



# The 2012 Budget: Winning the Future Through Investments in Innovation, Education, and Infrastructure

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“We know what it takes to compete for the jobs and industries of our time. We need to out-innovate, out-educate, and out-build the rest of the world.”

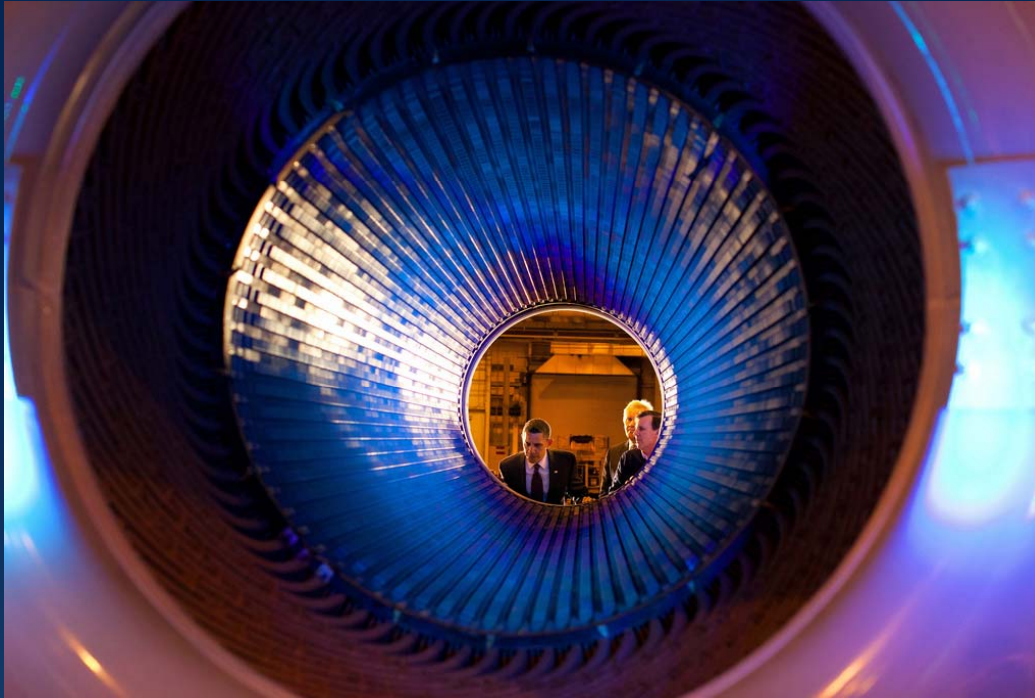
- President Barack Obama  
January 25, 2011



# The 2012 Budget: Winning the Future

- Jumpstarts Innovation
- Supports STEM Students
- Invests in Infrastructure
- Makes Tough Choices to Reduce the Deficit Responsibly
  - Offsets all increases with cuts in other programs
  - Keeps non-security discretionary spending flat for the second year in a row



