

# The FY 2011 Federal R&D Investment

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for the APLU Council on Governmental Affairs

AAAS R&D Budget and Policy Program

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

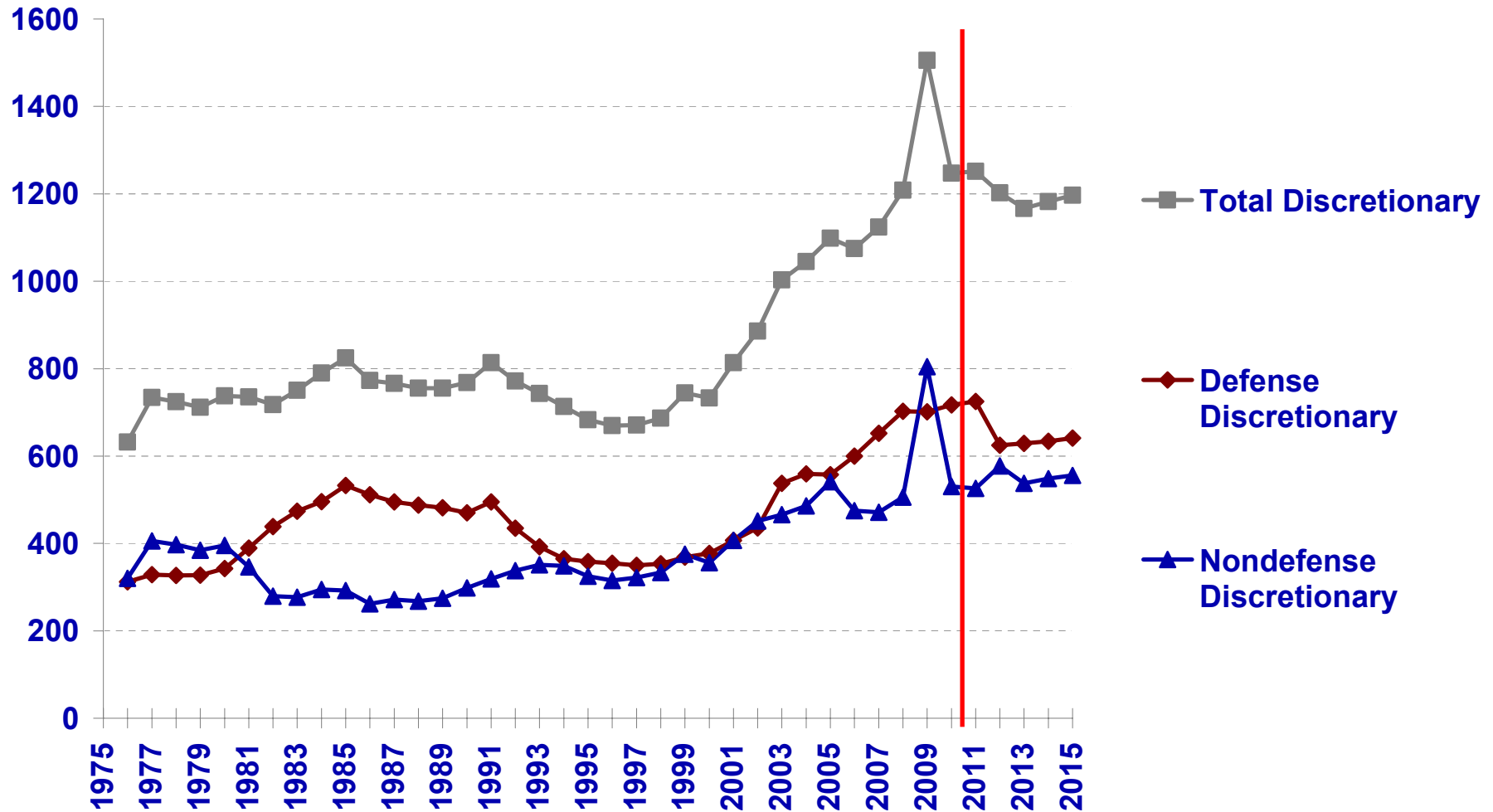
See the “Seminars and Presentations” section for  
copies of this presentation.

