

Science Policy Issues and Legislation in the 110th Congress

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

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THE 110TH CONGRESS: GONE FOR GOOD?

- Congress MAY be done for the year, with no extended post-election session, so most issues will have to wait for the 111th Congress in January.
- FY 2009 started October 1, but the budget is still unfinished.
- Major legislation is stalled, so bills will have to be reintroduced in 2009.
- There is a lot of unfinished business.

THE 110TH CONGRESS: SOME ACCOMPLISHMENTS

- Higher Education reauthorization completed in July.
 - Reauthorizes most higher-education programs, raises Pell Grant maximum, introduces new reporting requirements (file sharing, graduation rates), and expands student loan forgiveness for high-need areas (including science, engineering, technology, and mathematics).
- Farm bill completed in June.
 - Reorganizes extramural agricultural research system under a National Institute for Food and Agriculture (NIFA), creates new research programs in organics, biomass, and specialty crops.
- Genetic Information Non-Discrimination Act completed in May.
 - Employers and insurers are prohibited from using genetic information in employment and insurance decisions

THE BUDGET: INNOVATION AND COMPETITIVENESS

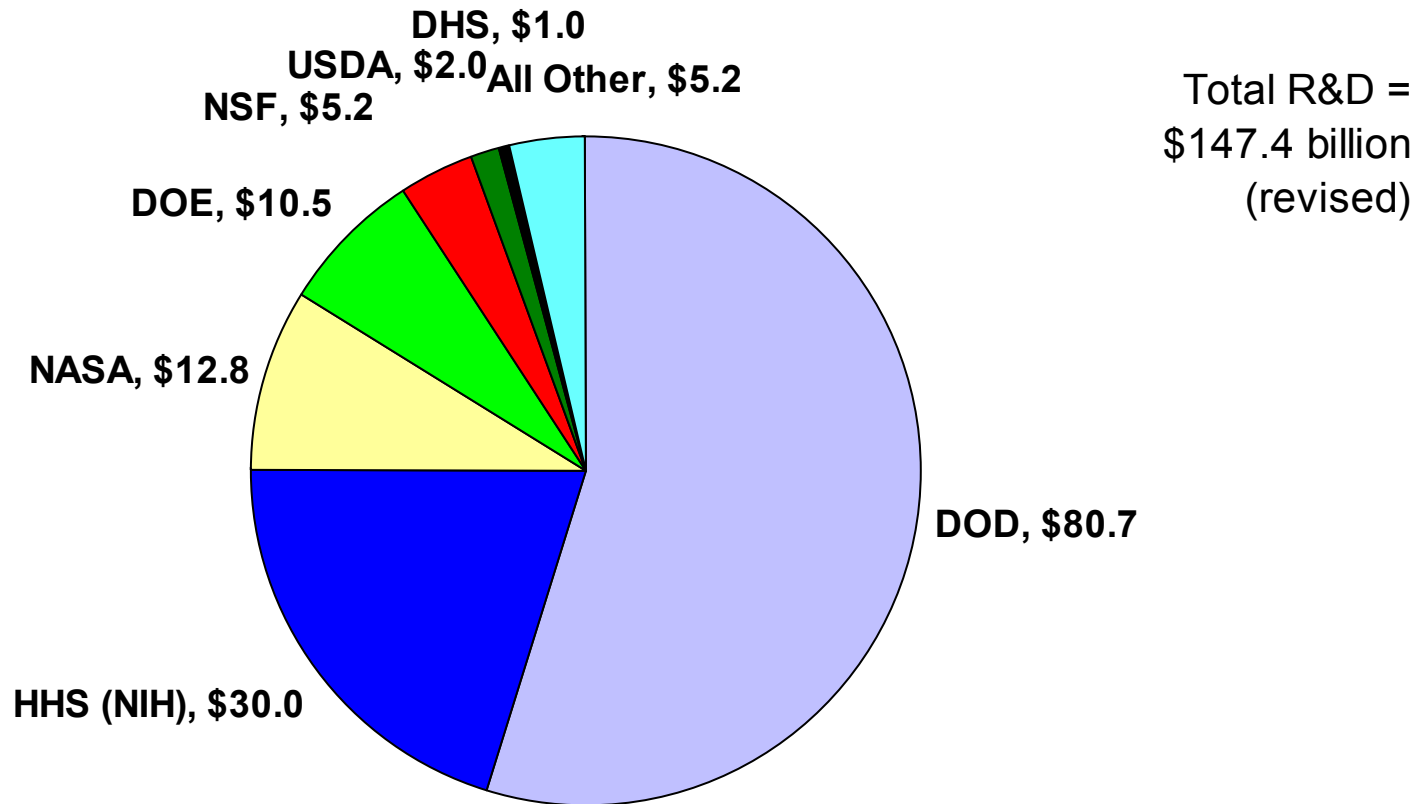
- In response to the “Gathering Storm” report and others, President Bush announced the American Competitiveness Initiative (ACI) in his 2006 State of the Union address.
- There are also several congressional responses, culminating in the America COMPETES Act of August 2007, an authorization bill.
- Now the task is implementing the legislation through funding annual increases in appropriations for COMPETES Act programs.
- The plan: Doubling the budgets of NSF, DOE Office of Science, and the NIST laboratories over 7 to 10 years. But 2007 and 2008 appropriations leave the plan off track despite COMPETES, and as of now 2009 appropriations are unfinished and flat-funded under a continuing resolution.

