

Congress Boosts Commerce R&D, Saves ATP

(This analysis is part of a series of AAAS R&D Funding Updates on the FY 2002 congressional appropriations process. This analysis includes information on R&D in final FY 2002 appropriations for the Department of Commerce. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2002 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/R&D>) in the "FY 2002 R&D" or the "What's New" sections.)

(This update is substantially similar to the November 20 update on Commerce appropriations, but the figures and text have been updated to include emergency appropriations for NIST approved in December.)

On November 28, President Bush signed into law the final version of a Commerce-Justice appropriations bill (HR 2500; Public Law 107-77) providing funding for the Department of Commerce. Commerce also received some emergency counter-terrorism and domestic security appropriations in a Defense bill that cleared Congress on December 20. The bills provide **\$1.4 billion for Commerce's R&D programs, \$153 million or 12.7 percent more than FY 2001, and a substantial \$244 million above the request** (see Table). Commerce's two major R&D agencies—the National Oceanic and Atmospheric Administration (NOAA) and the National Institute of Standards and Technology (NIST)—both receive substantial increases. NOAA R&D rises by 15.3 percent, or \$111 million above FY 2001, while NIST R&D rises by 17.1 percent, \$72 million above the FY 2001 level. The final bill breaks with the Bush Administration and the House's proposals to eliminate NIST's Advanced Technology Program and provides an almost 30 percent increase in FY 2002 for the program.

NOAA performs R&D related to its mission of environmental stewardship of coastal and marine environments and the atmosphere to ensure sustainable economic opportunities. It plays a key role in research on the topics of climate change, weather, and fisheries. **The final Commerce-Justice bill provides large increases—ranging from 4 to more than 20 percent—across several NOAA R&D accounts**, including those in the National Ocean Service (NOS); Oceanic and Atmospheric Research (OAR); the National Weather Service (NWS); and the National Environmental Satellite, Data and Information Service (NESDIS). Total NOAA R&D rises 15.3 percent to \$836 million, following closely the Senate-proposed total. (For full details of the President's request for Commerce R&D, see Chapter 12 of *AAAS Report XXVI: R&D FY 2002*; for details of House appropriations for Commerce R&D, please see the July 18 AAAS R&D Funding Update; for details of Senate appropriations for Commerce R&D, please see the July 24 AAAS R&D Funding Update.)

The final bill follows the Senate lead in keeping NIST's **Advanced Technology Program (ATP) alive with a boost of 26.6 percent in its R&D to \$150 million**. The Bush Administration and the House would have all but eliminated the program. Started by the first Bush Administration but promoted as a key technology initiative by the Clinton Administration, the ATP is an extramural research grants program to provide precompetitive cost-shared R&D support for promising market technologies. The House has repeatedly voted to terminate the program, but the Senate and the Clinton Administration had managed to preserve it in past budget struggles. Many Republicans regard the ATP as "corporate welfare," a subsidy to industrial firms that unnecessarily funds research private firms could and should support. The Administration requested only \$13 million for ATP in FY 2002, only enough to close out previously awarded grants and pay for administration costs, with no funds for R&D in FY 2002. The House went along with the Administration proposal, but the Senate bill expressed strong support for the program and the final bill follows the Senate version.

Because of the large boost to ATP R&D, total NIST R&D increases by 17.1 percent to \$493 million, in sharp contrast to the House's proposed 24.1 percent cut down to \$319 million and an even steeper cut in the

request down to \$313 million. The main NIST R&D activity—**Scientific and Technical Research and Services (STRS), which funds intramural research at the NIST laboratories—rises by a modest 4.3 percent** (or \$12 million) to \$279 million. The STRS appropriation includes \$5 million in emergency funds for the development of cybersecurity technologies, allocated in the Defense bill out of the \$40 billion post-September 11 emergency response fund. The other NIST R&D program, Construction of Research Facilities, increases a substantial \$29 million over FY 2001 and \$43 million over the request for a total of \$64 million, of which \$41 million is reserved for 11 congressionally designated research projects and \$1.2 million of which is emergency funds to upgrade NIST lab security. The non-R&D **Manufacturing Extension Partnership (MEP)**, a program to operate a nationwide network of extension centers to disseminate better manufacturing technologies to small- and medium-sized manufacturers, receives \$107 million, up slightly from FY 2001.