## 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
- A Foundation for Economic Growth and Job Creation
  - 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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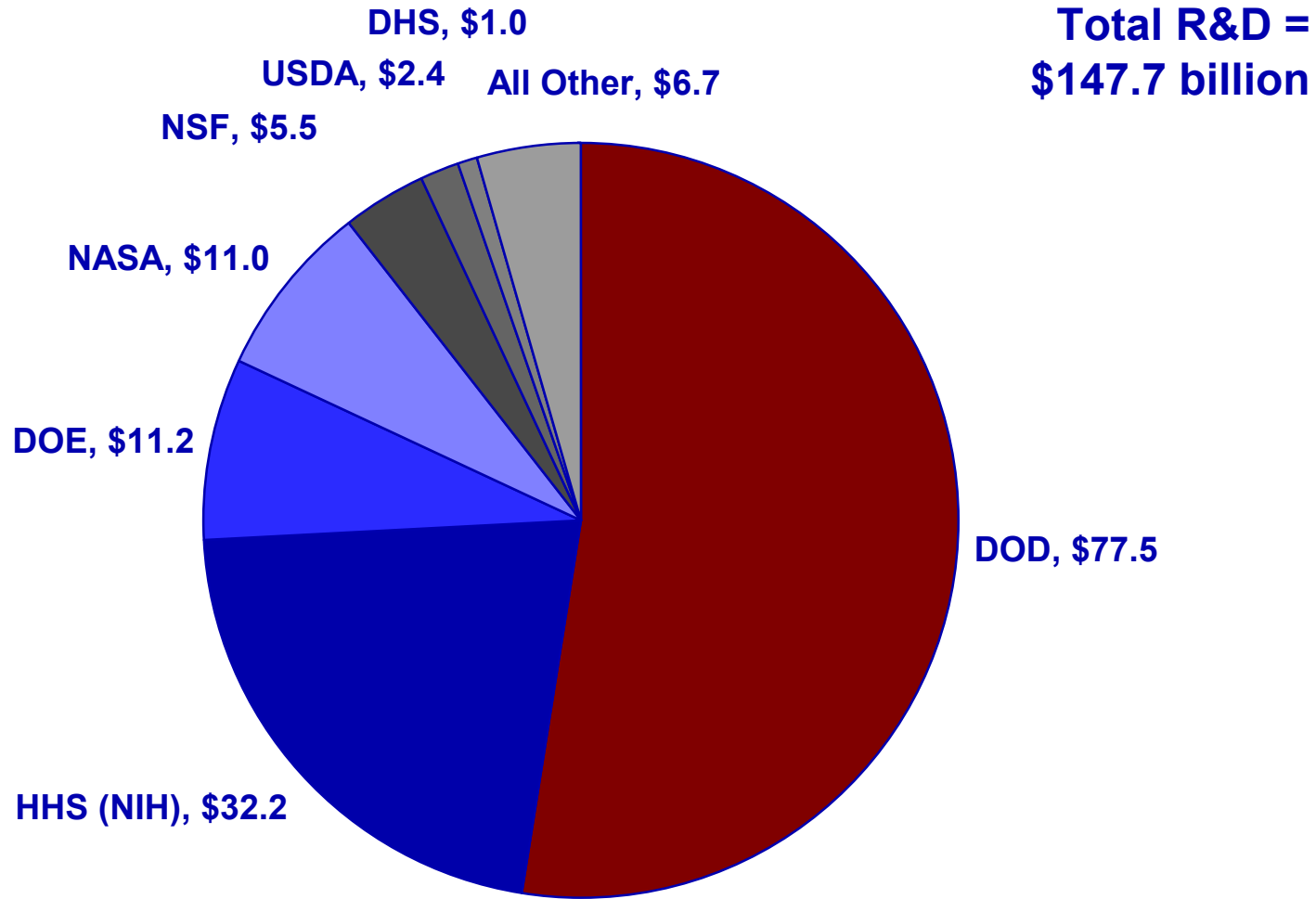


## The FY 2011 Federal R&D Investment

- \$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.

