

Engineering R&D in the FY 2011 U.S. Federal Budget

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for ASEE Engineering Deans Council

AAAS R&D Budget and Policy Program

<http://www.aaas.org/spp/rd>

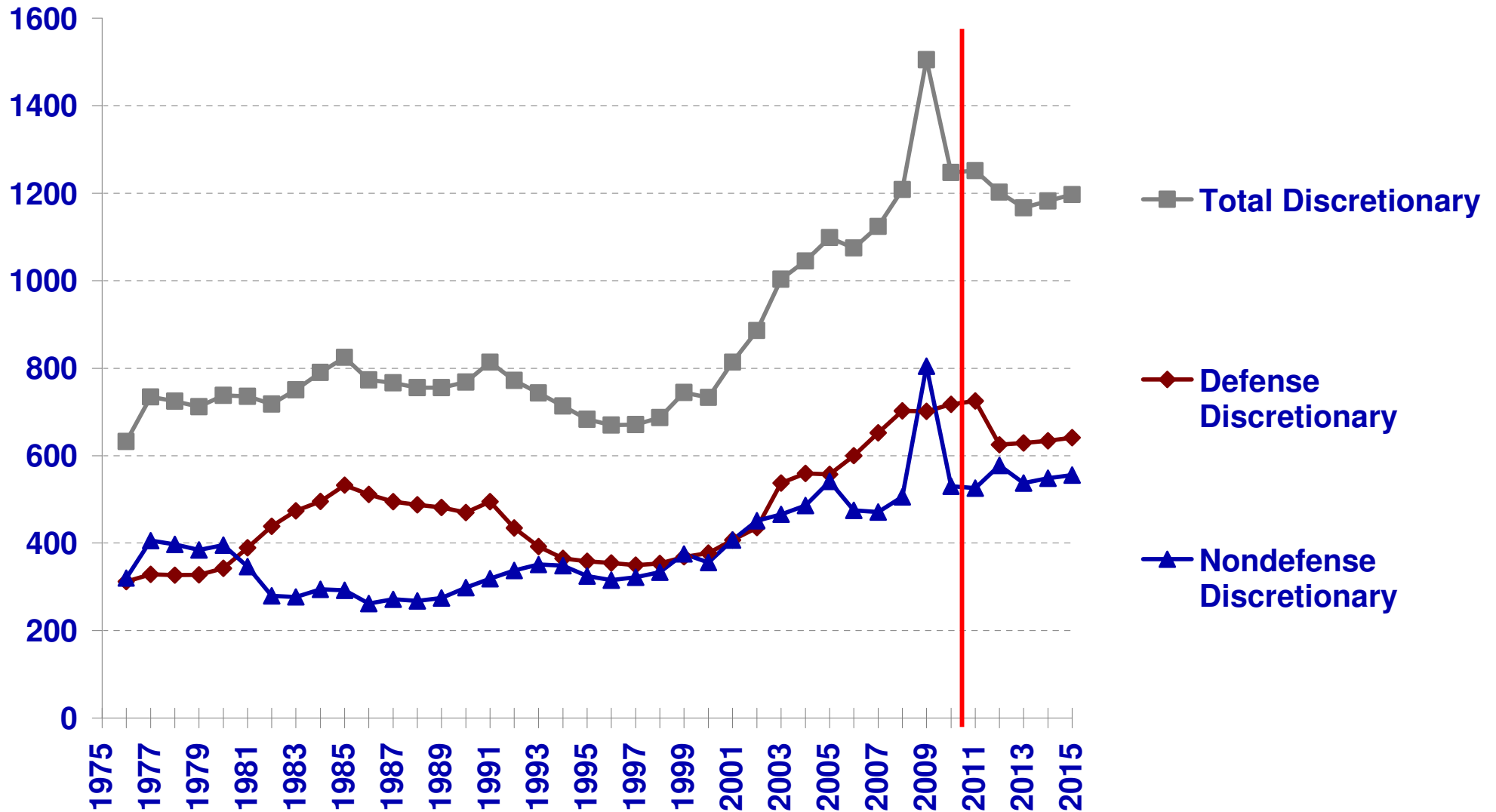
See the “Seminars and Presentations” section for
copies of this presentation.

