

**Oral Remarks of Dr. John P. Holdren**  
**Director, Office of Science and Technology Policy**  
**Executive Office of the President of the United States**  
**to the**  
**Committee on Commerce, Science, and Transportation**  
**United States Senate**  
**on**  
**Advancing American Innovation and Competitiveness**  
**March 10, 2010**

Chairman Rockefeller, Ranking Member Hutchison, Members of the Committee, I'm pleased to be here with you today to discuss the Obama Administration's responses to the America COMPETES Act to date, our support for reauthorizing the Act, and the important investments in R&D and science, technology, engineering, and mathematics education the Administration is proposing in order to continue to fulfill the vision of the Act going forward.

A little more than a half a century ago, Americans gazed astonished into the night sky at the glint from a Russian satellite – the first artificial satellite to orbit the Earth. As a nation, we quickly grasped the significance of that event, and we responded aggressively with massive new investments in research and development and a new commitment to science and math education. We created NASA and DARPA, and we built new labs and manufacturing facilities to tackle the scientific and engineering challenges that suddenly loomed large.

Today we face another “Sputnik moment”, albeit one not so easily recognized because the indications are more diverse and subtle than seeing a Russian satellite overhead when we had none. But the relevant facts include these:

- America has fallen from 1st in the world in broadband penetration to the middle of the pack among developed nations.<sup>1</sup>
- In science education, one widely used international assessment shows American 15-year-olds ranked 25th in math and 21st in science among OECD countries.<sup>2</sup>
- And for the first time, in 2008, non-Americans were granted more U.S. patents than Americans.<sup>3</sup>

We can do better. America still can, and indeed must, be an innovation machine. Clearly, however, technological and economic superiority is not our birthright. It is something that in the past we have earned as a result of smart investments in fundamental science and targeted investments in the next big things—and it is something we must get serious about earning again, so we can continue to lead the world in the next round of modernization and creativity.

That is why the President has set the ambitious goal of lifting the sum of public and private investments in research and development in the United States to three percent of Gross

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<sup>1</sup> OECD, OECD Broadband Portal, *Data on Broadband Subscribers per 100 inhabitants*, 2009 Q2 data.

<sup>2</sup> US Department of Education, National Center for Education Statistics, Program for International Student Assessment, *Highlights from PISA 2006: Performance of U.S. 15-Year-Old Students in Science and Mathematics Literacy in an International Context*, December 2007.

<sup>3</sup> NSF, *Science and Engineering Indicators 2010*, Chapter 6, based on US Patent and Trademark Office data.

Domestic Product (GDP)—to exceed, for the first time, the level of R&D investment at the height of the space race.

It is also why the President is committed to moving American students from the middle to the top of the pack in STEM education, and to be No.1 in the world once again when it comes to college graduation rates, as we were just a few decades ago.

The America COMPETES Act has been a helpful tool in the early stages of attaining these and related goals. The President and the Vice President supported the original COMPETES Act when they were Senators, and the Obama Administration is strongly supportive of Congressional efforts to reauthorize this important Act this year.

But the Administration has not waited for COMPETES to be reauthorized to continue pursuit of the goals the Act was created to achieve. In his first year in office, the President has taken key steps to move America forward by:

- Getting key science and technology agencies (NSF, DOE Office of Science, and NIST labs) back on track toward doubled budgets;
- Investing record sums for R&D through the FY 2009 and 2010 budgets and the Recovery Act, as well as calling for further targeted budget increases in 2011;
- Launching a comprehensive Strategy for American Innovation that lays out a practical path to rejuvenating American industry and creating millions of high-quality jobs;
- Inaugurating Educate to Innovate – a public-private partnership in STEM education that has already raised more than half a billion dollars in cash and in-kind donations to revitalize science and engineering programs in schools;
- Unveiling a new plan for the U.S. space program that extends the life of the International Space Station and increases investments in game-changing technologies for human exploration of space beyond low Earth orbit, with budgets that match the goals;
- Sharply ramping up support for clean-energy and energy-efficiency research, development, demonstration, and deployment, including standing up the Advanced Research Projects Agency for Energy, or ARPA-E.

The America COMPETES Act can and should remain a valuable tool to support these and related strategies for enabling innovation to propel America into a better future.

Both the America COMPETES Act and the 2007 *Rising Above the Gathering Storm* report emphasized the need for enhanced Federal efforts in science, technology, engineering, and mathematics education – STEM education. As I noted earlier, President Obama is committed to bringing American students back to the top in this domain. His FY2011 budget would put \$1 billion into improving math and science achievement among K-12 students, and \$3.7 billion into STEM education overall. And his “Educate to Innovate” initiative has already attracted over \$0.5 billion in corporate and philanthropic support for improving STEM education facilities, practices, and teacher preparation. Reauthorization of COMPETES is an opportunity for Congress to reinforce these efforts going forward.

Let me note briefly, before closing, that among the responsibilities the America COMPETES Act assigned to OSTP was a requirement that the Director, in consultation with others, develop an overarching set of principles to ensure the communication and open exchange of research data collected by Federal scientists and to prevent the suppression or distortion of such research findings. The Act also required OSTP to develop specific policies and procedures

regarding the public release of data consistent with the principles established in the Act, a task that the last Administration did not fulfill. President Obama initiated the remedy in March of last year, issuing a Presidential Memorandum that promulgated six principles “to restore scientific integrity in government decision making” and tasked me, as OSTP’s Director, with making recommendations for how to ensure scientific integrity throughout the executive branch. A substantial effort has ensued – as described in my written statement – but the task has proved more challenging than expected and the work is not yet complete. I do expect to have those recommendations completed shortly, and I anticipate that they will more than satisfy the remaining responsibilities under the COMPETES Act.

In conclusion, I know this Committee shares with me, and with the President, the important goal of advancing America’s standing in the world as a leader in innovation and competitiveness. It is a goal that I think you will all agree transcends partisan politics because, in fact, it is so important and so central to this Nation’s well-being.

I look forward to working with all of the Members on this Committee toward the reauthorization of the COMPETES Act and, more broadly, on all that we can do together to achieve the potential of science, technology, innovation, and STEM education to strengthen our country and improve our world.

I thank you for your attention and will be happy to try to answer your questions.