THE 2009 BUDGET FOR R&D

- The ACI continues for a third year, with large increases for NSF, DOE Science, and the NIST labs to catch up to a 10-year doubling track.
- Again, there would be large increases for DOD weapons and NASA spacecraft development, but also increases for most R&D programs.
- The NIH budget would be flat, agricultural and environmental R&D agencies would decline.
- Congress has a long way to go in finalizing 2009 appropriations, but is hoping to add money to the request.

Total R&D by Agency: FY 2009 Proposed

Budget Authority in billions of dollars



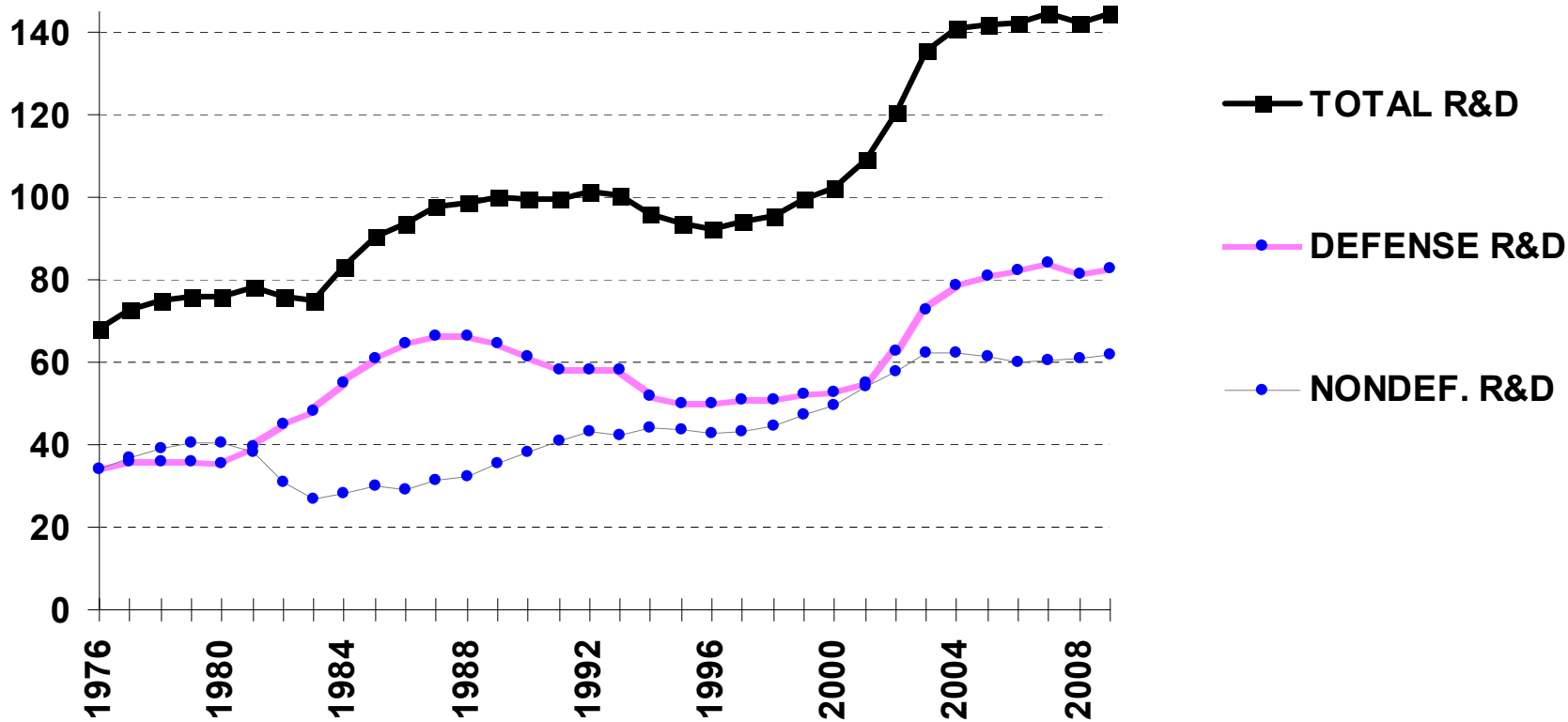
Source: AAAS, based on OMB R&D Budget Data and agency estimates for FY 2009.

