possible alternatives, which J. Dahlburg agreed made the recommendation more technical and, therefore, within the mission of POPA. F. Slakey suggested that he, J. Davis, J. Dahlburg, and P. Zimmerman revise the recommendation. It will then be sent via e-mail for review by POPA, and then a vote on the revised section will be held via e-mail or teleconference.

**Action:** J. Davis moved to approve the remainder of the report, outside of the section that needs revision. W. Barletta seconded the motion.

*The motion to approve the report, without the section undergoing revision, was passed unanimously.*

## Climate Change Discussion

D. Moore restated the charge, given to POPA by Cherry Murray in November 2009, to review the current APS climate change statement for issues of clarity and tone. The subcommittee established to handle this task consisted of J. Browne, F. Houle, J. Drake and D. Moore. F. Slakey and R. Socolow acted as advisors. The subcommittee spoke with several experts and compiled their remarks into a formal appendix (in the form of a commentary) that was circulated and reviewed by POPA prior to today’s meeting. Suggested changes and comments have been incorporated and D. Moore called for

remarks on the revised commentary. Word-smithing ensued at the table and then J. Browne, J. Drake, and D. Moore convened separately to incorporate these changes.

**Commentary:**

If POPA approves the commentary, it will then move to the Executive Board, which will authorize the action of sending the commentary out to the Society's membership for examination and feedback. F. Slakey said that we should be prepared for 1,000+ responses.

**Action:** The Panel on Public Affairs endorses the commentary prepared by the ad hoc Climate Change Subcommittee. POPA recommends that, after possible further editing in response to membership comments and a subsequent vote by POPA and adoption by Council, the Commentary be appended to the 2007 APS Climate Change Statement and be posted on the APS web site with other APS Statements.

*The resolution, as stated, was approved unanimously.*

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| <b>Report &amp; Study Updates</b> |
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**CO<sub>2</sub> Extraction Report Update**

R. Socolow provided a brief update on the study committee's progress. They are continuing to write and integrate the report sections.

**Commentary:** M. Lubell suggested that jargon not be used in the report (based on R. Socolow's slides).

**Electric Grid Study Update**

G. Crabtree provided a brief update on the study committee's progress. The first workshop, of two, was held last fall and the second will be held later this month. One important aspect that surfaced, as the technical side of this issue was researched, was whether there were business incentives available for each of the players involved (generation side, grid side, customer side) to "do the right thing." It became clear that it would be important to add a business-case consideration to the study. McKinsey (represented on the study committee by Humayun Tai) was approached to develop a case study and become a partner on the report. This is not a settled arrangement, because McKinsey has concerns about being connected with policy recommendations made in the final report and any conflicts of interest this may cause with their clients. One solution may be to produce an informational report that McKinsey is a partner on, and a separate recommendation section/report that is produced strictly by the APS/POPA.

**Commentary:** R. Socolow asked G. Crabtree what the benefit would be of having McKinsey's name on any part of the report. G. Crabtree said that it would give the report more weight and make the audience look at the issue in a different light. R. Socolow said that having them involved carries baggage, too. M. Lubell asked him to clarify. R. Socolow argued that McKinsey is a private company with its own interests and they generally don't reveal the work behind the statements they produce. M. Lubell said that

McKinsey has a strong reputation in Washington and they command attention. Having them involved on the economical piece of this report is important because they can address that issue far better than APS could. G. Crabtree said that, although Humayun Tai is on the study committee, having McKinsey's name associated with the report adds value and impact. F. Slakey indicated that there is a precedent for partnering with other organizations; the study committee members think that partnering with McKinsey is a good idea because APS would be responsible for the technical conclusions and McKinsey for the business conclusions. He reminded everyone that the full report will come back to POPA for final review. J. Drake said that it's reasonable to collaborate, as long as POPA reviews the final report prior to its release. R. Socolow said that he is worried about setting a precedent of having to partner with other entities when economics are included in the final report. It should be enough to have economists on the study committee. F. Slakey stated that he did not think that POPA has credibility on the business case, in this scenario. M. Lubell stated that the advantage that this report would bring to the public is that, no one else has produced a report that includes the technical and economic aspects of the grid. Many are doing reports on the technical aspects, but none have intersected technology with economics. R. Socolow said we shouldn't trade physics for impact. F. Slakey said that we don't limit ourselves exclusively to the physics of an issue. We do partner with other organizations to bring a broader perspective to the issues we are examining. We did so with the Nuclear Forensics report, where we partnered with CSIS. Partnering with people who can provide a broader context and credibility makes our reports unique. There is value in answering policy questions with an interdisciplinary approach. R. Socolow said that there is a difference between CSIS and McKinsey. K. Kirby asked whether there was an institute (an NGO, not a private sector company) that would be a good partner and add credibility to the report. M. Lubell said that many NGO's have political ties that would be problematic for the purposes of partnering. G. Crabtree said that we have McKinsey at our fingertips, with Humayun being on the study committee. McKinsey has considered these issues before (perhaps for other clients). To bring the business case and technical case together in a single report would push the frontier forward. F. Slakey proposed that we proceed as G. Crabtree has suggested. If, in the review process, the reviewer of the economic portion of the report finds they are unable to adequately review the report because McKinsey is withholding information, then we will have to proceed without McKinsey. The proposal was agreed to. J. Dahlburg stated that we should mention this to McKinsey up front, so they understand where we are coming from.

### **Energy Critical Elements Study Update**

R. Jaffe provided a brief overview of the study, for those who are new to POPA and know little about it. The study will focus on issues, and using materials to illustrate issues. The committee will aim to illustrate the limits created by the availability of materials, and how this will impact scaling energy technology. The issues will range from fundamental scarcity all the way to geopolitics. The aim is to understand the scope of the issues and to try to construct a case and policy recommendations for stewardship of these issues, within government or the private sector. The report will be narrative in nature.

**Commentary:** L. Krauss complimented R. Jaffe on what's been done; it's a beautifully designed study. V. Narayanamurti said he thinks the committee is on a very good track. J. Onuchic said he is very impressed. J. Davis asked if the committee will be looking at He-3, He-4? R. Jaffe said that Alex King and Alan Hurd, who are both on the study

committee, are He-3 people. However, the study will consider only He-4. J. Drake asked how they plan to constrain the breadth of the study. R. Jaffe said that we are looking at “energy” and “scalability”. The study is interested in the marginal substances, where scalability plays a role.

### Next Meeting

The next POPA meeting will be held on **Friday, June 4<sup>th</sup>, 2010.**

### Adjournment

**Action:** A member of POPA moved to adjourn the meeting at noon, due to the inclement weather. Motion was seconded.

*The motion to adjourn the meeting passed unanimously.*