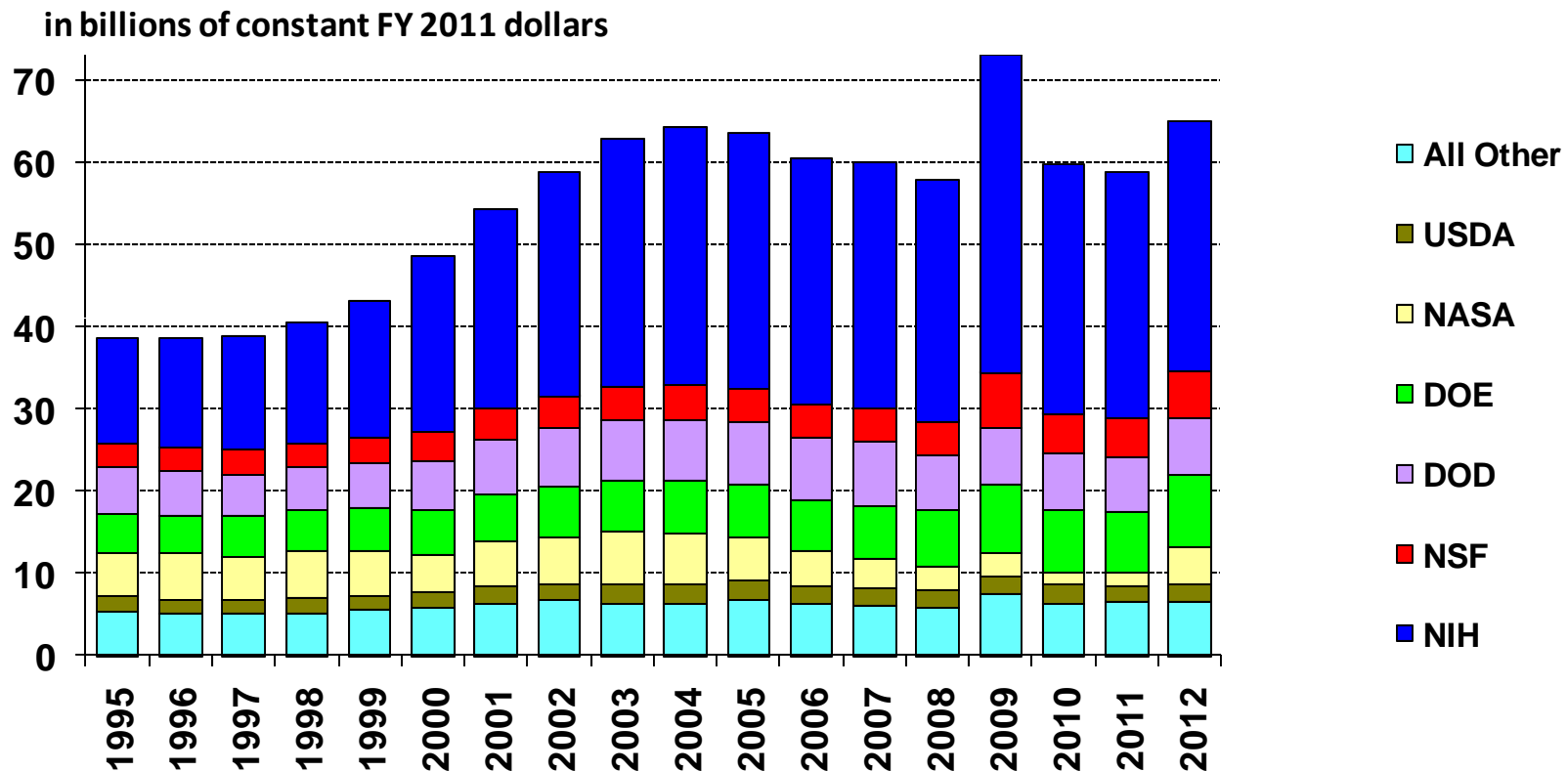


“This is our generation’s Sputnik moment... We’ll invest in biomedical research, information technology, and especially clean energy technology – an investment that will strengthen our security, protect our planet, and create countless new jobs for our people.”

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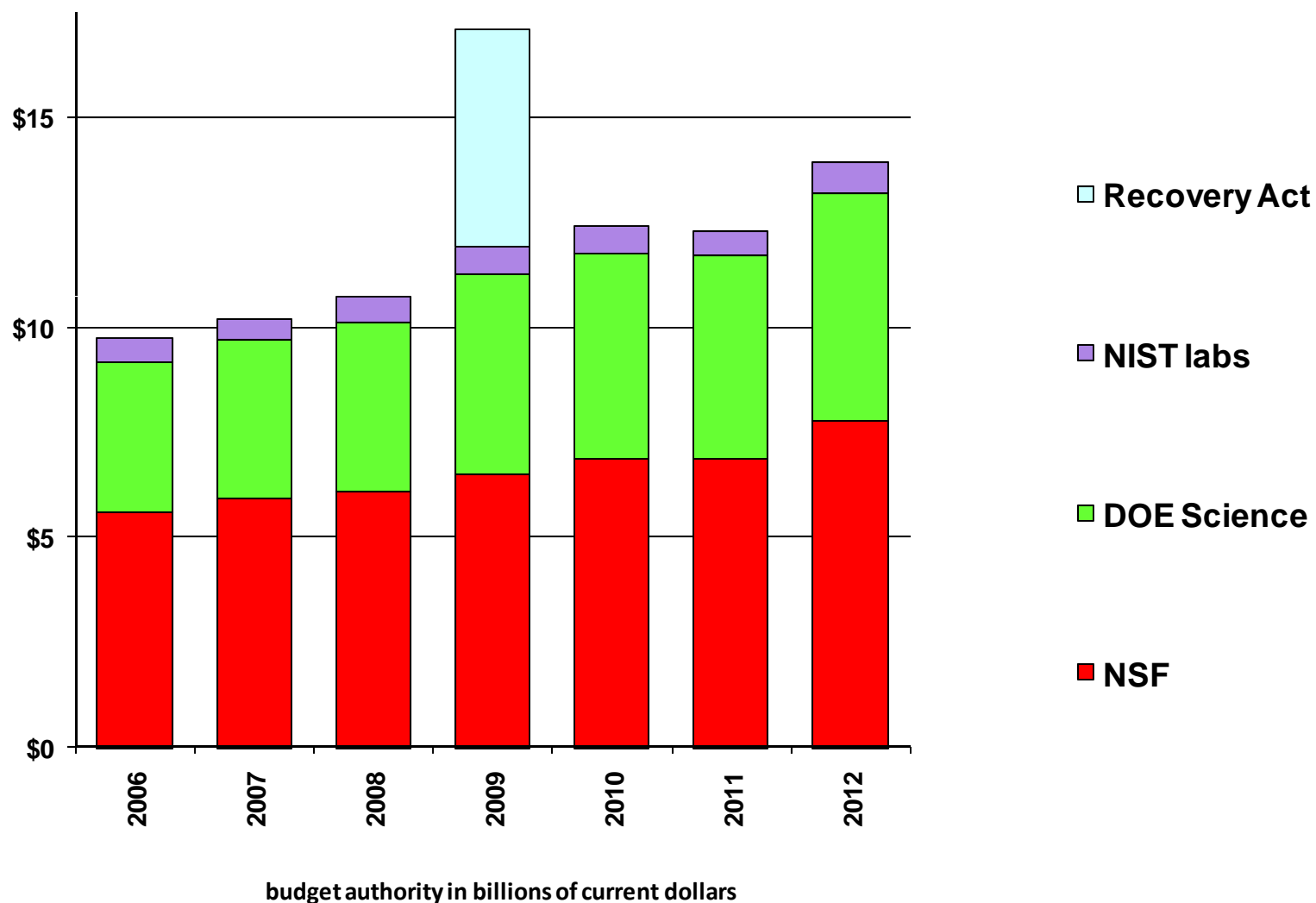


