

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

## SIXTEENTH MEETING

January 6, 2012

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, S. James Gates Jr., Mark Gorenberg, Shirley Ann Jackson, Richard C. Levin, Mario Molina, Ernest J. Moniz, Craig Mundie, Barbara Schaal, Daniel Schrag, Eric Schmidt, Ahmed Zewail

Members Absent: Chris Chyba, Chad Mirkin, Ed Penhoet, David E. Shaw

Staff: Danielle Evers, Amber Hartman Scholz, Deborah Stine

Public Attendance: Approximately 60 observers attended.

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

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The President's Council of Advisors on Science and Technology (PCAST) convened in open session at 10:00 am with Dr. John Holdren and Dr. Eric Lander presiding on Friday, January 6, 2012.

### Agenda Item 1: Welcome from PCAST Co-Chairs

Dr. Holdren welcomed the public to the meeting. He noted that this was a very busy and important time for science and technology policy.

### Agenda Item 2: Overview of the Activities of the Science and Technology Adviser to the Secretary of State

In introducing Dr. Bill Colglazier, Science and Technology Adviser to the Secretary of State, Dr. Holdren noted that his position involves a very important role in international affairs. Dr. Colglazier then described the history of his position, and highlighted the importance of the U.S. as a world leader in science and technology. He elaborated on ten goals his Office as well as the State Department as a whole is working on: strengthening innovation policy, identifying new sources of innovation, encouraging more global scientific knowledge engagement and capacity building, supporting fellowship programs in the State Department, building structures to enhance scientific advice to foreign governments, enhancing science advice within the State Department, working with

disciplinary societies to facilitate U.S. and foreign scientist interactions, reinvigorating partnerships with USAID, supporting women in science and engineering, and identifying disruptive and transformative technologies and foresight to support developing countries' scientific infrastructure. Dr. Colglazier was hopeful that the State Department would have the opportunity to develop science and technology partnerships between the public and private sectors to meet these goals.

PCAST members asked questions concerning the benefits of interactions between academies and nongovernmental sectors, the continuation of building American universities in other countries, the possibility of cooperation with the Peace Corps, and encouraging the State Department to develop a strategy for global science and technology engagement.

### Agenda Item 3: PCAST Study Update

Dr. Eric Lander indicated the purpose of this session was to update the public regarding ongoing PCAST studies. He then introduced Dr. William Press to provide an update on PCAST's study on the future of the U.S. science and technology enterprise. Dr. Press stated that the study will address will entail making the connection between basic research enterprise and the developmental benefits of science, innovation, invention, and jobs. Dr. Maxine Savitz then indicated PCAST would update its 2010 report in on state of nanotechnology research and development. Dr. Savitz said that a letter report, hopefully to be approved at the March PCAST meeting, will assess the progress of the recommendations from the 2010 report. PCAST will then be able to decide if additional recommendations are needed. Lastly, Dr. Lander described PCAST's study on advancing drug development and evaluation that will address the innovation gap between using basic research and applying it for therapy purposes. PCAST is currently working on a solution to respond to this challenge, as well as on solutions to accelerate bridging this gap through partnerships and improving infrastructure for clinical trials.

### Agenda Item 4: Overview of the Activities of the U.S. Chief Information Officer

Dr. Holdren introduced Steven VanRoekel, U.S. Chief Information Officer at the Office of Management and Budget in the White House. Steven VanRoekel discussed the new pressures that have affected the federal IT infrastructure and government technologies. In order to alleviate these pressures, VanRoekel encouraged focusing on returns on investments, closing the productivity gap within the government by working with the private sector, engaging citizens and businesses with the government, increasing cybersecurity by using programs such as FedRamp, and building more efficient infrastructure for IT within the government. VanRoekel emphasized the importance of keeping pace with the growth of technologies in order to build on infrastructure projects. He concluded by urging private sector employees to work for the government, through fellowships and other opportunities.

PCAST members asked questions on the need for systematic analysis for priority of simplifications, using top coder models for finding solutions, working with other agencies to streamline technology, standardizing and making data accessible across agencies, and increasing the fundamental understanding of how the government works. Questions were also asked about the progress of the new Internet Protocol Version 6's (IPV6) and its movement within the government.

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#### Agenda Item 5: Public Comment

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

*Kelly Cleland, Researcher, Office of Population Research at Princeton University and also Executive Director of the American Society for Emergency Contraception;*

*Susan F. Wood, speaking on behalf of the Project on Scientific Knowledge and Public Policy, and the Jacobs Institute of Women's Health at the George Washington University School of Public Health and Health Services;*

*Douglas Laube, Board Chair, Physicians for Reproductive Choice and Health;*

*Wayne Shields, President, Association of Reproductive Health Professionals;*

*Francesca Grifo, Director of Scientific Integrity Program at the Union of Concerned Scientists.*

Dr. Holdren then provided his reflections on the comments.

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#### Agenda Item 6: Commerce Department's New Report on the Competitiveness and Innovative Capacity of the United States

Dr. Holdren introduced Secretary of Commerce John Bryson. Secretary Bryson discussed the Commerce Department's new "COMPETES" report which focuses on the competitiveness and innovation of the US economy. The report attributes the success of the American economy not only due to good entrepreneurship and successful companies, but also to smart federal investments and accomplishments in the public sector (specifically in education, infrastructure, and research). According to the report, the private sector has a tendency to underinvest in projects; federal aid to counter this underinvestment is crucial and has huge beneficial results and advancements. He cited the semiconductor industry as a good example of both public sector and federal investment and encouraged strengthening the advanced manufacturing sector. Bryson described some of the steps the current administration is taking to enhance U.S.

competitiveness including boosting STEM education, investing in research, and making historic infrastructure and investments.

PCAST members asked questions concerning government interest in building infrastructure, the importance of federal-state partnerships, the initiatives by universities to improve the interface between research and application, and the possibility of an immigration reform plan.

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Dr. Lander adjourned the meeting at approximately 3:00 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