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Trends in Federal R&D, FY 1976-2009 *

in billions of constant FY 2008 dollars



Source: AAAS analyses of R&D in AAAS Reports VIII-XXXIII. * FY 2009 figures are latest AAAS estimates of FY 2009 request.

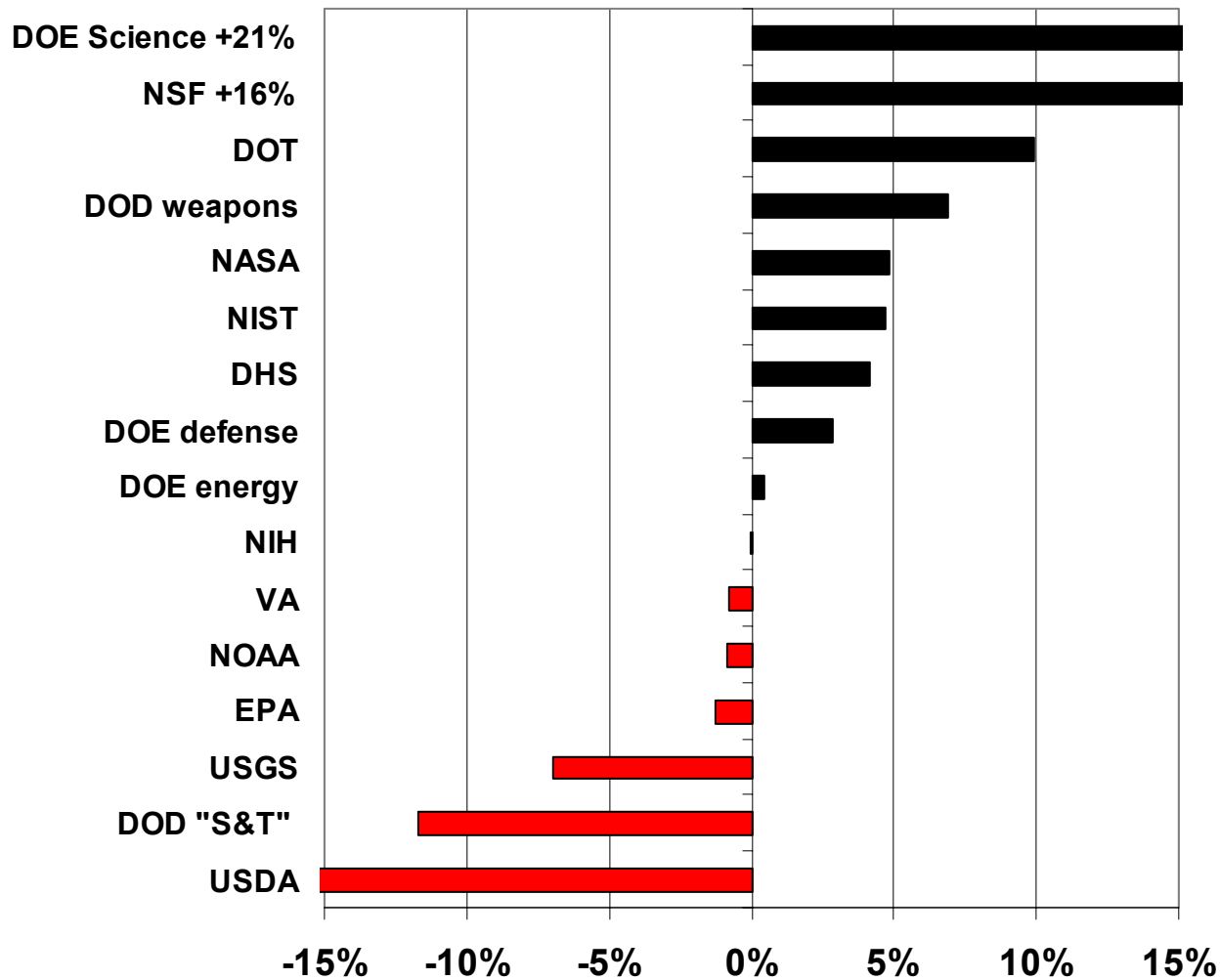
R&D includes conduct of R&D and R&D facilities.