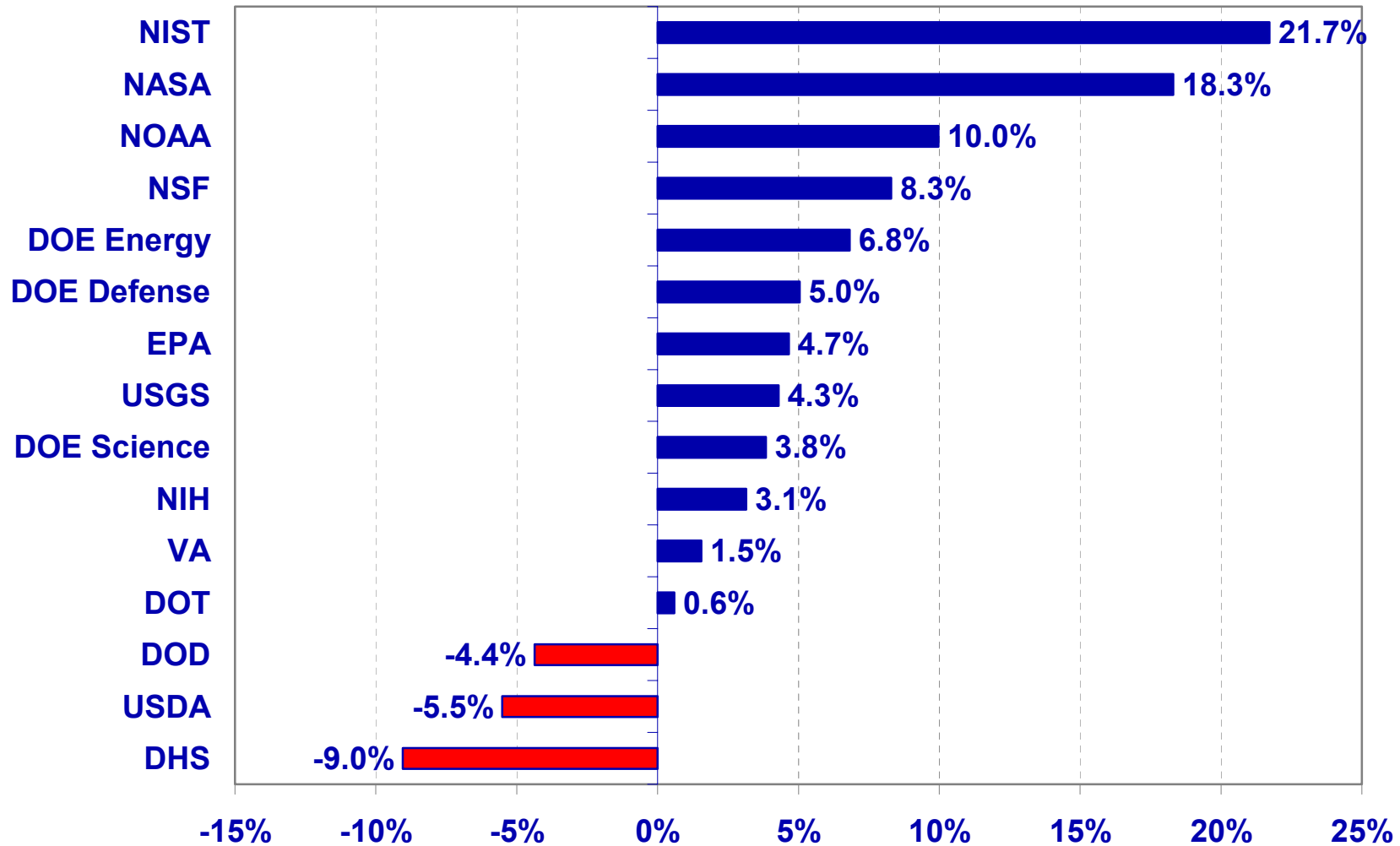
R&D includes conduct of R&D and R&D facilities.

