



Panel on Public Affairs (POPA)
Meeting Minutes October 7, 2022
Time: 10:00 am EST - 3:00 pm ET

Committee Members in-person attendance: Jim Adams, Representative, Forum on Industrial and Applied Physics, William (Bill) Collins, Past-Chair, Sarah Demers, Member, Eric Gawiser, Member, Young Kee-Kim, Vice-President, Don Lamb, Vice-Chair, Despina Louca, Member, Eric Mazur, Chair-Elect, Bill McCurdy, Chair, Bob Rosner, Advisor, Washington Taylor, Member, Jonathan Wurtele, Member

Committee Members in attendance via Zoom: Dana Dattelbaum, Member, Steve Fetter, Member, Jim Gates, Chair, Physics Policy Committee, Laura Grego, Representative, Forum on Physics and Society, Frances Hellman, Advisor, Clifford Johnson, Member, Dan Stamper-Kern, Member, Kristen Pudenz, Member, Marion White, Member

APS Staff Present in person attendance: Jonathan Bagger, CEO, APS, Nico Hernández Charpak, Federal Relations Senior Associate, Mark Elsesser, Director of Government Affairs, Jessica McCullough, Office Operations and Programs Manager, Francis Slakey, Chief External Affairs Officer

APS Staff in attendance via Zoom: Jeanette Russo, Corporate Board Secretary

APS Guests in attendance via Zoom: Nan Phinney, Chair, Ethics Committee

Chair Bill McCurdy welcomed those committee members in attendance in person and via Zoom.

He began committee business by asking for a motion to approve the minutes of the June 2022 meeting.

***The Motion to approve was moved by Rosner, seconded by Lamb and was unanimously approved by the committee.**

McCurdy reminded committee members that the meeting is being recorded for the sole purpose of note taking. These recordings will not be achieved and will be deleted upon completion of the minutes.



Government Affairs Update (Nico Hernández Charpak)

Hernández Charpak began his Government Affairs update by expressing what a pleasure it was to see everyone. The CHIPS and Science Act of 2022 was signed by President Joe Biden in August 2022. He expressed that this is the most significant science bill in a Decade. In the 1000 plus pages of this bill are the first authorization of the Department of Energy Office of Science and a reauthorization of the National Science Foundation. This bill affects nearly all aspects of the science, research and development ecosystem. It is the product of many years of work by multiple people. APS has worked with hill staff on bills by providing text, definitions, and feedback. We have published timely and relevant reports that have pushed legislation forward, and in just the past 3 years, members have taken more than 300 meetings in congressional offices and produced more than 5000 actions.

There were three key provisions in this bill where APS was the leading voice:

1. Building Research Capacity to Broaden Opportunities
2. Taking on Sexual Harassment in STEM
3. The Liquid Helium Crisis: Unsustainable Prices, Unreliable Supply and what Congress should do

These three provisions have been policy priorities for APS for years, but also this work is guided and grounded in the work POPA completes to create and maintain these statements.

On “**Building Research Capacity to Broaden Opportunities**”, we produced the Diversity Statement and the Undergraduate Research Statement. On “Taking on Sexual Harassment in STEM”, we produced the Protection Against Discrimination statement, Promoting an Inclusive Workplace statement and the statement on the Status of Women in Physics. In “The Liquid Helium Crisis, we have a statement on the “Conservation of Helium”.

In “Building Research Capacity to Broaden Opportunities” – we began this work with (two people whose names I cannot understand). This work culminated in the “Building America’s STEM Workforce” report where we coined the term “Emerging Research Institution”. In working with hill staff, this term became official in the Chips and Science Act of 2022. It is defined as the term “emerging research institution” meaning an institution of higher education, with an established undergraduate or graduate program, that has less than \$50,000,000 in Federal research expenditures. This was also used in a pilot program at NSF. This term is also included in more than 13 provisions in the act and is the official term in the WH Presidential Budget request for FY2023.



Combating Sexual Harassment in Science

This has been a priority at APS since the Trump Administration, and this work began as the priority of former Congressional Science Fellow and POPA member Lauren Aycock. It has also been a focus of Congressional Visit Days every year. Our members were the constant drum beat on the hill and built the necessary support for its inclusion in the bill. This was also included in the “Building America’s STEM Workforce” report. One focus was to ensure that gender based harassment was included in the scope of this bill, so not just sexual harassment, or sexually explicit behavior, but also discrimination based on one’s gender. Until the end, it was unclear if it would be included. We were meeting with Senate offices up until the last minute. It was included, (Subtitle D) and now we look forward to informing its implementation.