The FY 2011 Budget

- \$3.8 trillion total budget, \$1.3 trillion unified deficit
- \$1.4 trillion discretionary spending (0.5% increase)
 - \$671 billion nondefense spending (3.4% decrease)
- Rescuing the Economy
- Reviving Job Creation a Foundation for Economic Growth
 - Small business initiatives
 - Investing in science and basic research
- Restoring Responsibility
 - Three year non-security discretionary funding freeze

Trends in Discretionary Spending

outlays in billions of constant FY 2010 dollars



Source: *Budget of the United States Government, FY 2011.*

FY 2010-2015 data are budget projections.

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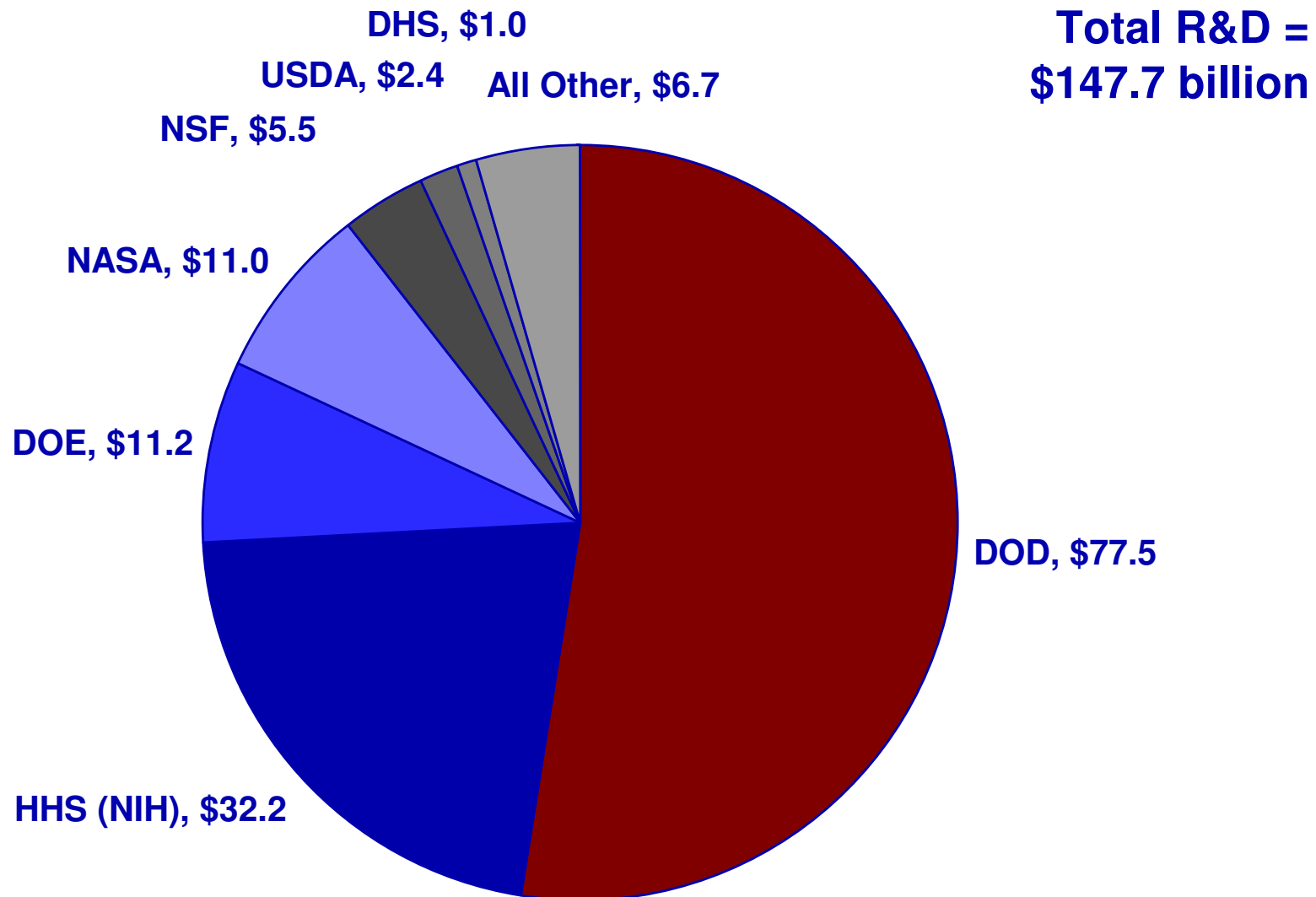


