250

General Science, Space, and Technology

Budget function 250 includes funding for the National Science Foundation, more than 90 percent of the spending of the National Aeronautics and Space Administration, and funding for general science research by the Department of Energy. In 2001, CBO estimates, total outlays for function 250 will be about $19.6 billion, continuing the trend of increasing spending for the function.

Federal Spending, Fiscal Years 1990-2001 (In billions of dollars)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Estimate 2001
Budget Authority (Discretionary)	14.5	16.5	17.3	17.2	17.6	16.7	16.7	16.6	18.0	18.8	19.2	20.9
Outlays												
Discretionary	14.4	16.1	16.4	17.0	16.2	16.7	16.7	17.1	18.2	18.1	18.6	19.5
Mandatory	0	0	0	0	0	0	0	0	0	0	0	0.1
Total	14.4	16.1	16.4	17.0	16.2	16.7	16.7	17.2	18.2	18.1	18.6	19.6
Memorandum:												
Annual Percentage Change in Discretionary Outlays		11.6	1.8	3.9	-4.9	3.2	-0.1	2.8	6.0	-0.5	2.9	5.0

250-01 Cancel the International Space Station Program

	Savings (Millions of dollars)	
	Budget Authority	Outlays
Relative to Current Appropriations		
2002	1,118	749
2003	2,118	1,765
2004	2,118	2,086
2005	2,118	2,108
2006	2,118	2,118
2002-2006	9,590	8,826
2002-2011	20,180	19,416
Relative to Inflated Appropriations		
2002	1,142	765
2003	2,206	1,832
2004	2,249	2,202
2005	2,291	2,254
2006	2,336	2,298
2002-2006	10,224	9,351
2002-2011	22,584	21,512

SPENDING CATEGORY:

Discretionary

RELATED CBO PUBLICATION:

Reinventing NASA (Study), March 1994.

Canceling the international space station would save, over the 2002-2011 period, $19.4 billion relative to the 2001 level of appropriations and $21.5 billion relative to those appropriations adjusted for inflation. On November 2, 2000, the first crew arrived at the space station to begin a four-month mission. Under current plans, over 40 additional launches will be undertaken before the space station is completed in 2006. By that time, more than $25 billion will have been spent to develop, build, and assemble the space station. The General Accounting Office (GAO) estimates that the life-cycle cost of the entire project, including operation, maintenance, and transportation to and from orbit, will be over $95 billion. The Congress's yearly decision about whether to continue funding for the program hinges on whether the program's future benefits are sufficient to justify spending an additional $70 billion through 2016.

People who would cancel the international space station program assert that its benefits are unlikely to justify additional spending and that costs are likely to increase above those estimated by GAO. To support their position, critics cite the general lack of enthusiasm for the space station among individual scientists and scientific societies. The program's opponents also note that the costs of the program have continually increased, although its capabilities and scope have decreased. Critics point as well to the uncertainty surrounding the costs of operating and supporting the facility once it has been developed and launched. They are skeptical of the National Aeronautics and Space Administration's assurance that the station's operating costs will be low, noting that the agency made similar claims about the space shuttle that proved overly optimistic.

Advocates of continued spending for the space station reject critics' claim that the program's benefits do not justify its costs. Supporters place a high value on the role of the station as a stepping-stone to future human exploration of the solar system. They also contend that the program will deliver scientific advances and perhaps even commercial benefits. Supporters further argue that Russia's participation has strengthened the foreign policy reason for continuing the program. They assert that drawing Russia, and particularly its aerospace industry, into a cooperative venture will help to stabilize the Russian economy and provide incentives for Russia to adhere to international agreements on the spread of missile technology. Advocates also point out that the project's cancellation would force the United States to renege on agreements signed with European nations, Japan, and Canada, as well as Russia—possibly hurting the prospects for future international cooperative agreements on space, science, and other areas of mutual interest.

250-02 Eliminate the Experimental Program to Stimulate Competitive Research

	Savings (Millions of dollars)	
	Budget Authority	Outlays
Relative to Current Appropriations		
2002	182	50
2003	228	150
2004	228	202
2005	228	217
2006	228	222
2002-2006	1,094	841
2002-2011	2,234	1,956
Relative to Inflated Appropriations		
2002	186	51
2003	238	155
2004	242	211
2005	247	230
2006	252	241
2002-2006	1,165	888
2002-2011	2,495	2,166

SPENDING CATEGORY:

Discretionary

The Experimental Program to Stimulate Competitive Research (EPSCoR), a partnership between states and several research-oriented federal agencies, was designed to encourage states to invest more in science and technology and to better distribute federal research and development (R&D) funding. Currently, federal agencies receive about $228 million in appropriations for EPSCoR. Eliminating the program would save, over the 2002-2011 period, $2.0 billion relative to the 2001 funding level and $2.2 billion relative to that level adjusted for inflation.

Twenty-one states and the Commonwealth of Puerto Rico currently take part in EPSCoR. Between 1980 and 2001, the National Science Foundation alone provided almost $450 million to more than 60 colleges, universities, and laboratories in states that had not received significant federal R&D funding in the past. State governments, local industry, and other nonfederal sources provided matching funds to those institutions. The entire effort has supported 2,000 scientists and engineers.

Opponents of EPSCoR contend that the nation must make optimal use of its limited research dollars and therefore should support researchers whose proposals are judged superior through a process of peer review, without regard to geographic distribution. Furthermore, critics doubt whether novice research institutions can provide a top-quality effort, which requires substantial ongoing investments by the states and regional institutions.

Critics also argue that EPSCoR was intended to be an experimental program, not a permanent source of R&D support for institutions in selected states. They note that after many years of support, the program's recipients, which represent more than a third of all states, continue to attract only about 8 percent of the federal funding for academic R&D. Opponents point to the corresponding lack of improvement in state shares of such funding: states that began participating in EPSCOR in the 1980s in the bottom half of the national rankings for scientific research were still in the bottom half in 1998.

Advocates maintain that EPSCoR promotes a more equitable geographic distribution of the nation's science and technology base. They assert that state policymakers invest more in R&D than they would without EPSCoR's incentives and that those investments give students in those states the research experience and training necessary for careers in scientific fields. Proponents also contend that the program fosters technology-related industries in the states by involving local firms in selecting research topics. Supporters note that 15 of the EPSCoR states experienced above-average growth in federal funding for academic R&D over the 1990-1998 period. They claim that the EPSCoR states have improved their rankings in their chosen "niche" fields, even if such changes are not apparent in the overall statistics. Finally, they argue that the quality of EPSCoR-funded research is equivalent to other federally funded R&D because awards are based on merit reviews.