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# FY 2011 R&D Budget Request

Percent Change from FY 2010



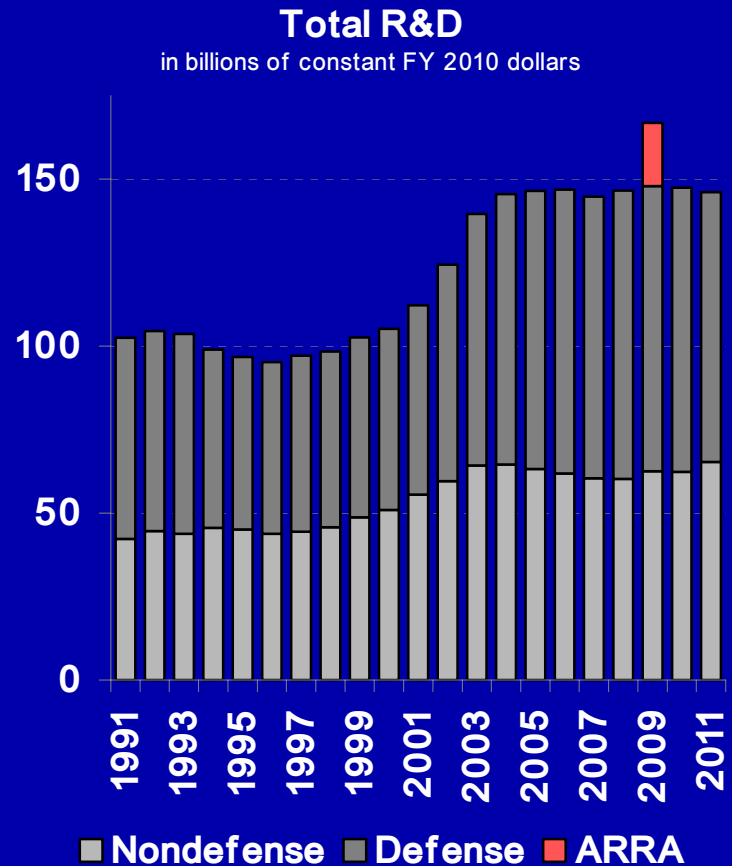
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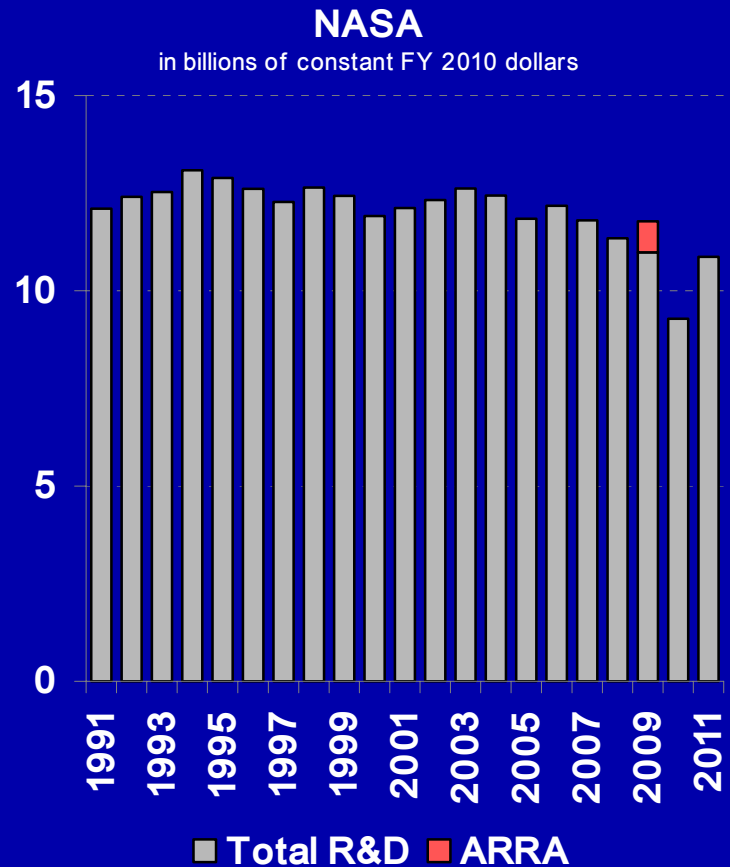
# Funding Shifts

- Defense, −\$3.3b
- Nondefense, +3.6b
- Development, −\$2.9b
- Research, +\$3.2b