Addressing Liquid Helium Crisis

This has been a priority since the release of the POPA report in 2016 on the Liquid Helium Crisis. We worked in partnership with ACS and MRS. Our members made sure to keep this issue at the forefront when considering legislation and we worked with one of our members to place an Op-Ed in the New York Times. We also provided legislative text stemming directly from this report. Two provisions were included in the bill – “At NSF Sec 314. Helium Conservation Program” and at DOE Sec 10373, Helium Conservation, both which focus on helium recycling.

In the September 30 PPC meeting, two senior staff members from the house committee joined the meeting. They spoke about the success of our partnership and APS involvement. They explained that they hold our reports in the same esteem as the academy reports, they recognize our role and what we offer with our text and definitions, and that were pivotal in keeping the sexual harassment portion of the bill at the forefront of the work being done.

Finally, Hernández Charpak recognized the work of many departments across APS, and thanked them for their support.

Physics and the Public Subcommittee Report:

Subcommittee chair, Sarah Demers began with an update of the “Statement on the status of women in physics” *

Demers reported that this statement received extensive feedback and was approved by the subcommittee, the POPA committee, but it was not approved by the APS board. The subcommittee was asked to consider modifications to the statement, and title, to acknowledge the non-binary nature of gender. The subcommittee had a substantive discussion in their August meeting, and gathered feedback from the relevant APS committees:

- Committee on the Status of Women in Physics (CSWP)
- Committee on Minorities (COM)



- Forum on Diversity and Inclusion (FDI)
- We have additional context from a 2016 APS report on the climate for the “LGBT+” community in physics.

Committee on the Status of Women in Physics Input

Although it was perceived that some of the titles suggested would suffice, in this particular case, some believed that a change of just the title was superficial and seemed to conflate multiple topics and audiences. Their preference would be to leave the statement as is, with its current focus on women, and develop a separate statement focused on the status of the LGTBQI+ community in Physics.

Forum on Diversity and Inclusion Input

They highly recommend including “gender identity” in the phrase “...full participation in physics by everyone, regardless of gender, gender identity, or gender expression.” They agreed with the comment about adding language from a non-binary perspective. They would strongly recommend changing language to “women and gender minorities” throughout the entirety of the statement, as this statement also has direct implications for trans women and non-binary physicists, as well as cis women physicists.

A question to consider when thinking about expanding the title without a substantial adjustment to the content:

Are all issues experienced by “women” also experienced by “gender minorities”? In other words, can we replace “women” with “women and gender minorities” throughout the statement as initially suggested by FDI? Potentially, no. A central thrust on the statement focuses on the under-representation of women in physics with respect to their percentage of the population. We do not have this data for gender minorities, except from the statement: “The number of women in physics remains disappointingly low at every level. Full participation in physics by everyone is important to the health of our discipline and future achievements of our members. The APS urges its members, physics leaders, and policy makers to take actions designed specifically to affect institutional culture, including actions to improve the recruitment, retention, and treatment of women in physics at all levels of education and employment.”

Additional feedback from FDI

The committee did think an additional statement on the Status of Transgender, Non-Binary, and Gender Minority Physicists was needed, particularly given the results of the 2016 LGBT Climate in Physics survey showing that trans physicists were facing significantly more difficulty than our cisgender LGB physicist peers, and that many transgender students are currently being targeted by state legislations across the country that seek to limit their participation within schools. However, they did also think it would still be useful to include gender minority language within



the current Statement on the Status of Women in Physics as well, as there is also significant overlap with the issues raised in that statement particularly for trans women. In conclusion, they would be very much in favor of both adding gender minority language to the current statement where these issues overlap, as well as creating an additional statement that focuses on the unique issues faced by transgender, non-binary, and gender minority physicists. POPA might also consider a Statement on the Status of LGBTQ+ Physicists as well, as there are other additional factors that LGBQ physicists face that are unique to what trans/NB/GM physicists face, as well as some overlapping issues. A robust discussion ensued amongst committee members, and the chair called a motion to the floor:

Motion: to approve the statement (with the edit done live on screen: the addition of the “+” Rosner supported the motion and Kim seconded the motion. The motion was unanimously approved by the committee.

