



SIA

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INDUSTRY
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THE HEARTBEAT OF AMERICAN INNOVATION

FEDERAL RESEARCH INVESTMENTS FUEL INNOVATION AND GROWTH

Declining Research Funding Puts U.S. Leadership At Risk

When the Defense Research Projects Agency and universities created technology to link computers together in 1968, no one imagined it would lead to today's Internet.

Economists tell us that more than 50 percent of U.S. economic growth since WWII is attributable to technological innovation.

Federally funded research, particularly physical sciences research, leads to innovations that create high-wage jobs and make our lives better. Technology advances are needed to meet our challenges in energy, health care, education, and national and homeland security.

But Federal Disinvestment Threatens Future U.S. Technological and Economic Leadership

America is resting on its laurels. While other countries around the world are dramatically boosting their research investments, U.S. federal research spending is in decline.

- Federal support for research and development (R&D) declined from 1.25 percent of GDP in 1985 to 0.75 percent today. Meanwhile, China more than doubled its R&D spending as a percentage GDP from 0.6 percent in 1995 to 1.4 percent.
- Despite broad, bipartisan support for the America COMPETES Act, appropriations for the National Science Foundation (NSF), National Institute for Standards and Technology (NIST) and Department of Energy's (DOE's) Office of Science have fallen short.
- We are quickly approaching the limits of our current microelectronics technology, and the country whose companies are first to market with a new technology likely will lead in the nanoelectronics era for decades to come, the way the U.S. has led for the last half a century in microelectronics. NSF, NIST and DOE sponsored research can keep the U.S. first.

Congress Must Invest in Basic Research

- SIA supports a significant increase in research investments at the NSF, NIST, and DOE's Office of Science; as well as at the research agencies within the Department of Defense.
- SIA supports passage of the National Nanotechnology Initiative Amendments Act (H.R. 554) this year. The House passed an identical bill in the 110th Congress by a 407 to 6 vote, but the Senate failed to act.

KEY FACTS

- The U.S. semiconductor industry invested nearly \$20 billion in R&D last year, or 16% of sales.
- Federal support for basic research at U.S. universities declined, in real terms, between 2004 and 2005 and between 2006 and 2007, the first multi-year decline since 1982.

"Invest in the Sciences:

Barack Obama and Joe Biden support doubling federal funding for basic research over 10 years. ... This will foster home-grown innovation, help ensure the competitiveness of US technology-based businesses, and ensure that 21st century jobs can and will grow in America.

Blueprint for Change
Obama and Biden's Plan
for America

"In the economic recovery package.... I said, if you want four words to describe this, it's science, science, science, and science."

Speaker Pelosi
NPR Interview
January 14, 2009