

President's Council of Advisors on Science and Technology (PCAST)

TENTH MEETING

March 8, 2011

MINUTES

Washington, DC

Members Present: John P. Holdren (Co-Chair), Eric Lander (Co-Chair), William Press (Vice Chair), Maxine Savitz (Vice Chair), Rosina Bierbaum, Christine Cassel, Chris Chyba, S. James Gates Jr., Richard C. Levin, Mario Molina, Ernest J. Moniz, Craig Mundie, Ed Penhoet, Barbara Schaal, Daniel Schrag, David E. Shaw

Members Absent: Shirley Ann Jackson, Chad Mirkin, Eric Schmidt, Ahmed Zewail

Staff: Deborah Stine, Danielle Evers, Michelle Costanzo

Public Attendance: Approximately 50 observers attended.

Video Webcast Archive: The archive of the video webcast is available at www.whitehouse.gov/ostp/pcast

The President's Council of Advisors on Science and Technology (PCAST) convened in open session at 10am with Dr. John Holdren presiding on Tuesday, March 8, 2011.

Agenda Item 1: Welcome from PCAST Co-Chairs

Dr. Holdren, PCAST Co-Chair, opened the meeting and provided an overview of recent Presidential activities where science and technology played a major role. The President's State of Union Address contained three major science and technology themes for winning the future, including education, infrastructure and innovation. These themes were reflected in the President's Fiscal Year 2012 Budget. The Presidential Summit with China consisted of a large agenda concerned with science and technology, including the renewal of the US science and technology agreement with China and discussions on innovation policies. Dr. Lander, PCAST Co-Chair, thanked the PCAST members for their hard work.

Agenda Item 2: Federal Statistical System

Dr. Holdren introduced Katherine Wallman, Chief US Statistician, Office of Management and Budget (OMB), Executive Office of the President. Ms. Wallman described the origin, function and organization of the Office of Information and Regulatory Affairs (OIRA) at OMB. Of particular interest to PCAST might be OMB's Office of Statistical and Science Policy within OIRA. This office establishes and enforces statistical policies and standards, bringing methodological rigor and a cross-cutting perspective; ensures that resources are proposed for priority statistical programs; approves statistical surveys conducted by the Federal government (Information Collections) under the Paperwork Reduction Act; and administers OMB's Government-wide Information Quality Guidelines (IQG), the Peer Review Bulletin, and the Risk Analysis Memorandum. The OMB Process for developing standards and guidance is always transparent and inclusive, and includes interagency discussions and frequent use of interagency working groups, peer review (when applicable), and Includes public comment opportunities.

Following Mr. Wallman's remarks, PCAST members asked a number of questions. Among the issues discussed were balancing the openness of data with data security; federal agencies' role in correcting for selection bias of data derived from voluntary respondents (such as unemployment data); the implications of the memo on scientific integrity on OMB; organization of data for ease of access; concerns about data protection and accuracy when the source of information was internet surveys, and collection of detailed and cross cutting information that is beyond the capacity of paper form and web survey (e.g. tax forms).

Agenda Item 3: Update on Status of Implementation of PCAST Influenza Report Recommendations.

Dr. Eric Lander introduced Drs. Nicole Lurie, Assistant Secretary for Preparedness & Response, U.S. Department of Health and Human Services (HHS) and Robin Robinson, Director, Biomedical Advanced Research and Development Authority, HHS.

Dr. Lurie started by highlighting the importance of information to ensure proper crisis response and assessment. She said the goal of her session is to give an update on progress made toward implementing PCAST recommendations which centered around "more, better, faster" including both short- and long-term impacts. She described advancements around the development of diagnostics to identify new threats, shortening of the time to manufacture, test and license influenza vaccines, establishment of a fill-finish manufacturing network, development of adjuvants, next-generation vaccine technologies, live-attenuated virus vaccines, and domestic vaccine manufacturing infrastructure. Dr. Lurie also discussed the importance of consideration of medical countermeasures, regulatory science, and HHS governance. Dr. Lurie closed with some reflections on H1N1 that go beyond the PCAST recommendations, which derived from recent events and highlight the need to have a scientific basis for emergency response.

