

Panel on Public Affairs Meeting
October 19th, 2007
529 14th Street, NW, Suite 1050, Washington DC

Members present:

R. Eisenstein, M. Klein, D. Moore (via videoconference), J. Browne, K. Budil, G. Crabtree, W. Dorland, R. Goldston, E. Heller, R. Howes, J. Lebowitz, S. Mtingwa, C. Murray, M. Ross, J. Scofield, A. Sessoms, B. Tannenbaum, V. Thomas

Advisors/Staff present:

J. Franz, T. Johnson, L. Kadanoff, M. Lubell, J. Russo, F. Slakey

Members Absent:

H. Gao, F. Hellman, G. Lewis, E. Moniz

Guests:

Peter Eisenberger, Jim Eisenstein (via teleconference)

Call to Order

Eisenstein called the meeting to order at 8:16 AM.

Welcome and Approval of Minutes

Bob Eisenstein introduced Cherry Murray, as this was the first POPA meeting she has been able to attend in person.

Action: Motion was made by Eric Heller to approve the minutes of the June 1st, 2007 POPA meeting. It was seconded by Sekazi Mtingwa. The motion to approve the minutes passed unanimously.

Status Reports on Studies in Progress: Energy Efficiency, Nuclear Forensics

Energy Efficiency Study

Mike Lubell indicated that the Study Panel had its first full meeting in August and heard from several government and NGO representatives. The second meeting will be held at Stanford, October 29th – 30th. The Study Panel now includes two research staffers, John Scofield and Fred Schlachter. Mike Lubell and Francis Slakey are serving as APS liaisons. The report is slated for release in early summer 2008, with the goal of having some of the recommendations contained within implemented by the new Administration. It will focus on three timeframes: near-term (0-5 years), intermediate-term (5-10 years), and long-term (10+ years) and will have an emphasis on end-use energy efficiency in buildings, transportation, and possibly an industrial component. The report will provide an assessment of visionary technologies which are years in the making, a review of what kinds of actions can be taken to accelerate the development of technologies currently in the R&D pipeline, and it will examine what barriers need to be overcome to deploy

existing technologies and what incentives could be used to facilitate the deployment. There will be several audiences (Congress and the Administration; federal, state, and local agency heads; civil service positions, etc.) and how we approach each needs to be addressed. We will also be addressing how to disseminate the information, how to frame the report, and how to market the final product appropriately.

Commentary: The general consensus is that the timing is right for such a study and, while there are other organizations pursuing the same topic, many will look to APS to provide input for their own reports. It was mentioned that it would be helpful if the report could summarize the widespread information available on energy efficiency and point readers to where additional information can be found. The idea of including a conservation component in the report was brought up again. Discussion ensued on whether conservation is a lifestyle/sociological issue and whether there is any merit in its inclusion. Some feel it is wrong to leave it out, others feel that the physics of this issue lies in energy efficiency and that the sociology component of the issue lies in conservation. Energy efficiency is forward looking, and the Study Panel feels that by focusing on the economic benefits available to the public there will be a more universal buy-in. The report will examine “tipping points” and will include information about how the jobs created by energy efficiency cannot be outsourced. Lubell indicated that almost every one of the current presidential candidates has said that climate change and energy efficiency need to be addressed. The public relations aspect of delivering this report cannot be overlooked. Several PR & advertising firms will be approached on how to handle the roll out.

Nuclear Forensics Study

Bill Dorland indicated that the study is doing well and that the group’s first meeting, which included several presentations from experts, was held in July at Stanford. The report is slated to be finished in February. A second meeting is being held in November in Washington, DC. Tannenbaum is currently working on editing the draft report, which is almost complete. He mentioned that there is a parallel effort being made, examining the technology of nuclear forensics, at the National Academies.

Discussion of Nuclear Use Policy Proposal

Nuclear Use Policy

John Browne reminded POPA that a working group was put together during our June 1st meeting to assemble a draft proposal for this project. Over the summer, Tannenbaum & Slakey contacted a variety of people in Washington to see how they would react to a study examining the United States’ nuclear use policy. The response was enthusiastic, because most felt we could facilitate discussion and present the issue in a non-partisan way. We were warned about the breadth of the issue and the large effort it will take to effectively tackle the project.