R&D in the National Telecommunications and Information Administration (NTIA) falls from \$51 million to \$21 million in FY 2002 because of a reduction in Technology Opportunity Grants from \$46 million back down to the FY 2000 level of \$16 million. These grants fund the development of innovative information technology systems to Americans in under-served communities.

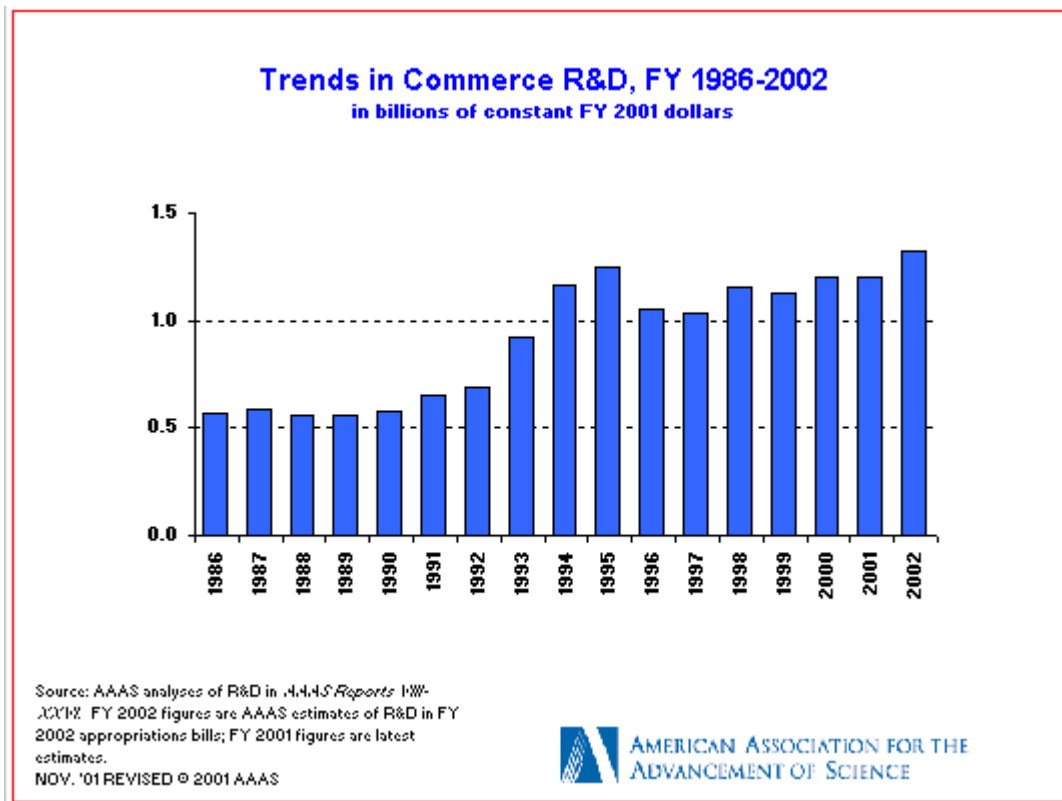


Figure 1. (click on the image to view or download a color, full-page PDF version of the chart)