Following Dr. Lurie's remarks, PCAST members asked her a number of questions. The discussion centered on bioterrorism preparation, the adequacy of funds to accomplish agency goals, the adaptability of the Biomedical Advanced Research and Development Authority partner-facility (ranging from rapid response emergency to route circumstances), the response of health care delivery system to crisis in the context of the new health care reform accountable care organizations, regulatory science, and international collaboration ranging from early surveillance to response.

Agenda Item 4: Defense Nuclear Nonproliferation Research and Development

Dr. Holdren introduced Anne Harrington, Deputy Administrator for Defense Nuclear Nonproliferation, National Nuclear Security Administration. Ms. Harrington discussed the important role science plays in the Department of Energy and the breadth of items NNSA addresses. She highlighted specific examples including the collaborative efforts to promote nuclear nonproliferation research and development, technical responses to the New START treaties, means of verifying warhead presence using neutrons and assuring confidence that the declaration of warhead counts are correct while not revealing sensitive information, new technologies for warhead dismantlement including an information barrier to protect design information, and NNSA collaborations with academia, other government agencies and industry to bring technology to the market.

Following Dr. Lurie's remarks, PCAST members asked her a number of questions. Issues discussed included the relationship of the Department of Homeland Security and NNSA, basic research beyond university collaboration to build NNSA research capability, implications and opportunities of 123

agreement with Russia and nuclear opportunities in the Middle East, basic research carried out in unclassified academic environments, engaging countries beyond Russia (New START treaties) in monitoring technologies, and the countries involved in verification of nuclear nonproliferation.

Agenda Item 5: Public Comment

PCAST heard from members of the public in person. The following individuals provided oral comments to PCAST:

1. *Kwame Gyamfi*, Director, iSonar
2. *Robert Berdahl*, President, Association of American Universities.
3. *Howard Gobstein*, Executive Vice President, A.P.L.U. -- Association of Public and Land-grant Universities

Numerous individuals provided written comments to PCAST that are posted on the PCAST website.

Agenda Item 6: PCAST Study Updates

The Biodiversity Preservation and Ecosystem Sustainability working group Co-Chairs, Rosina Bierbaum and Barbara Schaal requested approval of a draft PCAST report entitled “Sustaining Environmental Capital: Protecting Society and the Economy.” Dr. Bierbaum and Dr. Schaal provided an overview of the report. They indicated that the central challenge in maintaining ecosystems is to assure the continued flow of ecosystem services, while also meeting society’s demands for those services. The report describes the role of environmental capital, ecosystems, ecosystem services, biodiversity, the drivers of degradation, and the rationale for involvement of the government. The proposed recommendations stress the need to develop a comprehensive and integrated view across government and disciplines ranging from biodiversity to social sciences to economics; and, the need for a modest investment in generating new essential knowledge, leveraging ongoing work, and building data infrastructure. After a series of questions by PCAST members focusing on the impact of the report on jobs, cost of implementation, coordination of state, federal and international stakeholders and climate change, the report was approved for public release, subject to editorial changes.

Jim Gates, co-chair of the PCAST Science, Technology, Engineering, and Mathematics (STEM) Higher Education working group, provided an update on the status of the PCAST’s report. Among the issues discussed was the scope of the report, focusing on the transition from high school through the first two years of higher education including public, private, and for-profit universities and community, technical, and four-year institutions. Dr. Gates reported that STEM includes all fields of science, technology, engineering, and mathematics including the social sciences, with the goal promoting a more STEM-capable workforce and increasing the number of STEM capable college graduates. The statement of task includes a focus on STEM higher education outcomes, available data, the role of instructional tools and educational technologies, model programs, reducing hurdles to implementing programs, and appropriate monitoring. Following Dr. Gate’s remarks, PCAST members asked a number of question and made several comments, including inquires regarding the difference between training and education and the supporting the focus on the first two years.

Dr. Holdren adjourned the meeting at approximately 3:40 pm.

Respectfully Submitted:



Deborah D. Stine
Executive Director
President's Council of Advisors on Science and Technology

Approved:



John P. Holdren
Co-Chair
President's Council of Advisors on Science and Technology



Eric Lander
Co-Chair
President's Council of Advisors on Science and Technology

Attachments:

Appendix A: PowerPoint Presentations

Appendix B: Written Public Comments