The working group suggests that several workshops be organized that deal with different aspects of the issue (stockpile, technical items, RRW; do we need different nuclear weapons; what are the international effects of any actions we take). They have discussed partnering with other

organizations in the area to work on the project, and have decided on CSIS and NTI as the best counterparts for the undertaking. John Hamre of CSIS assigned one of his senior policy advisors, Clark Murdock, to work with us. Murdock feels there is real value in having the science community involved in the debate. He also thinks that we will need more than \$75K to effectively execute this project.

Commentary: It was mentioned that the Executive Board's concerns included (1) whether we would have access to classified information and (2) that APS does not have expertise in all the areas being proposed for coverage. The E-Board feels that if we don't have access to classified information, the end product will not be taken seriously. In addition, they are concerned that we might not want to be involved in this project because we do not have the expertise as an organization to cover all the necessary issues. Browne indicated that we would address the concern about access to classified information by handling this in the same fashion as the RRW report. Some of the people we have leading the workshops would have active classified clearance. Having the right people involved will lend credibility to the final product. This is very similar to how we are handling the Nuclear Forensics Study. Tannenbaum indicated that our position isn't to answer the questions that may require classified information, but rather to develop a framework for the next administration to use as a springboard for these important discussions.

Another concern brought up by the working group was how we will engage people outside of the scientific community. In the defense community, John Gordon & Bill Odom were both approached and are interested. The feeling is that Odom would be good if we really want to get into the issues because he is opinionated and will engage the defense community in an active way. He is a very compelling person. On the international front we could involve Al Carnesale, Bill Schneider, or Jim Leach.

Murdock has suggested that two papers be commissioned for each workshop so that the issue is framed and there is sustained debate. There should be a real focus on gearing this to the new administration, as opposed to the candidates for the presidency. It is crucial that we get the right people involved, the right people to chair the workshops, people with experience working for classified labs and also with the government. It is agreed that we will need more than \$75K for the project. It will probably take closer to \$200K. Kadanoff indicated that APS should match any funds that the other partners put up. Tannenbaum indicated there was no shortage of funding from AAAS.

- Actions:**
- (1) Eisenstein indicated that we should provide a revised version of the proposal for the November Executive Board meeting. Murray suggested that we should provide the revised version of the proposal to a subset of the Board prior to meeting in November.
 - (2) A budget needs to be decided upon and a list of names of those who may be invited, those who could possibly chair the workshops, and

those who will write the papers should be developed by the working group over the next month.

- (3) The Executive Board will present the revised proposal and additional information to the Council following their meeting in November.

POPA Study Proposal – Renewable Energy Sources

Presentation by guest, Peter Eisenberger.

Peter provided a brief history of how he decided upon making this proposal to POPA. In the 1980s, he was working for Exxon heading up their solar program during the last energy crisis the U.S. faced. As the price of oil eventually began to drop, he was asked by the corporation to do a study about whether they should stay involved in the research and development of solar energy.

With a modest amount of investment, sources of renewable energy that are cost effective (in comparison to coal) are closer to becoming viable alternatives than most think. The time frame: start a program within the next 5-10 years that will have enduring effects for the next century.

Four critical characteristics that need to be researched on each renewable energy source:

- (1) Capacity
- (2) Impact on Climate Change
- (3) Energy Security
- (4) Long Term Limits

Eisenberger suggested that research done on this issue would not be independent. Rather, his intent is to organize all of the multitudes of information available and condense it into a digestible format. He contends that renewable energy resources have not garnered a serious intellectual look for many years. What would make this study stand out is the comparative and integrative nature of the final product. It would be a technology based review of renewable energy resources as opposed to a purely economic review. Predictions about how renewable energy sources would fare in the future would be made by reviewing existing technology, done as well as it could possibly be done, to come up with the forecasted numbers.