# Funding Shifts

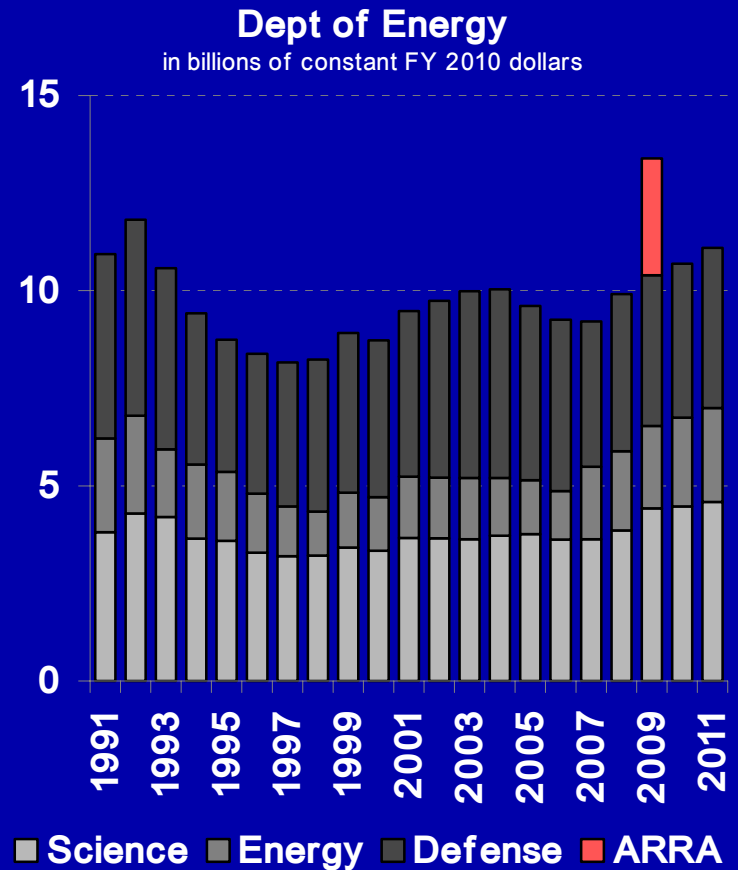
- NASA Constellation
  - \$3.1b over 3 yrs to...
    - Near earth orbit through private industry
      - +\$6.1b over 5 yrs
    - Heavy Lift and Propulsion
      - +\$559m
    - International Space Station
      - +\$812m, 35.1% over 3 yrs





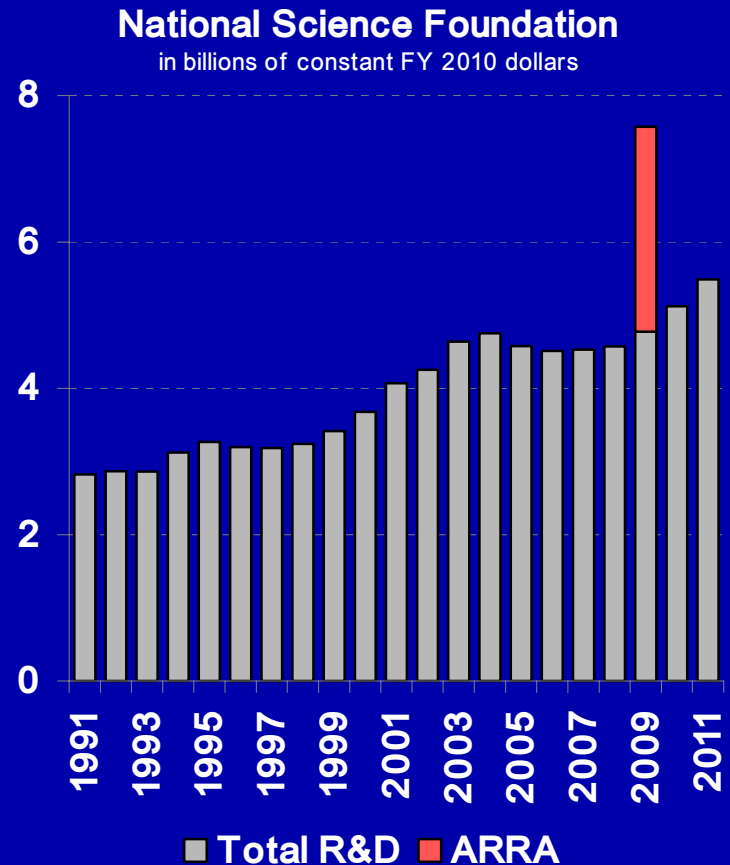
# Funding Shifts

- Dept of Energy
  - Fossil, -\$53m
  - Nuclear, -\$122m
  - EERE, +\$35m
  - Electric Grid, +\$22m
  - Office of Science, +\$172m
  