Demers then moves to the statement “**Against the Boycott of scientists by nationality**” * As was discussed in the June POPA meeting, the Physics and the Public subcommittee proposed expanding their statement against a call of boycotting Israeli scientists to calls to boycott scientists of any nationality. The resulting statement has been broadened, but still applies to Israeli scientists. The statement supports APS positions in the present, applicable to scientists from Russia and Ukraine, and the breadth of the current statement also more viably sustains APS in the face of potential future conflicts. There was some concern that the broadening of the statement would be interpreted as a weakening of support for Israeli scientists. We were informed that handling PR-related issues, such as intentional misreads of a statement, are not in POPA’s purview. The subcommittee voted between the broadened statement and the statement that had been broadened, but also referenced the Israeli Scientists. The statement that did not refer to the Israeli Scientists was selected.

There was a discussion amongst committee members, including those who opposed this statement and supported the statement that supported Israeli scientists. It was also discussed how this statement references the distinction between scientists versus institutions, and how the purpose of statements is to be clear on the principles the APS community stands for. Slakey reminded the committee that we needed to make a broad statement that we would not hold scientists accountable for their government’s decisions and actions.

Taylor makes a Motion to send the statement back to the subcommittee with the instruction to add one sentence similar to: “this expands the previous statement to include not just Israeli scientists but also other scientists...”, and reconsider the last three words.

**13 members voted yes
1 abstained from voting**



The motion is approved

Demers then moved to the “**Statement on the protection of the EM spectrum**”

The subcommittee voted to pursue a statement on this topic and committee member Gawiser has drafted a statement. The subcommittee agreed that this is an important topic that deeply impacts physics. The subcommittee debated how prescriptive their recommendations need to be to give APS the tools it needs with this statement. They also agreed that close collaboration with other partners (in astronomy and astrophysics, for example) is important in further developing the statement.

Demers provided the update on the “**Statement on public engagement**” discussion. The subcommittee voted to craft a statement in support of the importance of public engagement. In considering this topic, the subcommittee discussed concerns regarding the growing number of activities expected of faculty members. The subcommittee did not see the need to necessarily define “public engagement on science” in the statement. They are aware of a potential danger of being overly prescriptive to departments, given that one size may not fit all. Finally, they think a shorter title is needed than what is provided in the draft from CIP which is “Statement advocating that engagement-based efforts be considered in recruitment and career advancement decisions by the facilitators’ home institutions”

Finally for the Physics and the Public Subcommittee, Demers provided the update on the “**Statement on teaching evaluations**”. The Subcommittee voted to develop a proposed statement on effective teaching evaluation. There was a discussion regarding what is particular to physics about this issue and expanding this to focus on improving teaching in addition to combating bias.

Energy and the Environment Subcommittee Report:

Bill Collins reported first on the updates to Statement **17.1 Accelerating the Transition to Carbon-Neutral Energy Sources ***

The subcommittee arrived at the conclusion to renew this statement with minor edits. It is very important to increase energy equity globally, and Collins acknowledges Wurtele’s contribution to the edits we have made. The committee added language that supports this to the forward and the background of the statement. We also recognized that we are not addressing the global energy challenge, which is a huge task. Instead the committee wanted to hone in on the transition to carbon neutral resources, thus we have shortened the title. After a discussion amongst the committee and suggestions to the context and phrasing, a motion was brought to vote on the statement with the edits done in real time.

The motion was brought by Mr. Collins and was seconded by Mr. Eric Gawiser.

11 Committee members voted yes

2 Committee members abstained

1 Committee member voted against

The motion was passed.

DAC report update and discussion:

Washington Taylor reported that in June 2022, POPA approved the Direct Air Capture Study. Taylor (chair of the study group) together with Marston, Rosner and Wurtele have begun to work on the study with the following goals in mind:

- Produce short (~ 25 pages) report on DAC
- Build on/complement 2011 chemical DAC POPA study
- Focus on basic physical requirements (energy, mass)
- Extend consideration to other approaches (accelerated weathering, bio)
- Aiming for finished version to present to POPA at February 2023 meeting (may arrange update meeting online in e.g. December/January for those interested)

Taylor explained that they are not aiming to break new ground with this report, as there is a tremendous amount of literature on the subject. The idea is to integrate a basic science understanding with the current state of knowledge to produce a clear and succinct report on the physical constraints and scientific guidance for policy regarding large-scale DAC.