## Winning the Future: Federal Research by Agency, FY 1995-2012



FY 2009 figures include Recovery Act appropriations.  
 2011 figures are preliminary estimates of final 2011 appropriations.  
 Research includes basic research and applied research.  
 MAY '11 OSTP

## Investing in the Building Blocks of American Innovation: The President's Plan for Science and Innovation







“Maintaining our leadership in research and technology is crucial to America’s success. But if we want to win the future — if we want innovation to produce jobs in America and not overseas — then we also have to win the race to educate our kids.”

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# Educating a Competitive Workforce

\$3.4 billion for STEM Education in programs throughout the Federal government.

- Launch the NSTC Committee on STEM Education to coordinate this investment.
- The “Educate to Innovate” campaign leverages these Federal resources with over \$700 million in private-sector commitments.







“We’re telling America’s scientists and engineers that if they assemble teams of the best minds in their fields, and focus on the hardest problems in clean energy, we’ll fund the Apollo projects of our time.”

- President Barack Obama  
January 25, 2011



# Energy R&D Highlights in the 2012 Budget

## Winning Our Clean Energy Future

### Advance Critical Energy Research

#### Energy Innovation Hubs

- Doubles the number of Energy Innovation Hubs from 3 to 6

#### ARPA-E

- \$550 million to DOE for support of transformational clean energy research

### Support American Leadership in Clean Energy

#### Clean Energy Technology

- Invest \$8.7 billion from basic research to development and deployment by ending fossil fuel subsidies





# President's Strategy for American Innovation

## **Catalyze Breakthroughs for National Priorities**

- Unleash a clean energy revolution
- Accelerate biotechnology, nanotechnology, and advanced manufacturing
- Develop breakthroughs in space applications
- Drive breakthroughs in health care technology
- Create a quantum leap in educational technologies

## **Promote Market-Based Innovation**

- Accelerate business innovation with the R&E tax credit
- Promote investments in ingenuity through effective intellectual property policy
- Encourage high-growth and innovation-based entrepreneurship
- Promote innovative, open, and competitive markets

## **Invest in the Building Blocks of American Innovation**

- Educate Americans with 21<sup>st</sup> century skills and create a world-class workforce
- Strengthen and broaden American leadership in fundamental research
- Build a leading physical infrastructure
- Develop an advanced information technology ecosystem





“The third step in winning the future is rebuilding America. To attract new businesses to our shores, we need the fastest, most reliable ways to move people, goods, and information — from high-speed rail to high-speed Internet.”

- President Barack Obama  
January 25, 2011



# Technology Highlights in the 2012 Budget

## Harnessing Technology and Innovation to Transform the Economy

Invest in the Building  
Blocks of American  
Innovation

### Wireless Innovation (WIN) Fund

- \$3 billion fund for: basic research, test beds, and public sector application development from spectrum receipts.
- NSF, DARPA, ARPA-E, NIST, and others will participate.