The FY 2011 Federal R&D Investment

- \$147.7 billion, 0.2% increase from FY 2010
 - Basic Research – \$31.3 billion, 4.3% increase
 - Applied Research – \$30.3 billion, 6.9% increase
 - Development – \$81.5 billion, 3.5% decrease
 - Equipment and Facilities – \$4.6 billion, 0.6% decrease
- \$81.7 billion for defense R&D, 3.9% decrease
- \$66.0 billion for non-defense R&D, 5.8% increase
- 0.8% decrease in constant dollars from FY 2010
- 0.4% increase in constant dollars since FY 2004

Total R&D by Agency, FY 2011

budget authority in billions of dollars



Source: OMB R&D budget data, agency budget justifications, and other agency documents.

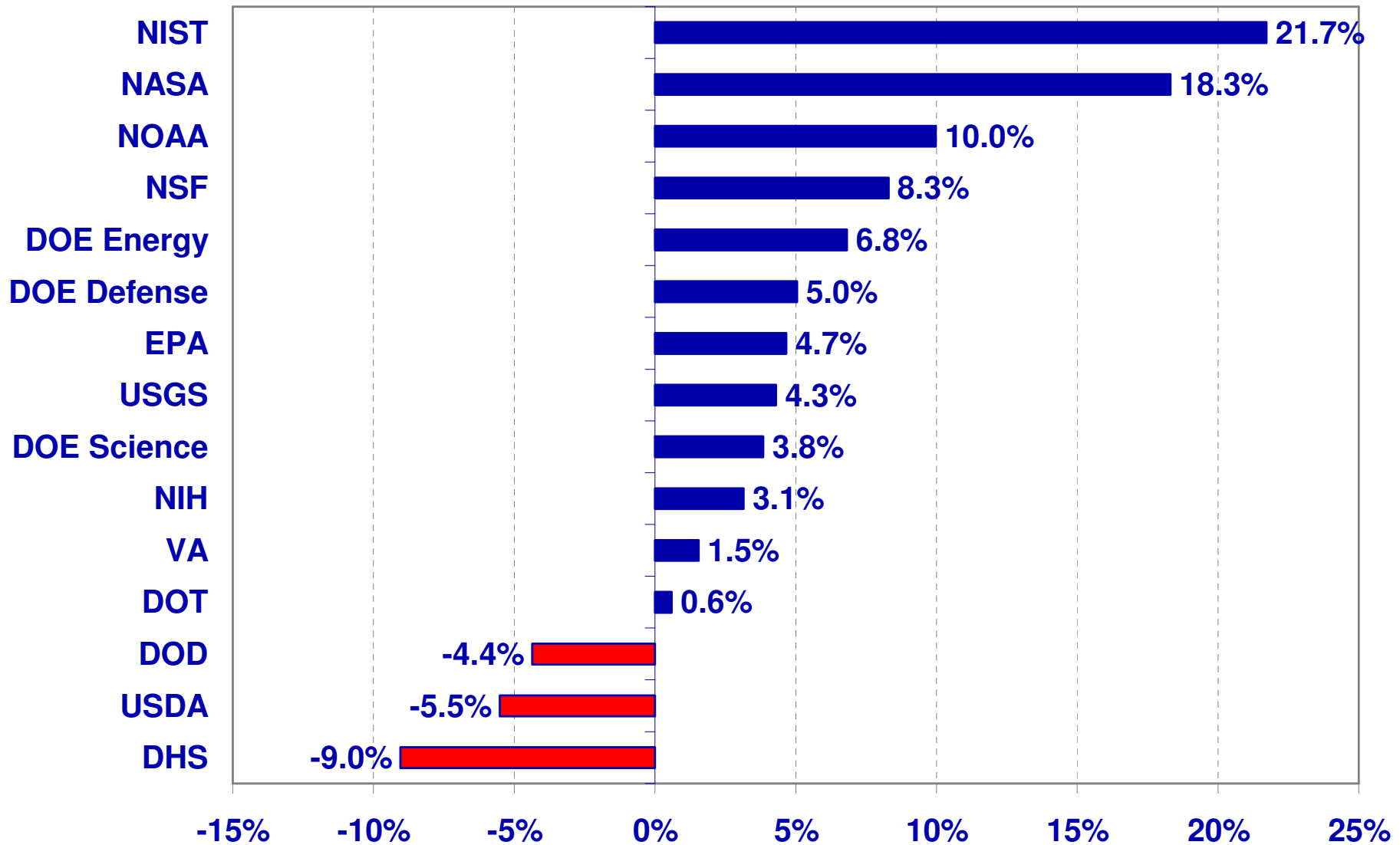
R&D includes conduct of R&D and R&D facilities.