Currently, the study committee has done the following:

- Framed the scope of the report and completed an initial investigation into various carbon capture modalities.
- Had initial discussion with a few experts in chemical DAC, geo aspects and bio carbon systems
- MIT graduate student (Nina Anikeeva, MIT QI student) has volunteered to help with the report.
- Started to draft report (very preliminary and incomplete draft distributed to POPA)
- In process of identifying specific technical questions that we cannot resolve completely ourselves, for which we will consult experts in coming months for perspective.
- Aiming to complete the first draft by the end of year.

Taylor outlined some potential goals/uses of this report which include the following:

(A) Clear and succinct statements of DAC challenges and issues related to basic



physical science, relevant for policy makers

(B) Clarifying specific things that government or private funding providers may wish to focus on in assessing different carbon capture proposals

(C) Guidance regarding relevant areas for possible science/technology research (e.g., measurement/detection for verification and standards)

In addition, Taylor discussed the integration and interaction with the government and private sector. Committee members discussed these concepts. It was agreed that work on the study would continue in the direction that Taylor had outlined.

National Security Subcommittee Report:

Laura Grego began with the **Statement on the use of nuclear weapons** * She explained that the subcommittee intended to bring this statement to a vote as written in response to feedback from PPC and POPA.

The motion to approve the statement was brought to the floor. Lamb supported the motion and Rosner seconded the motion.

13 Committee Members voted Yes
1 Committee member abstained

The Motion has been approved.

Grego then moved to a discussion regarding the “**Statement on BMD**”. The committee discussed the statement, and the topic was addressed that we should distinguish between the words “strongly recommend” and “recommend”. There was a further discussion about what differentiates the two. She and Collins reminded the committee that the preexisting version of this statement dates to 1999 and is out of date and officially archived.

Update on BMD report:

Mark Elsesser updated the committee on the BMD report. The report was published in mid-February of this year, followed shortly by a webinar. There were two APS members that raised concerns regarding the specifics of the boost phase section of the report. These concerns were brought to the committee, and the committee began reviewing the report. In May, it was clear that there were two technical errors in the calculations that needed to be addressed. The report was removed from the APS website accordingly. Elsesser contacted staff at the House Armed Services Committee, Senate Armed Services Committee, DOD, NSA, OMB and National Security Council, all organizations that had been contacted when the report was published. He informed them that there were errors in the calculations, we were taking the report down and it



would be undergoing a review. Conversations began with the POPA chair line, and in June, we discussed how to improve the process of POPA reports and how we learn from what had occurred. While we are working on the process of authoring reports, the study committee is working on correcting the report by performing the calculations that were meant to be done. As soon as the calculations are complete, the report will be remitted to the subcommittee for review and agreement. The report will then be sent to an outside expert that we have secured to independently review the report. Once that review is completed, it will be routed through APS leadership, and brought back to the full POPA committee for a vote.

Update on new guidelines for POPA Studies and Reports:

Elsesser explained that to adjust current POPA report guidelines, there are three concepts they are considering:

- Report content
- Committee member expectations
- Review Process

And once a report is published, we need to establish a post-publication process that would focus on

- Scientific and Technical Errors

As the APS leadership and POPA chair line continue to assess this process, we are looking at the following areas for consideration:

1. Content Guidelines

- Clearly define “based on existing published work”
- What level of calculation is permitted?
- Provenance of figures and data presented in report

2. Committee Member Guidelines

- Communication guidelines
- Archival of drafts at regular, appropriate intervals
- Report sign off/approval

3. Review Process

- Anonymous external reviewers
- Independent “Editor”



Elsesser reported that he and the POPA chair line will continue to work on establishing a process, develop a document outlining a number of things he reviewed, and will report back to the committee, hopefully with that document, in the February 2023 meeting. This document would then route to APS leadership for full approval.

Ethics Committee Update:

Nan Phinny, Chair of the Ethics Committee, provided an update on the edits to the Ethics Statement. In October 2021, the Ethics Committee presented some changes to POPA edits, there were further suggestions, and those were incorporated in the February 2022 meeting. The statement was then sent to the Board Council. Council had edits, 2 or 3 edits were minor, one was discussed during this meeting. Phinny noted that if the revised statement was agreed upon, the committee could call a vote and the statement would proceed to the Board for review on October 12. If approved, it would then be sent to the APS membership for comment.