The FY 2002 increase, after adjusting for expected inflation, brings Commerce R&D to an all-time high, surpassing the previous peak of FY 1995 (see Figure 1). Mostly because of strong Clinton Administration support for NIST programs over the last eight years, and secondarily because of bipartisan support for NOAA's R&D programs in the early 1990s, Commerce R&D in FY 2002 is nearly double the funding level of a decade ago (in inflation-adjusted terms). Commerce is now one of seven agencies to fund more than \$1 billion in R&D annually. Commerce R&D peaked in FY 1995 had been up and down since then because partisan disagreements on the proper role of the federal government in commercial technology made ATP a contentious political issue, because Republican hostility toward some environmental R&D programs resulted in cuts to NOAA, and because tight discretionary spending caps limited the pool of money available for both NIST and NOAA. But in recent years, continuing to FY 2002, there has been strong

growth for NOAA R&D programs as the agency's environmental R&D mission has gained increasing favor in Congress, and NIST R&D programs have grown because of bipartisan support for the intramural lab programs and a more stable funding outlook for the ATP.

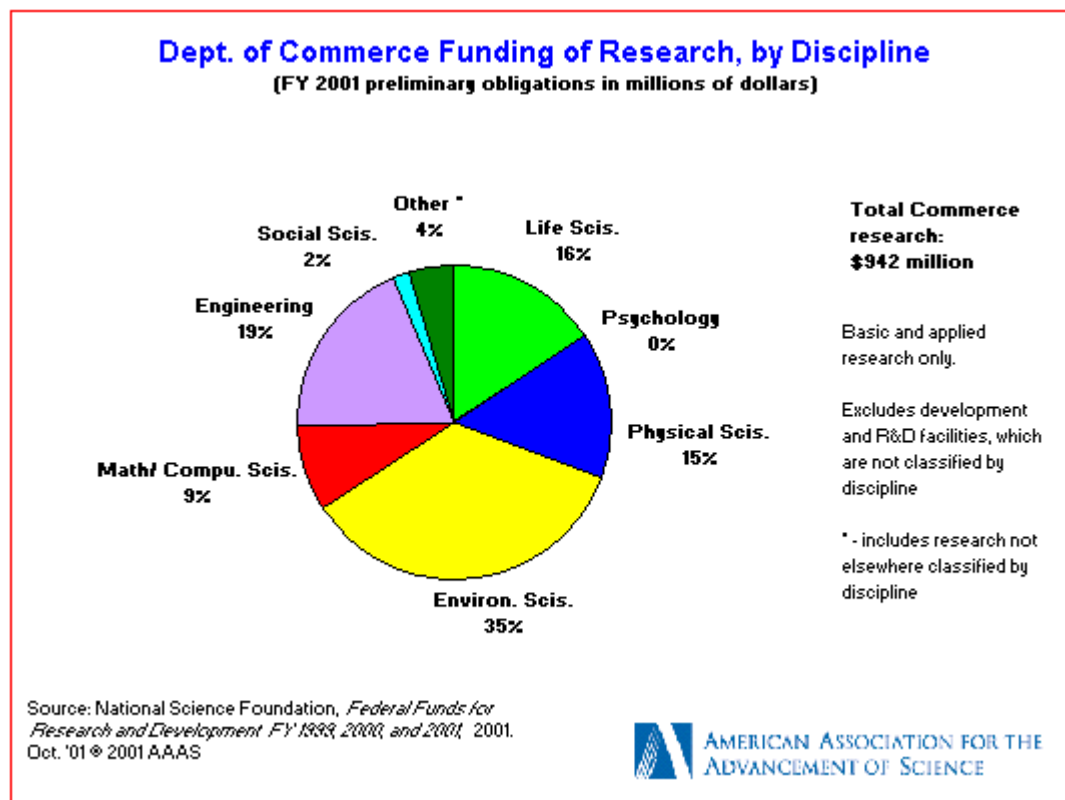


Figure 2. (click on the image to view or download a color, full-page PDF version of the chart)

Because of the differing missions of NOAA and NIST, Commerce has a diverse research portfolio, as shown in Figure 2. Although Commerce is not the dominant supporter of research in any one discipline, it does provide significant amounts of research funding for several disciplines. NOAA is a leading supporter of research in the life sciences and especially the environmental sciences, including atmospheric and oceanographic research. NIST is a leading supporter of research in the physical sciences (including chemistry and physics), computer sciences, and the engineering sciences. Most of NOAA's and NIST's research is performed in intramural laboratories.