Commentary: There is concern that the proposed study would be a large and time consuming project and we are currently in the midst of another very large study - Energy Efficiency. There is also a need to consider how we would present findings. Slakey indicated that he would not want to deliver two ideas to staffers at once. The delivering of findings from any additional study would have to be timed appropriately, so as not to conflict with the roll out of the Energy Efficiency Study's report. There is also another large study being done by the NRC on renewable energy sources. Eisenberger feels that a POPA study will be more policy-focused than anything produced by the NRC and we would have more effect on the Hill than they would. Slakey & Lubell indicated that there seems to be interest about this on the Hill right now based on budget numbers, a renewable caucus, and interest shown from Visclosky & Dorgan. If we were to move forward with the proposed study, Eisenstein indicated that the Energy & Environment

subcommittee would need to take stewardship. The proposal will need to be reworked. Ruth Howes & Valerie Thomas indicated that they are willing to rework the proposal. They should take the timetable of NRC's report into consideration when they do so. Lubell suggested that we should not advocate for one energy source over another. The study should be sequenced correctly and should be targeted at both the Administration and Congress.

Actions: Bill Dorland moved that the Energy & Environment subcommittee rework and repackage Eisenberger's proposal. The subcommittee should be prepared to deliver the new proposal to POPA at the next meeting in February 2008.

Eisenstein amended the motion to include Eisenberger when revising the proposal.

Marc Ross seconded the motion.

The motion passed unanimously.

Discussion of APS Letter Regarding Iraqi Scientists

Bob Eisenstein opened a discussion regarding whether a letter about the situation Iraqi scientists are facing should be written by APS. The head of CIFS suggested this action some time ago. At that time, Leo Kadanoff drafted a letter but no one could agree on its purpose and nothing was sent. At the most recent Executive Board meeting, the idea of such a letter was brought up again and POPA has been asked to consider whether APS should take action.

Commentary: Members indicated that a letter from physicists indicating that other physicists are under attack may be perceived as elitist. A statement could do some good, but it could also do harm by turning the focus of the militants specifically on this sector of the society. The group collectively thinks we should send word to CIFS that we have decided that writing a letter at this point would do more harm than good and we will not do so at this point.

Action: Eisenstein & Russo will draft a response letter to CIFS, which will be reviewed by POPA and then sent to CIFS and the Executive Board.

Climate Change Statement

Marc Ross spoke about the statement the Energy & Environment subcommittee has created for review by POPA (provided for review prior to today's meeting) and about the current statement APS has posted on the internet.

Action: The Energy & Environment subcommittee moves to adopt a statement on climate, without mention of energy. Motion is seconded by Bill Dorland.

Motion passes unanimously, after discussion clarifies that this vote is not on whether we will issue a statement; rather, we are voting on the content of the statement IF we vote affirmatively to issue one.

Commentary: It was suggested that we quote the current APS statement and then go on to include new wording, as drafted by the Energy & Environment subcommittee. Franz mentioned that AGU is working on a new climate change statement and that perhaps we should just endorse their statement. Tannenbaum agreed. Howes thinks it is important that we make a statement of our own because, among our peer groups, we aren't on the record for stating that climate change is a problem. It is agreed that whatever APS decides to say, as a scientific organization, proof will be needed to back any claim that is made. Review of the statement provided by the Energy & Environment subcommittee continues. It is decided that a re-write should be performed over lunch, incorporating commentary that has been shared during this discussion.

Action: The members of the Energy & Environment subcommittee will re-write the draft statement over lunch, to be reviewed & voted on by POPA following lunch. During that discussion it was decided that further action on the statement should be accomplished by email.

Discussion of APS Nominating Committee Considerations

Mike Lubell discussed how APS has become involved in more public issues, as of late. He indicated that we have been fortunate in having some very politically savvy people as Chairs and members of the Presidential Line. However, we have also encountered the opposite. He thinks it is important that we remind the APS Nominating Committee to consider a candidate's experience in the public arena when they nominate people to lead the Society. He would like POPA to consider having the POPA Chair write a letter to the Chair of the APS Nominating Committee, indicating that they should take both a candidate's public experience and scientific credentials into consideration when nominating our future leaders.