- ARPA-E, +\$273m



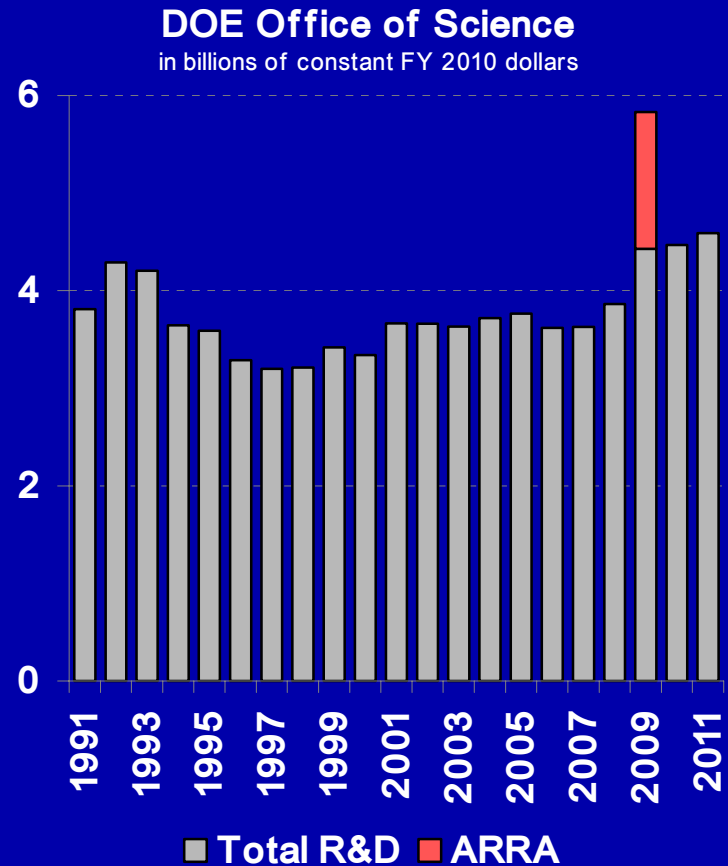
# Funding Doubling for Basic Research

- National Science Foundation
  - 8.0% increase to \$7.4 billion
  - R&D – 8.3% increase to \$5.5 billion