Commerce funding for many of these disciplines has stagnated or declined in recent years because of continuing disputes over the proper role of NIST in funding R&D and up-and-down funding for NOAA, although the most recent years have seen upward trends. The trends in Commerce's total R&D budget are mirrored in trends for Commerce support of specific disciplines, as shown in Figure 3. Until recently, NOAA's support of environmental sciences and life sciences declined in tandem with losses in purchasing power in NOAA's overall R&D budget, although funding levels were somewhat higher than they were in the early 1990s; the large FY 2002 increase, however, (not shown in Figure 3) should bring NOAA support to all-time highs. NIST dramatically expanded its support of engineering, physical sciences, and computer sciences research in the early 1990s after ATP started. But beginning in 1995, when the Republican Congress began casting a harshly critical eye toward ATP, its support of these disciplines stagnated or declined. The increases for NIST R&D in FY 2001 and FY 2002 should reverse these downward trends.

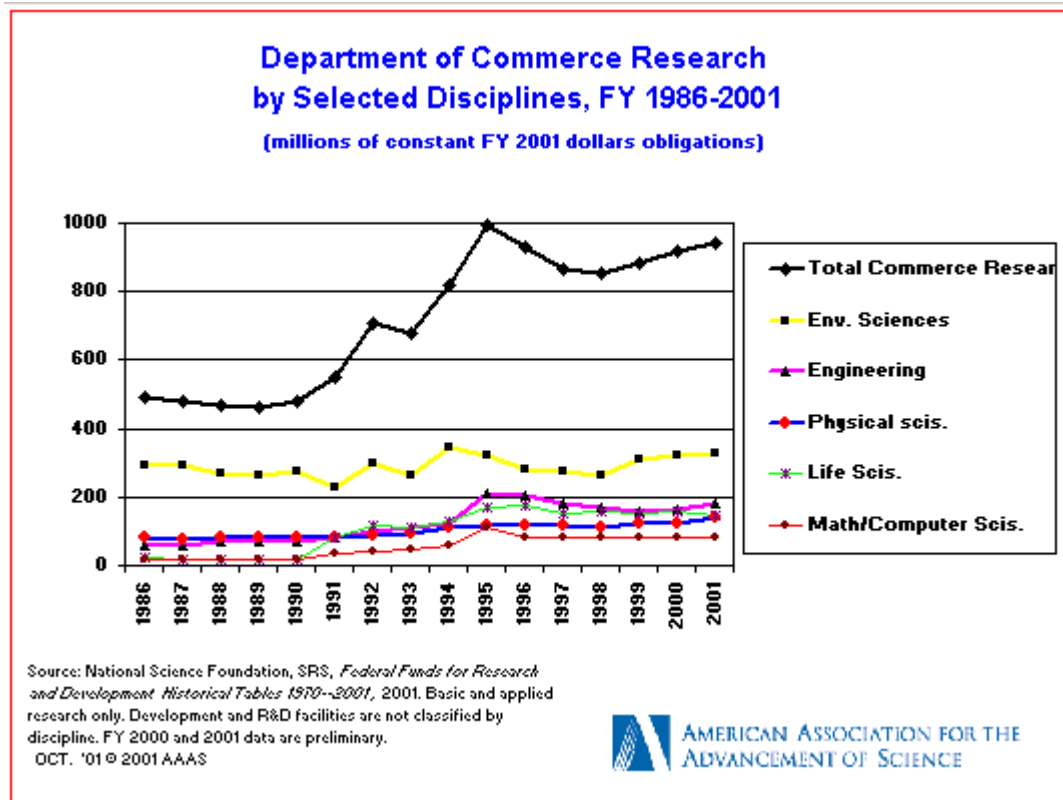


Figure 3. (click on the image to view or download a color, full-page PDF version of the chart)

President Bush signed the Commerce-Justice bill into law on November 28 (Public Law 107-77). Congress gave final approval to the Defense bill on December 20, which includes \$6 million in emergency funds for NIST out of the \$40 billion post-September 11 emergency response fund.

