

Panel on Public Affairs Meeting
February 2nd, 2007
529 14th Street, NW, Suite 1050, Washington DC

Next meeting June 1st, 2007

Members present:

R. Eisenstein, M. Klein, D. Moore, E. Moniz, W. Dorland, E. Heller, J. Lebowitz, M. Ross, R. Howes, S. Mtingwa (by phone), B. Tannenbaum, J. Scofield, G. Crabtree, H. Gao, K. Budil, A. Sessoms, R. Goldston, V. Thomas,

Members Absent:

C. Murray, J. Browne, F. Hellman, G. Lewis

Staff present:

M. Lubell, F. Slakey, K. Duncan, J. Russo, B. Mosley, J. Franz

Guests:

L. Kadanoff

Roger Hagengruber, Co-Chair of POPA Interim Storage Report (by phone).

John Ahearne, Co-Chair of POPA Interim Storage Report (by phone).

Eisenstein called the meeting to order at 8:15 AM.

Welcome and Approval of Minutes

Action: The motion to approve the minutes of the October 20th, 2006 POPA meeting, with noted corrections, passed unanimously.

2007 POPA Subcommittee Assignments:

Action: Assignments to the POPA subcommittee for 2007 are as noted at the end of this document.

Discussion & Approval of Electricity Storage Report: Ruth Howes introduced the report and policy supplement. The report makes the point that it is important to implement “green” technologies and a next generation power grid; the report committee also made a point of not making the report/supplement proscriptive. With the Department of Energy (DOE) as the primary audience, the report identified six promising technologies: 1) Pumped hydro, which is effective but environmentally disruptive, and is not for small installations; 2) Compressed air, which has the potential to be used in small scale facilities but requires more innovation to do so; 3) Batteries, which are promising and are gradually being used for building size applications but are expensive; 4) Super capacitors, which are expensive and require more research but have the potential to replace batteries; 5) Flywheels, which are only in the experimental stage and 6) Superconducting magnets, which are promising but not yet practical. The report recommends that the DOE should hold a workshop to create a plan for the future. It suggests that the inclusion of a demonstration project is important. Finally, leveraging industrial money with public funding will be needed to ensure success. Heller raised the question of why transportation was not brought up in the recommendations; Howes responded that the focus of the report was on the grid and not transportation. Crabtree offered to supply more references, noting that it is

difficult to find authoritative references in the field. Goldston and Moniz pointed out efficiency needs to be made clear in the report. Moniz also made the observation that some of the text needs to be tightened up and comprehensive proofreading is needed. Lubell explained that the policy supplement was created for non-experts, specifically Congressional staffers and other policy makers. Slakey explained that a Congressional staffer, who was presented the report and asked to review it, said the supplement was readable and hit the right tone for a Capitol Hill audience.

Action: The committee approved the Policy Supplement for the Electricity Storage report. The committee did not endorse the full report and asked that revisions be made. The committee asked that revisions be made in time for the report to go to the February Executive Board meeting. The committee agreed that it would reconsider the full report at its next meeting.

Discussion & Approval of Interim Storage Report: John Ahearne began the discussion with an update of the review process. Four reviewers have read the report and said that it is good, and have few changes. The report conclusions: siting consolidated facilities will be difficult, with no security, safety, or financial benefits. Fuel presently being stored in dry casks and pools on site will be safe for the near and mid-term. Hagengruber pointed out that responsible nuclear energy uses must lead to creating a better concept of interim storage of spent fuel.

Action: The committee approved the report with slight changes.

Creationism/ID Recommendations: The Committee made clear that how the issue is approached is important: we must make sure that the discussion is not science versus religion, and must realize that this is a political issue. Tannenbaum made the point that we need to decide if we want to have this be a long-term process or more of a short-term splash. Moniz voiced a strong objection to recommendation 4, which stated that APS, “participate in the development of a multi-society structure that promotes a coordinated grassroots strategy and a unified national communications strategy on issues germane to the C-ID debate.” The recommendation was edited to emphasize the established Joint Society Work Group (JSWG). The committee decided to revisit the topics during New Business in the afternoon.

Action: During New Business: Recommendations 2 through 7 were approved; recommendation 1 was eliminated. Motion passed with 15 approvals and 1 dissent.