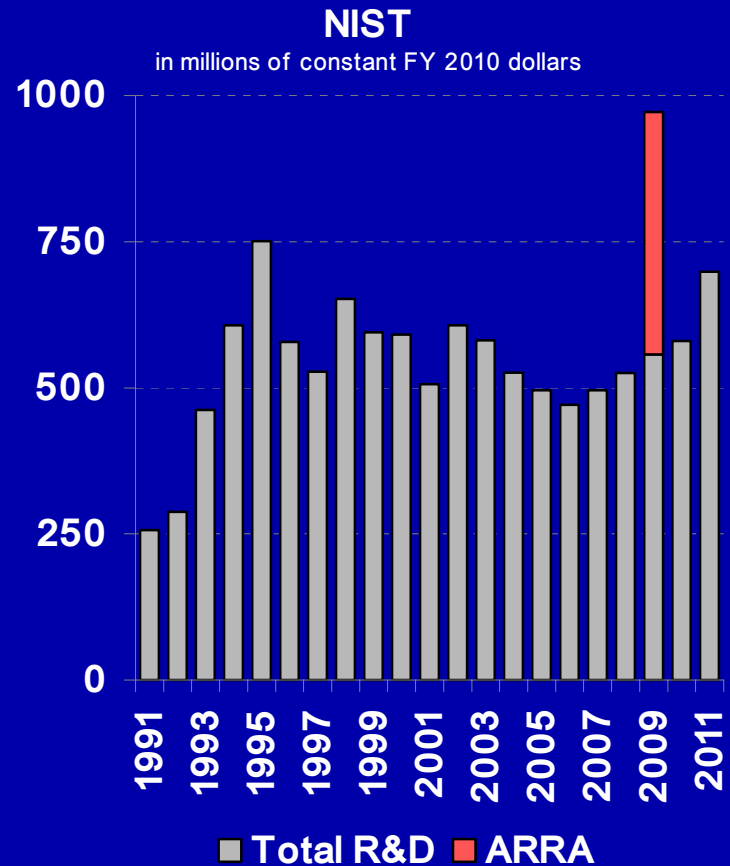
# Funding Doubling for Basic Research

- DOE Office of Science
  - 4.6% increase to \$5.1 billion
  - R&D – 3.8% increase to \$4.6 billion



# Funding Doubling for Basic Research

- National Institute of Standards and Technology
  - 7.3% increase to \$919 million
  - R&D – 21.7% increase to \$706 million



## R&D Investment Priorities

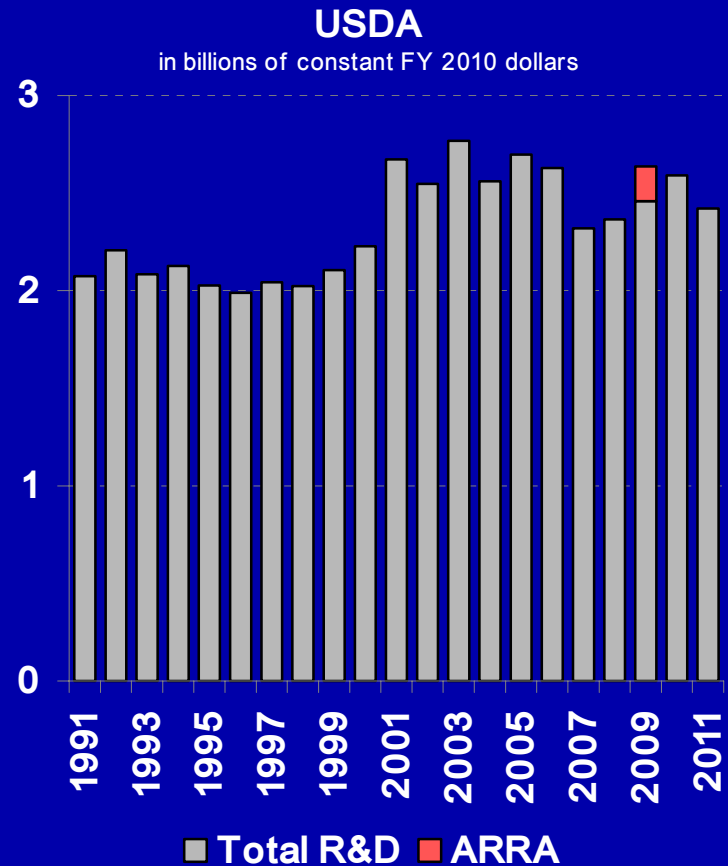
- New Industries and Jobs
  - Advanced materials and manufacturing methods
  - \$6.1 billion over 5 years for commercial earth orbit
- Cleaner Energy
  - \$155 million (6.8%) increase for DOE Energy R&D
- Healthier America
  - \$956 million (3.1%) increase for National Institutes of Health
- Enhanced Security
  - DOD Basic Research – 6.7% increase to \$2.0 billion

# US Dept of Agriculture

- Total R&D
  - -\$143 million, -5.5%

## BUT...

- Earmarks
  - \$230 million in R&D
- AFRI (Total Budget)
  - +\$166m to \$429m, +63.4%



## STEM Education

- \$3.7 billion, +\$32 million from FY 2010
- K-12 Education
  - \$450m at Dept of Ed, \$63m at NASA, \$41m at NSF
- RE-ENERGYSE (Undergraduate)
  - \$19 million for NSF, \$55 million for DOE
- Undergraduate Diversity
  - \$103m for NSF (+14%)
- Graduate Fellowships
  - +16% NSF, +5% NIH, +4% DOD, \$15m at DOE

## 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