Promote Market-Based  
Innovation

### Advanced Manufacturing

- \$190 million to NSF for promising areas like “materials by design,” nano-manufacturing, next-generation robotics
- \$1 billion over five years to DARPA dramatically reduce time to production
- \$500 million to DOE for flexible electronics, lightweight materials, etc.
- \$12 million to NIST for Advanced Manufacturing Technology Consortia

Catalyze Breakthroughs  
for National Priorities







“All these investments – in innovation, education, and infrastructure – will make America a better place to do business and create jobs.”

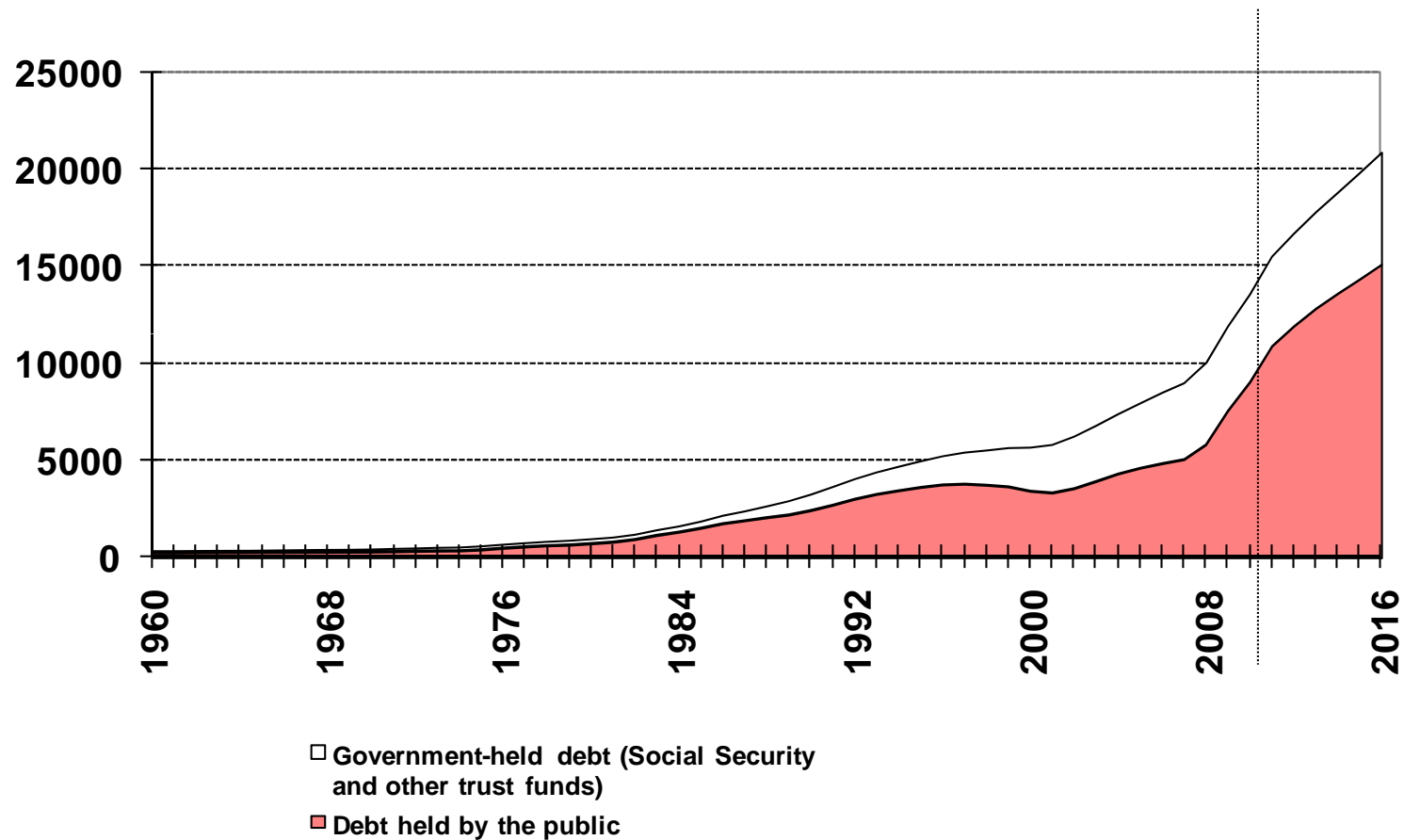
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## The National Debt, 1960-2016

in billions of dollars



Source: Budget of the U.S. Government FY 2012 Historical Tables.  
FY 2011 data are estimates. FY '12-'16 data are budget projections.

# Universities and the Federal Government

- We need to sustain the longstanding partnership between the Federal government and the Nation's universities and colleges
- Thank you for the tremendous response to the Recovery Act, Educate to Innovate, and STAR METRICS.
- We need to keep working together to sustain Federal support of cutting-edge research, to improve commercialization of university research, to reduce burdens, and to document the impacts of Federal research investments.



Thank You

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