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FY 2009 R&D Request

Percent Change from FY 2008

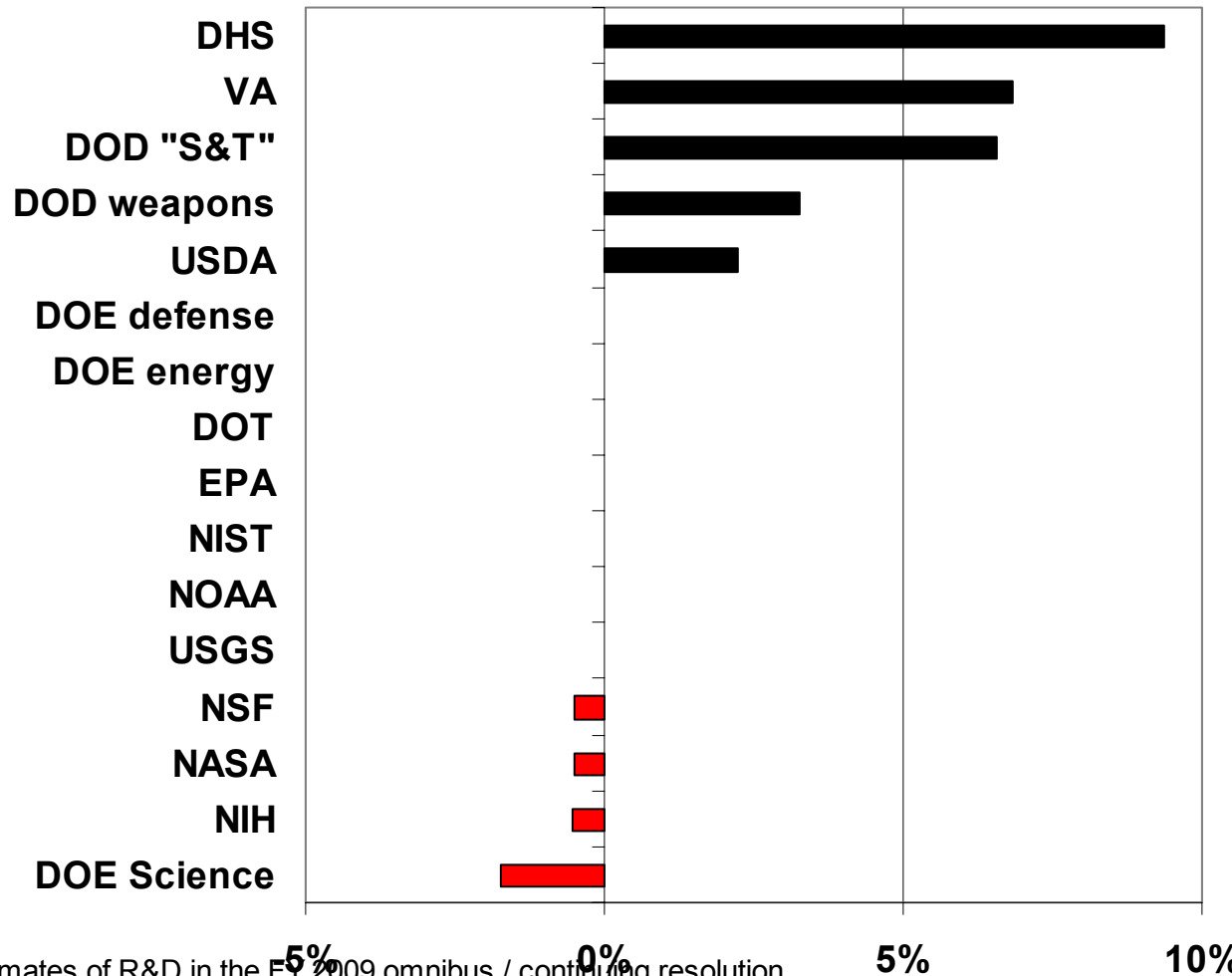


Source: AAAS, based on OMB R&D data and agency estimates for FY 2009.
 DOD "S&T" = DOD R&D in "6.1" through "6.3" categories plus medical research.
 DOD weapons = DOD R&D in "6.4" and higher categories.
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FY 2009 R&D Appropriations in the 2009 CR

Percent Change from FY 2008 (as of SEPT. '08)