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FY 2011 R&D Budget Request

Percent Change from FY 2010



Source: OMB R&D budget data, agency budget justifications, and other agency documents.

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Funding Doubling for Basic Research

- National Science Foundation
 - 8.0% increase to \$7.4 billion
 - R&D – 8.3% increase to \$5.5 billion
- DOE Office of Science
 - 4.6% increase to \$5.1 billion
 - R&D – 3.8% increase to \$4.6 billion
- National Institute of Standards and Technology
 - 7.3% increase to \$919 million
 - R&D – 21.7% increase to \$706 million

NASA Reorganization

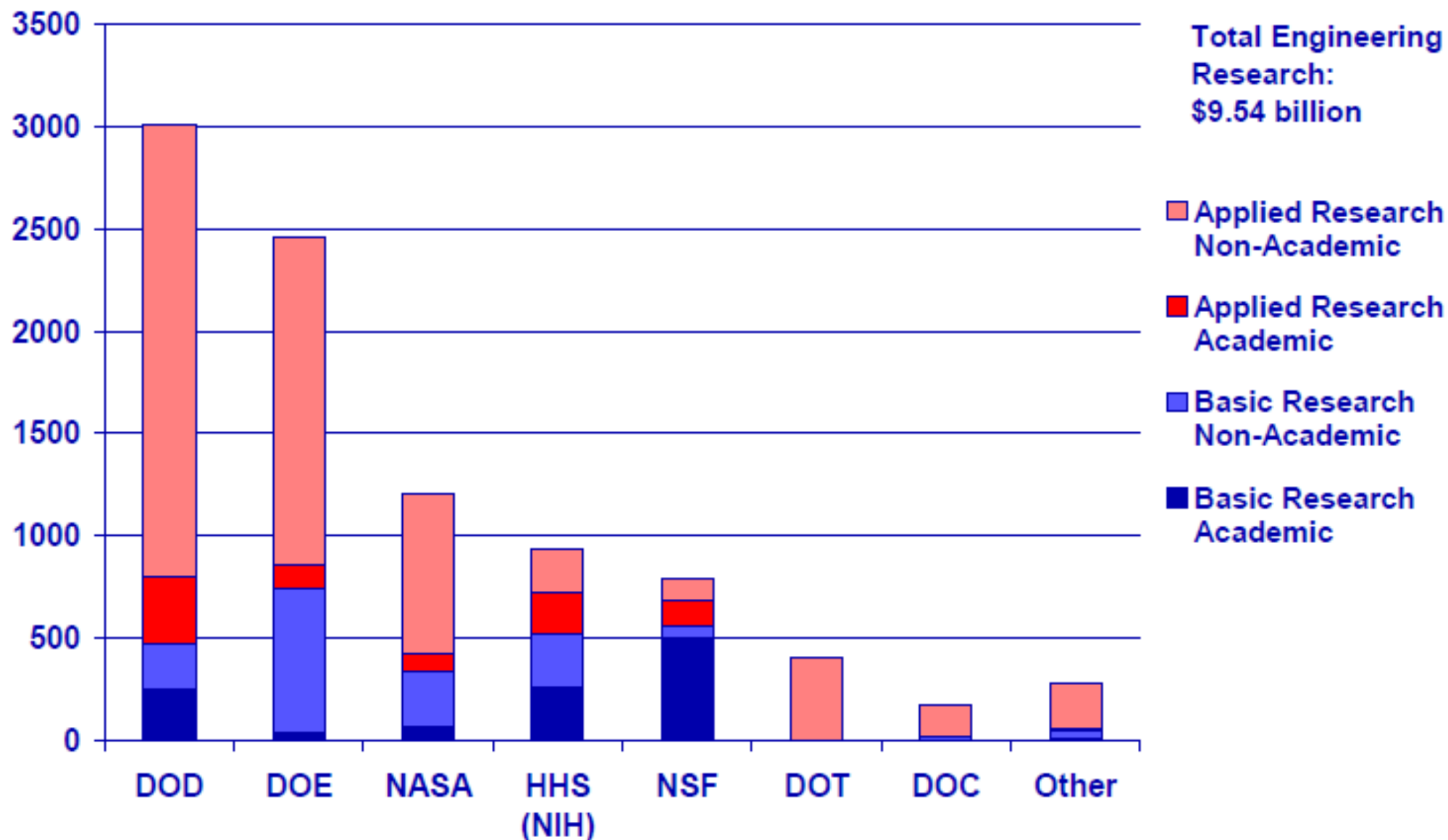
- Constellation program cancelled
 - Near earth orbit to transition to private industry
 - \$6.1 billion over 5 years
- Technology Demonstration – \$652 million
- Heavy Lift and Propulsion – \$559 million
- Robotic Precursor Missions – \$125 million
- International Space Station – 20.0% increase to \$2.8 billion

R&D Investment Priorities

- New Industries and Jobs
 - Advanced materials and manufacturing methods
 - \$6.1 billion over 5 years for commercial earth orbit
- Cleaner Energy
 - \$155 million (6.8%) increase for DOE Energy R&D