There are three sections under review:

- Enabling Misconduct – New Section; added in response to complaints the Ethics Committee has received.
- Conflicts of Interest and Commitment – Updated to reflect consistent language (transparency, disclosure, reciprocity).
- Code of Conduct for Meetings – Updated to emphasize responsibility of bystanders who witness inappropriate behavior.

There was a discussion amongst the committee regarding the vocabulary used in the code of conduct. The use of the words obligation vs responsibility, complainant vs all parties, and prioritizing the welfare of the victim or victims of the incident so as to not endure further harm. The committee also discussed the ethical obligation of reporting conflicts of interest versus the responsibility of doing so.

The Motion was presented by Phinney: POPA approves the recommended revisions to APS Statement 19.1 – Guidelines on Ethics as presented by the APS Ethics Committee. The motion was moved to the floor by Wurtele and seconded by Collins.

13 Committee Members voted Yes

The motion passed

POPA Committee New Business

McCurdy began the discussion regarding POPA meetings start and end times in a hybrid environment. The POPA committee needs more time on the agenda. Currently, meetings begin at 10:00am ET/ 7:00 am PT. McCurdy proposed adding 30 minutes to the beginning of the meeting for a 9:30am ET start.



There was also a discussion prompted by committee members suggesting that we focus the committee more on discussion and feedback when in-person, and that more preparation be done before the meeting. It is agreed that in February 2023, we will begin at 9:30am ET.

Discussion on the structure of the subcommittees

McCurdy explained that the idea of possibly restructuring the subcommittees stemmed from the Statement on the Electromagnetic Spectrum, which was presented by Physics and the Public. This is really a question of what topics belong in which subcommittees. McCurdy continued to explain that over the history of POPA, the oldest statements we have focus on the impact of physics on society in the physics and the public domain. Now, though, there are public concerns, societal concerns and their impact on physics and teaching physics. This has expanded the agenda of the Physics and the Public committee, and over a year they have worked on four statements. McCurdy asked for thoughts and suggestions on how we might better structure the Physics and the Public subcommittee.

Lamb suggested possibly having members of other subcommittees work on agenda items for Physics and the Public when applicable. He also suggested possibly expanding POPA to have more members to work on these items.

Kim suggested that we look at diversity and inclusion on our committee. We require a diverse knowledge base to support the topics of today and need to think about this when we are nominating candidates for POPA.

Mazur suggested that the committee think about how we increase institutional knowledge and have a greater understanding of statements that were created before POPA members join the committee.

Collins suggested that we make a graph of the statements that will come up for renewal. With this method, we will know what the workload will look like year by year and over the next five years. This will significantly assist us in knowing what the subcommittee workload will look like. Collins also posed the question of whether a statement, once written, belongs in perpetuity to that subcommittee. After the graph is created, we can take a look at the statements we have to assess the load ahead.

Hernández Charpak will create the requested graph for the next steering committee meeting, so we can determine how to move forward on this topic.



Bagger reported that the Board and Council have established a task force to look at all APS committees to help codify the practices of those committees to ensure things like continuity in committee work.

Demers suggested that we look at not taking on every statement request that is made of the committee. Perhaps we think about merging statements. She is not suggesting that we clump topics together, rather that we read the POPA statements that exist to assess what new ideas come in, and if there are ways to plug holes in existing statements. She also expressed that many of the statements we work on require expertise in equity, diversity and inclusion, teaching, education, and public engagement which requires a more diverse skill set on the committee.

Reminder on Nominations for new POPA Members

Hernández Charpak reminded the committee that it is time to submit names to nominate to POPA for 2023. In doing this, he asked that the committee think about the expertise we need when we lose committee members, and the diversity we have discussed. In the February 2023 meeting, there will be a formal call for nominations on the agenda. Once we compile names, they are sent to the Nominating Committee. The Nominating Committee considers our list, they make their own list which is then submitted to the Council for a vote. In November, we will receive a list of new members that have been elected to join POPA in January 2023.

Hernández Charpak also shared that committee members Gawiser and Adams have created a document for a potential structure for future statements. This may especially help new members to POPA as they navigate working on a subcommittee. They have shared the draft and it will be circulated at the February 2023 meeting for review.

Closing comments by POPA chair

McCurdy thanked everyone for coming and looks forward to seeing everyone on February 3, 2023 at the next POPA meeting. The meeting ended at 2:52pm.