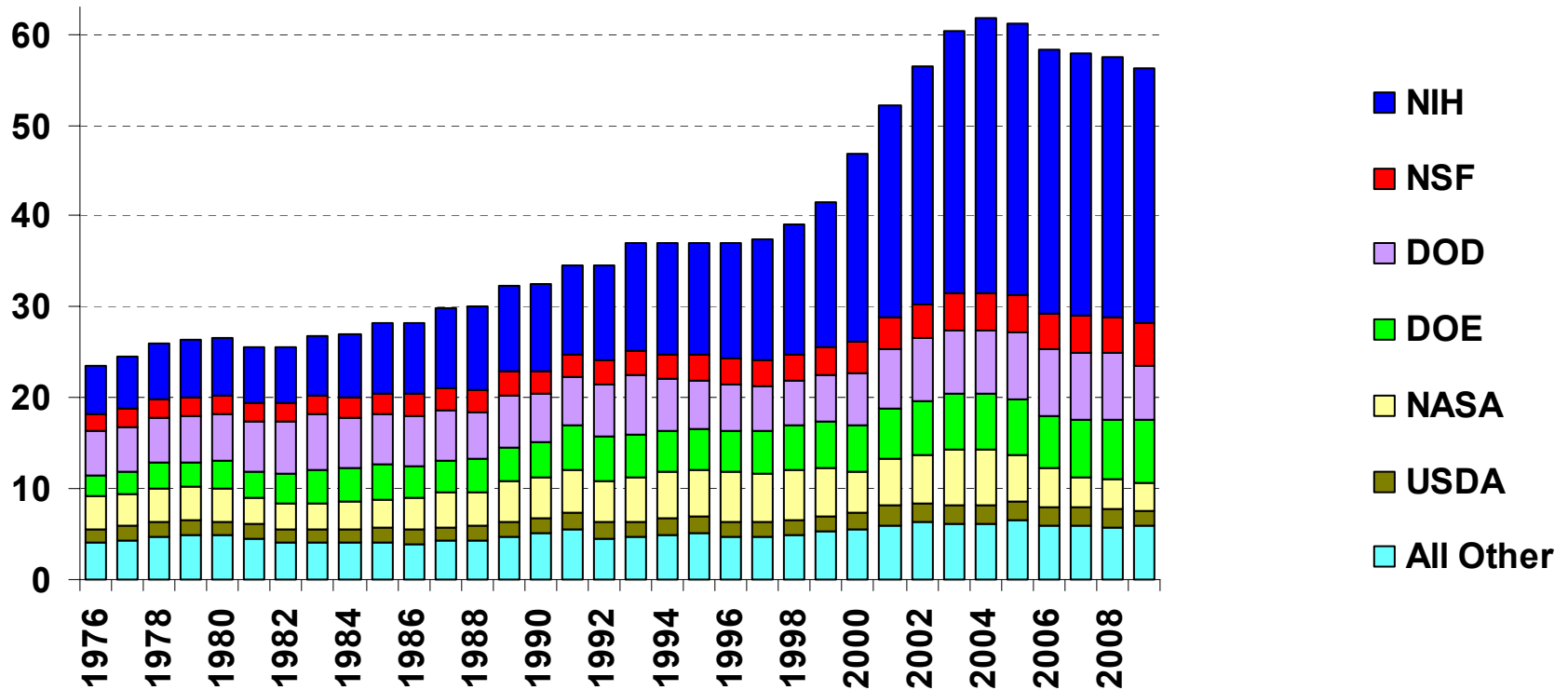


Source: AAAS estimates of R&D in the FY 2009 omnibus / continuing resolution.
Only DOD, VA, and DHS have final FY 2009 appropriations. The remaining agencies are funded temporarily through March 6 under the continuing resolution.
DOD "S&T" = DOD R&D in "6.1" through "6.3" categories plus medical research.
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Trends in Research by Agency, FY 1976-2009 *

in billions of constant FY 2008 dollars



Source: AAAS analyses of R&D in annual AAAS R&D reports.

* FY 2009 figures are latest AAAS estimates of FY 2009 request. Research includes basic research and applied research. 1976-1994 figures are NSF data on obligations in the Federal Funds survey.

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R&D FUNDING POLICY DECISIONS

- As part of the financial sector rescue bill, Congress and the President agreed to retroactively extend the Research & Experimentation Tax Credit (expired Dec. 2007) through Dec. 2009.
- The SBIR / STTR programs need to be reauthorized. The House and a Senate committee have passed bills to extend the programs 14 years, and to raise the set-aside percentage (from 2.5% to 3.5% for SBIR, 0.3% to 0.6% for STTR), but Congress has not finalized the bill.
- Only 3 of the 12 2009 appropriations bills are finished (for DOD, VA, and DHS). All other federal agencies are temporarily at or below 2008 funding levels through March 6.

WHERE IS FEDERAL R&D FUNDING HEADED?

- Congress is way behind schedule in finishing FY 2009 appropriations. After the inauguration?
- The big budget battle between the President and Congress is over how much to spend on domestic discretionary programs, but the difference of \$21 billion is between a slight cut and an inflationary increase.
- Even at a time when policymakers are concerned about U.S. leadership in science and technology eroding, and when proposed R&D increases are authorized in the America COMPETES Act and other legislation, the problem remains how to find the resources.
- Don't expect increased funding for research: the broader budget choices policymakers make will constrain future investments in R&D.

CLIMATE CHANGE POLICY

- There are more than a dozen climate change bills, which will have to be reintroduced in the 111th Congress.
- The specifics are unclear, but all the bills have some combination of binding emissions targets and cap-and-trade/carbon tax.
- Most of the bills have renewable energy and energy efficiency standards, R&D authorizations, and international negotiations provisions.
- Both presidential candidates support the above policies.
- A comprehensive climate change bill will be enormously complex and could get derailed, and it's impossible to predict what will be in it.
- In Washington, many groups are gearing up to claim auctions/tax/permits revenues for programs such as energy or climate research.