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**Table. Department of Commerce
Congressional Action on R&D in the FY 2002 Budget
(budget authority in millions of dollars)**

| | FY 2001 Estimate | FY 2002 Request | FY 2002 Approved | Action by Congress | | | |
|--|---------------------|--------------------|---------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| | | | | Chg. from Request Amount | Chg. from Request Percent | Chg. from FY 2001 Amount | Chg. from FY 2001 Percent |
| National Oceanic and Atmospheric Administration: | | | | | | | |
| TOTAL NOAA R&D | 726 | 772 | 836 | 64 | 8.3% | 111 | 15.3% |
| <i>National Ocean Service</i> | 64 | 64 | 78 | 14 | 22.3% | 15 | 22.9% |
| <i>National Marine Fisheries Service</i> | 311 | 329 | 323 | -6 | -1.8% | 13 | 4.1% |
| <i>Oceanic and Atmospheric Research</i> | 269 | 290 | 311 | 22 | 7.5% | 43 | 15.8% |
| <i>National Weather Service</i> | 23 | 28 | 24 | -4 | -13.0% | 1 | 4.8% |
| <i>National Env. Satellite and Data Info.</i> | 13 | 11 | 15 | 4 | 34.6% | 2 | 18.8% |
| <i>All Other NOAA R&D</i> | 46 | 50 | 84 | 33 | 66.7% | 37 | 80.1% |
| <i>Total ORF (incl. non-R&D)</i> | 1,868 | 2,180 | 2,254 | 73 | 3.4% | 385 | 20.6% |
| <i>Total NOAA (incl. non-R&D)</i> | 3,041 | 3,064 | 3,256 | 192 | 6.3% | 215 | 7.1% |
| National Institute of Standards and Technology: | | | | | | | |
| Scientific & Technical Research | 268 | 292 | 279 | -12 | -4.2% | 12 | 4.3% |
| Advanced Technology Program R&D | 118 | 0 | 150 | 150 | -- | 31 | 26.6% |
| Construction | 35 | 21 | 64 | 43 | 204.5% | 29 | 82.8% |
| TOTAL NIST R&D | 421 | 313 | 493 | 180 | 57.6% | 72 | 17.1% |
| <i>STRS Non-R&D Activities</i> | 45 | 56 | 47 | -9 | -15.9% | 2 | 4.3% |
| <i>ATP Non-R&D Activities</i> | 27 | 13 | 35 | 22 | 167.9% | 7 | 26.6% |
| <i>Manufacturing Extension Partnership</i> | 105 | 106 | 107 | 0 | 0.2% | 1 | 1.3% |
| <i>Total NIST Budget</i> | 598 | 487 | 681 | 193 | 39.7% | 82 | 13.8% |
| Bureau of the Census | 2 | 2 | 2 | 0 | 0.0% | 0 | 0.0% |
| National Telecomm. and Info. Admin. | 51 | 21 | 21 | 0 | 0.0% | -30 | -58.8% |
| Economic Development Administration | 1 | 1 | 1 | 0 | 0.0% | 0 | 0.0% |
| Dept. Administration | 1 | 1 | 1 | 0 | 0.0% | 0 | 0.0% |
| Total Commerce R&D | 1,201 | 1,110 | 1,354 | 244 | 22.0% | 153 | 12.7% |

AAAS estimates based on FY 2002 appropriations bills. Includes conduct of R&D and R&D facilities.
FY 2001 and FY 2002 request figures based on OMB R&D data and supplemental agency budget data.
Figures are rounded to the nearest million. Changes calculated from unrounded figures.

December 26, 2001 - Based on enacted FY 2002 appropriations bills.

Includes emergency appropriations for counterterrorism and national security.