Commentary: Franz indicated that the Nominating Committee does consider public experience, but APS membership tends to vote on scientific credentials. However, she thinks that providing the Committee with guidance would be helpful. Lubell agreed that a reminder is worth something. Dorland appreciates that APS leaders come from the ranks, and he doesn't necessarily care if they have a lot experience with policy. Franz indicated that she looks to POPA for guidance on who should be nominated and will be asking for suggestions again in February.

Action: John Scofield moved to have the POPA Chair write a letter to the Nominating Committee Chair, from POPA, reminding them of what they should consider when nominating Society leaders. The motion is seconded by Miles Klein.

Motion passes, with one abstention (Dorland).

-Break for Lunch-

Status Reports on Studies in Progress: Nuclear Workforce

Nuclear Power Workforce Study

Sekazi Mtingwa indicated that the group's first meeting has been held and they are looking to have the draft of the study wrapped up the end of this month. Eisenstein raised a question from the Executive Board regarding whether the working group had time to approach employees of the different universities to determine their feedback. Mtingwa indicated that he had sent out a request to the varied consortia to get feedback and that there is good deal of data.

Final Discussion of Climate Change Statement, Post-Lunch

Discussion regarding word-smithing ensued. The group indicated that past work on climate change should be acknowledged and that a "do no harm" clause should be included.

Actions: Allen Sessoms made a motion to authorize to send a climate change statement to the Executive Board, with changes as discussed, to be approved by all of POPA via e-mail within two weeks from today. Motion is seconded by Sekazi Mtingwa.

The motion passed, with one abstention (Tannenbaum).

New Business

Liquid Helium Shortage/Cryogenics Discussion

Presentation by guest, Jim Eisenstein, via teleconference

Presentation Highlights:

- There is a shortage of Helium IV, which is causing some suppliers to ration their stores. Liquid helium is used for welding, in the aerospace industry (for purging rocket fuel), in the semiconductor growth industry, and in the medical industry for magnetic resonance imaging (MRI) machines. The physics community is a small player, but there is use in particle accelerators and in experimentation by condensed matter physicists. The rationing is causing concern.
- Helium is a non-renewable resource. It is released by natural gas, which is found in large deposits mainly in Texas, Oklahoma, and Kansas. 80% of U.S. helium is exported.
- The rough estimate of our need per annum is 7 billion cubic feet, although some suggest that this need will increase because of usage in MRI equipment, etc.
- BLM (Bureau of Land Management) used to extract helium, but it ceased doing so and began handling the operation of the Federal Helium Reserve, under the 1996 Helium

Privatization Act. The reserve provides 60% of the world's consumption, but it has only 20 billion cubic feet left (5 years worth at the current rate of withdrawal).

Action: Bob Eisenstein agreed to look into any actions that the NAS/NRC may be taking on this issue and report back in February.

Public Lecture Series – “The Panofsky Lectures”

Benn Tannenbaum discussed an idea he has developed to initiate a public lecture series on the past, present, and future of nuclear weapons. The series will be called “The Panofsky Lectures”, in remembrance of Dr. Wolfgang Panofsky, Director Emeritus of the Stanford Linear Accelerator Center, who passed away on September 24th, 2007. The lectures will be held on Capitol Hill in the first quarter of 2008. Members of the scientific community and Congressional staffers will be invited to attend. The series will be videotaped for webcasting and could be used as an educational tool.

Tannenbaum asked if APS would be interested in becoming an official co-sponsor.

Commentary: The reaction was very positive. Judy Franz indicated that an approval would have to come from APS' Executive Board.

Action: Bill Dorland moved that we should forward the idea, with positive recommendation, to the Executive Board for approval. The motion was seconded by Valerie Thomas. Motion passed unanimously.

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| Next Meeting |
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The next POPA meeting will be held on **Friday, February 1st, 2008**

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| Adjournment |
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Action: John Scofield moved to adjourn the meeting at 2:41PM. The motion was seconded by Bob Eisenstein. The motion to adjourn the meeting was approved unanimously.