Bill	Cap-&Trade / Carbon Tax	International Provisions	Energy Efficiency	Nuclear Energy	Clean Coal Technologies	CAFE Standards	Renewable Energy	R&D	Carbon Sequestration
S.2191 <i>America's Climate Security Act</i>	X	X	X	-	-	-	X	X	X
HR 3416 <i>America's Energy Security Trust Fund Act of 2007</i>	X	-	-	-	-	-	X	X	X
S. 1168 <i>Clean Air/Climate Change Act of 2007</i>	X	-	X	-	-	-	X	-	X
S. 1177 <i>Clean Air Planning Act of 2007</i>	X	-	X	-	X	-	X	X	X
H.R. 6318 <i>Climate MATTERS Act of 2008</i>	X	X	X	-	-	-	-	X	X
S. 280 / H.R.620 <i>Climate Stewardship and Innovation Act of 2007</i>	X	X	X	X	X	-	X	X	X
S.317 <i>Electric Utility Cap and Trade Act of 2007</i>	X	X	X	X	X	-	X	X	X
S.309 <i>Global Warming Pollution Reduction Act</i>	X	X	X	-	-	X	X	X	X
S. 485 <i>Global Warming Reduction Act</i>	X	X	X	-	-	X	X	X	X
H.R. 6188 <i>Investing in Climate Action and Protection Act</i>	X	X	X	-	X	-	X	X	X
S. 3036 <i>Lieberman-Warner Climate Security Act of 2008</i>	X	X	X	-	X	-	X	X	X
S. 1766 <i>Low Carbon Economy Act</i>	X	X	X	-	-	-	X	X	X
H.R.1590 <i>Safe Climate Act of 2007</i>	X	X	X	-	-	X	X	-	-
H.R. 2069 <i>Save Our Climate Act of 2007</i>	X	-	-	-	-	-	-	-	-

Legislation in Depth

America's Climate Security Act of 2007 (S.2191)

- Caps emissions to 10 percent below 2005 levels by 2020, 30 percent by 2030, 50 percent by 2030, and 70 percent below 2005 levels by 2050.
- 24 percent of the allowances are auctioned off to producers by a newly-created Climate Change Credit Corporation.

ENERGY POLICY

- Again, there are many proposals, but Congress will have to start over in 2009.
- Congress has dramatically increased energy R&D spending since 2006, and hopes to continue the trend.
- Proposed climate change bills contain authorizations for new or expanded programs in energy R&D in areas such as clean coal, carbon sequestration, alternative energy, nuclear energy, etc.
- Congress is deadlocked over offshore drilling and other expanded domestic oil production, but agreed to let the federal ban on offshore drilling expire on Sept. 30.
- Comprehensive energy legislation could contain expanded mandates for renewable energy sources, as well as tax incentives or subsidies for renewable energy.

EMBRYONIC STEM CELL RESEARCH AND NIH

The current U.S. policy is an executive order, so it can be repealed or modified by the next President.

Congress may try again to expand federal funding of embryonic stem cell research in law; both candidates support it.

This issue could be one of the 'easy' policy questions and changes could be implemented in early 2009.

- NIH Public Access Policy is in place and is now mandatory – requires authors to allow free access to NIH-funded research manuscripts through PubMed Central within 12 months of publication. There is draft legislation to repeal the policy.
- As a result of the NIH Reform Act (2006), NIH has expanded new programs: the Common Fund, high-risk research grants, Transformative Research grants.

OTHER ISSUES

- Immigration reform will be an important issue next year. H-1B visas, foreign-born S&E talent, and student visas will be side issues to the broader issues of border control and unskilled labor immigration.
- There is congressional interest in a comprehensive oceans bill, which could establish an expanded oceans research agenda.
- Space policy appears settled for now, but there could be changes in 2009 to the current Vision for Space Exploration of retiring the Space Shuttle in 2010, and launching a replacement by 2014 to carry humans to the moon by 2020. Currently, NASA plans to rely on Russian spacecraft between 2010 and 2015 to transport U.S. astronauts.
- Patent reform is a perennial issue. A Senate bill to revamp the U.S. patent system from first-to-invent to first-to-file is stalled.

FOR MORE INFORMATION...

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

