Update on R&D Funding

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for the AAAS Board of Directors

AAAS R&D Budget and Policy Program
http://www.aaas.org/spp/rd
Composition of the Proposed FY 2011 Budget
Total Outlays = $3.8 trillion

outlays in billions of dollars

Net Interest $251
Defense Discretionary $661
[Defense R&D] $83
Nondefense Discretionary $599
[Nondefense R&D] $71
Social Security $730
Medicare $491
Medicaid $297
Other Mandatory $647

Source: Budget of the United States Government FY 2011.
Projected unified deficit is $1.3 trillion.
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The FY 2011 Federal R&D Investment

- Total R&D: $148.1b, -0.3% from FY 2010
  - Basic Research: $30.4b, +4.3%
  - Applied Research: $31.6b, +2.1%
  - Development: $81.5b, -2.9%
  - Equipment and Facilities: $4.6b, +1.3%
- $82.2b for defense R&D, -4.8%
- $65.9b for non-defense R&D, +5.9%
- -1.4% in constant dollars from FY 2010
- +0.7% in constant dollars since FY 2004
  - Peak in FY 2009
R&D in the FY 2011 Budget Request
percent change from FY 2010

- NOAA: 22.0%
- NIST: 21.6%
- NASA: 17.8%
- NSF: 9.4%
- DOE Energy: 6.8%
- DOE Defense: 5.0%
- DOE Science: 3.8%
- NIH: 3.1%
- USGS: 2.8%
- EPA: 1.8%
- VA: 1.5%
- DOT: -1.3%
- DOD: -5.2%
- USDA: -5.5%
- DHS: -9.0%

Source: OMB R&D budget data, agency budget justifications, and other agency documents.
* - Lighter colored bars indicate percent change with projected FY 2011 earmarks.
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Pre-Election Outlook

- **Democrats**
  - Budget cuts in FY 2012
    - 5% total discretionary budget
    - Low-Impact programs totaling 5%
  - Summary: 5-10% decrease in FY 2012

- **Republicans**
  - Immediate budget cuts
    - Pre-stimulus, pre-bailout levels
    - Sparse guidance in *A Pledge to America*
  - Summary: $100b decrease in FY 2011
Post-Election Reality

- **Democrats**
  - Obama: “I don't think we should be cutting back on research and development.”
  - Total Budget: 5-10% decrease in FY 2012
  - R&D: Smaller decreases or priority funding for R&D

- **Republicans**
  - Senate: $1.108 trillion (-$28b request) omnibus spending bill
  - Total Budget: Inflation adjusted FY 2008 levels in FY 2012 (-$100b)
  - R&D: “Strong oversight... of multiple new and duplicative programs” - Rep. Ralph Hall (R-TX)

- Earmarks
Post-Election Reality

Fiscal Commission

- “… we must invest in education, infrastructure, and high-value research and development…”
- Long-term: Revenue and spending balance at 21% GDP
- Inflation-adjusted FY 2008 levels in 2013, limit annual increase to half of the inflation rate through 2020.
- No biennial budget recommendation
- Notable R&D in $200 billion illustrative savings options
  - 10% decrease in DOD RDT&E, eliminate new funding for DOE Fossil R&D, eliminate private sector funding for spaceflight developments
R&D Priorities

- National Security
- Health
- Jobs / Innovation / Economy
- Energy

- Democrats
  - Clean Energy
  - Action on Global Climate Change

- Republicans
  - Energy Security
  - Resource Management
Trends in Federal R&D
in billions of constant FY 2010 dollars

Source: AAAS analyses of R&D in annual AAAS R&D reports.
FY 2011 figures are latest AAAS estimates of FY 2011 request. 
R&D includes conduct of R&D and R&D facilities.  
1976-1994 figures are NSF data on obligations in the Federal Funds survey. 
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Next Steps

- Congress passed a second CR which extends funding until December 18.
- FY 2011 Appropriations Possibilities
  - 12-bill omnibus
    - $1.108 trillion, some earmarks ($9b), priorities funded
  - Year-long CR
    - $1.091-$1.098 trillion, very few earmarks, status quo
- FY 2012: OMB Memos: 5% reduction; list of low-impact programs totaling 5% of discretionary budget. Initial budget submissions were due to OMB by September 13.
For More Information...

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

Twitter: @AAAS_RDBudget

The FY 2012 AAAS Forum on  
Science and Technology Policy  
is May 5-6, 2011  
in Washington, DC