Proposed POPA Report on Nuclear Forensics: Bill Dorland introduced the study charge. With the recent inclusions of India, Pakistan, and North Korea into the “Nuclear Club,” five decades of non-proliferation have ended. The study is to look at the technical issues associated with nuclear forensics including both current and potential techniques & technology available to identify origins of nuclear explosions and testing. It will examine the potential for nuclear forensics to enhance global nuclear deterrence and to contribute to nuclear attribution of an intercept or detonation of nuclear materials. He said that the subcommittee is currently in the preliminary stages of finding a chair for the group. The committee is aiming for a ten-member study group, with representation from national labs, academia, AAAS, POPA, and the European community. The committee will have 2 multi-day meetings within the year and will have a budget of \$60K, to be split between APS and AAAS. The study group will attempt to recruit briefers from national labs, the Department of Homeland Security, and IAEA. Sessoms asked:

will the report be classified or not? Dorland replied: the report will be unclassified. Klein pointed out that there would be a concern of complications arising from classification.

Action: Report charge was approved.

Proposed APS Study on CO₂ Reductions: Ernie Moniz began with a discussion of the study's background. At the November APS Council meeting, there was a statement from the Presidential line that the society should take a strong stance on climate change. It was decided that a major study was needed, one that would look at the full range of the issue and the associated cumulative problems. APS is looking at a broad portfolio of technology and policy decisions that can be made; the Society wants to get away from a "quick-fix" technology solution. Slakey explained that the broader idea for this study has it encompassing multiple topics, such as fuel efficiency for cars, efficient energy use, and renewable fuels. Due to concerns about the breadth of this undertaking and the proposed timeline (the report should be ready to present to the new administration in two years), it was agreed that the major study should be broken into smaller segments. The first segment that the committee would take on is energy efficiency. Multiple committee members cautioned that the report not develop into an "engineering report." Moniz raised the possibility of updating the 1997 Presidential Council on Science & Technology's (PCAST) analysis. Lubell pointed out that, we need to be mindful of the Federal Government's time horizons; specifically that of Congress (2 years).

Action: The committee voted, with 14 approvals and 2 dissents, that the proposed study be focused on updating the Presidential Council on Science & Technology's (PCAST) figure on future energy use. The study charge was sent onto the APS Executive Board with POPA's approval.

Proposed POPA Report on U.S. Nuclear Power Workforce: Sekazi Mtingwa began the discussion with an explanation of the current situation. There is concern over the readiness and educational ability of our national nuclear workforce to meet the projected changes in the use of nuclear energy that are expected in the next few decades. With the Nuclear Power Act of 2005, the Bush Administration is advocating to move forward with an increase in the use of nuclear power. In addition, GNEP was proposed last year, which will 1) divide the world into suppliers and users of nuclear power, and 2) close the fuel cycle. Are we ready to staff the present, and future, facilities and commitments? The report is not to advocate for or against nuclear power. The report committee will have a 2- or 3-day briefing session in mid-summer, with a plan to have the first draft of a report finished by December (2nd draft by January '08). The committee is expected to be 12 members large. Three possible scenarios for the future were discussed, which the report needs to consider: 1) nuclear power's market share remains constant (APS is on record as saying nuclear power is needed to meet future energy needs of the country and the world); 2) nuclear power increases its market share, which is likely with such programs as GNEP and the 2005 Nuclear Power Act; and 3) nuclear power's share decreases, which is unlikely. Moniz pointed out that there are 30 filings for new reactors with the Nuclear Regulatory Commission (NRC), so the second scenario is the most likely to occur.

Action: Report charge was approved with modifications.

Update of AAAS-RRW Report: Benn Tannenbaum gave an update on the present status of the AAAS Reliable Replacement Warhead (RRW) report.

Action: The committee endorsed the APS' informal role in the RRW report.

Update of GOCO Report: Robert Eisenstein began by outlining the history of these deliberations, now well into their third year. The original idea for a study was to focus on GOCO arrangements in defense-related cases (e.g. MIT's management of Lincoln Labs). It was fairly soon concluded that, for several reasons, this was not likely to be a fruitful exercise. It was then suggested that it might be more useful to look into the degree to which the transition to for-profit managers at DOE labs had distorted the science mission of institutions like Jefferson Labs or LANL. But in this case too it is not clear what sort of report would be useful (or even achievable) and therefore it is not clear how to proceed. What is clear is that several of the current management arrangements are causing considerable angst in the community. But due to the lack of a concrete idea of how to proceed usefully, Eisenstein (with the concurrence of Klein) suggested that the GOCO report idea be terminated. Lubell pointed out that there is a new House Science Subcommittee that has asked for topics to look into; perhaps this is a topic to suggest. There has also been a suggestion that a one- or two-day "fact-finding" workshop might provide some clarity on the matter. These ideas are percolating.