- Healthier America
 - \$956 million (3.1%) increase for National Institutes of Health
- Enhanced Security

Federally Funded Engineering Research: FY 2008

(obligations in millions of dollars)



Source: National Science Foundation, *Federal Funds for Research and Development*.

FY 2008 figures are preliminary.

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NSF Engineering Directorate

- 11.0% increase to \$826 million
 - Chem, Bioeng, Env & Trans (CBET) – \$169 million (+7.8%)
 - Civil, Mech & Manuf Innov (CMMI) – \$207 million (+9.8%)
 - Elect, Comm & Cyber Sys (ECCS) – \$103 million (+9.6%)
 - Eng Education and Centers (EEC) – \$138 million (+11.5%)
 - Ind Innov Partnerships (IIP) – \$178 million (+16.9%)
 - SBIR/STTR – \$143 million (+13.6%)
 - Emerging Frontiers in Res Innov (EFRI) – \$31 million (+6.9%)

Next Steps

- Congress currently holding budget briefings for agencies
- Congress will pass a budget resolution and determine 302(a) and (b)s
- Congress needs to pass 12 appropriation bills, ideally by Sept. 30, the end of FY 2010.

For More Information...

The AAAS R&D web site is
<http://www.aaas.org/spp/rd>

The AAAS Forum on Science
and Technology Policy is
May 13–14, 2010 in
Washington, DC