Action: Eisenstein reported that he and Miles Klein were recommending that this project not proceed. Judy Franz and Ernie Moniz will reconsider whether or not a short one- to two-day meeting on this topic would be useful, and will report back at the June meeting.

New Business:

Nuclear Weapon Use Letter: J. Lebowitz presented a letter that was to be circulated to members of Congress, asking that new limits be placed on the President's ability to pre-emptively use nuclear weapons.

Motion: Recommend to the APS Executive Board that it consider transmitting the approved APS Nuclear Weapons Use statement to Congress, as a reminder of the Society's position on the topic.

Action: The committee approved the motion, with 12 approvals and 3 dissents. After some discussion, a motion was made to reconsider the last motion; the motion to reconsider passed, with 13 approvals and 2 dissents. The motion was reconsidered and was defeated, with 2 votes to approve and 10 to defeat.

Next Meeting

- The next meeting will be June 1st 2007.

Adjournment

The meeting adjourned at 3:39 PM.

Panel on Public Affairs 2007 Subcommittees

Energy & Environment

- Marc Ross (Chair)
- Ernest Moniz
- Ruth Howes
- Sekazi Mtingwa
- John Scofield
- Valerie Thomas
- George Crabtree

Ethics

- Miles Klein (Chair)
- Ernest Moniz
- Cherry Murray
- Duncan Moore
- Robert Eisenstein

National Security

- William Dorland (Chair)
- Ernest Moniz
- Joel Lebowitz
- George Lewis
- Kim Budil
- Benn Tannenbaum
- John Browne
- Miles Klein

Physics & the Public

- Robert Eisenstein (Chair)
- Eric Heller
- Frances Hellman
- Joel Lebowitz
- Allen Sessoms
- Haiyan Gao

National Research Policy Committee

- Ruth Howes (Chair)
- Sekazi Mtingwa
- Benn Tannenbaum
- Robert Eisenstein
- Duncan Moore
- Haiyan Gao
- Valerie Thomas

Steering Committee

- Robert Eisenstein (Chair)
- Ernest Moniz
- Miles Klein
- Duncan Moore
- Cherry Murray
- Marc Ross
- William Dorland
- Ruth Howes
- Arthur Bienenstock

POPA'S RECOMMENDATIONS TO THE EXECUTIVE BOARD

1. POPA recommends that APS continue its grassroots activity of alerting APS members in states where there is pending legislation that dilutes the teaching of science in the public school science classroom.
2. POPA recommends that APS develop, along with other scientific societies, a generic Amicus Brief that can be used in legal cases that could threaten to dilute the teaching of science in the public school science classroom. The Brief would be provided to societies for review and approval before any public release.
3. POPA recommends that APS continue to participate in JSWG activities that promote a coordinated grassroots strategy and a unified national communications strategy on issues germane to the C-ID debate.
4. POPA recommends that APS contribute to a fund, overseen by the JSWG, which would supplement the grassroots activities for issues advocacy consistent with 501(c)(3) limits. However, POPA suggests that the APS contribution be conditional in the same way as its previous contribution to JSWG activities; namely that:
 - a. At least 8 societies contribute to the fund; and
 - b. The physics community not be the primary contributor.
5. The Greenberg/Mercury report suggests that there would be value in the existence of an organization that promotes capable pro-science candidates in local school board elections. However, there are strict limitations on non-profit organizations engaging in such activities. APS should consult with its legal counsel to determine the non-profit limits, and inform the JSWG of the restrictions. If in the future the APS participates in activities in this area, care should be taken to stay firmly within the non-profit limits.
6. POPA strongly encourages the JSWG to foster joint educational activities consistent with the shared theme identified in the Greenberg/Mercury report (for example, societies could all participate in the 2009 "Year of Science" that is being spearheaded by the NAS).