



**CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE**

September 8, 2010

**S. 3729
National Aeronautics and Space Administration
Authorization Act of 2010**

As passed by the Senate on August 5, 2010

SUMMARY

S. 3729 would authorize the appropriation of nearly \$59 billion for activities of the National Aeronautics and Space Administration (NASA) over the 2011-2013 period. Under the act, NASA would be authorized to perform an additional space shuttle mission to the International Space Station (ISS) following the mission currently planned for February 2011. Under the legislation, CBO estimates that other federal agencies, such as the Office of Science and Technology Policy (OSTP), the National Oceanic and Atmospheric Administration (NOAA), and the Government Accountability Office (GAO), would need an additional \$2 million over the 2011-2015 period for new planning and reporting requirements.

Assuming appropriation of the authorized and necessary amounts, CBO estimates that implementing S. 3729 would cost \$58 billion over the 2011-2015 period. Because the legislation could increase direct spending, pay-as-you procedures apply. However, CBO estimates that any increase in direct spending under the legislation would not be significant.

S. 3729 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 3729 is shown in the following table. The costs of this legislation fall within budget functions 250 (general science, space, and technology), 300 (natural resources and environment), and 800 (general government).

	By Fiscal Year, in Millions of Dollars					2011- 2015
	2011	2012	2013	2014	2015	
CHANGES IN SPENDING SUBJECT TO APPROPRIATION						
Space Operations						
Authorization Level	5,509	4,142	4,253	0	0	13,903
Estimated Outlays	4,076	4,387	4,252	1,104	85	13,903
Science						
Authorization Level	5,006	5,249	5,510	0	0	15,764
Estimated Outlays	2,503	4,827	5,264	2,684	313	15,591
Exploration						
Authorization Level	3,868	5,252	5,264	0	0	14,384
Estimated Outlays	2,321	4,544	5,127	2,039	196	14,227
Cross-agency Support						
Authorization Level	3,111	3,190	3,277	0	0	9,578
Estimated Outlays	1,836	3,126	3,240	1,343	33	9,578
Aeronautics						
Authorization Level	930	1,071	1,105	0	0	3,105
Estimated Outlays	465	954	1,062	539	53	3,072
Construction and Environmental Compliance and Restoration						
Authorization Level	394	364	367	0	0	1,125
Estimated Outlays	106	236	317	252	140	1,052
Education						
Authorization Level	146	146	146	0	0	437
Estimated Outlays	36	80	118	102	66	402
Inspector General						
Authorization Level	37	38	39	0	0	114
Estimated Outlays	31	38	39	6	0	114
Other NASA Programs and Other Agencies						
Estimated Authorization Level	66	47	30	15	15	173
Estimated Outlays	53	46	30	22	16	167
Total Changes						
Estimated Authorization Level	19,066	19,497	19,990	15	15	58,583
Estimated Outlays	11,428	18,238	19,448	8,090	902	58,106

Note: Components may not sum to totals because of rounding.

BASIS OF ESTIMATE

For this estimate, CBO assumes that S. 3729 will be enacted near the beginning of fiscal year 2011 and that the amounts authorized and estimated to be necessary will be appropriated for each year. Estimated outlays are based on historical spending patterns for the affected agencies and programs. S. 3729 would specifically authorize the appropriation of nearly \$59 billion for NASA activities during the 2011-2013 period. Assuming appropriation of the necessary amounts, CBO estimates that implementing S. 3729 would cost \$58 billion over the 2011-2015 period.

For 2010, NASA received an appropriation of \$19 billion to fund its activities. For the 2011-2013 period, S. 3729 would authorize the appropriation of \$19 billion to \$20 billion a year for NASA's programs. The specified authorizations under S. 3729 include:

- *Space Operations*: \$13.9 billion to support the ISS, modernize launch infrastructure, and conduct an additional manned space flight mission if the Administrator certifies that the mission meets existing safety standards. Currently, two shuttle missions are scheduled to occur during fiscal year 2011. The new mission would take place in 2011 between June and September;
- *Science*: \$15.8 billion for Earth, astrophysics, heliophysics, and suborbital research, and to restart domestic production of radioisotope thermoelectric generator material;
- *Exploration*: \$14.4 billion to support commercial cargo transportation services, the Space Launch System, the development of a multipurpose crew vehicle, and other exploration activities;
- *Cross-agency Support*: \$9.6 billion to support NASA's nine field centers, facilities, laboratory construction and maintenance, and NASA's other general and administrative activities;
- *Aeronautics*: \$3.1 billion to conduct research on aviation safety and environmental sustainability, collaborate on research with the Department of Defense and the Federal Aviation Administration, and to enhance research on space technology;
- *Construction and Environmental Compliance and Restoration*: \$1.1 billion to modernize existing facilities, construct new facilities, and ensure compliance with environmental regulations;
- *Education*: \$437 million to attract and retain students in the fields of science, technology, engineering, and mathematics;

- *Inspector General:* \$114 million to conduct investigations into the ongoing operations of the agency; and
- *Other NASA Activities and Other Agencies:* \$45 million for the Commercial Reusable Suborbital Research program, \$50 million to eliminate toxic materials from shuttle orbiters before transferring them to other institutions, \$75 million to fund a nonprofit institution to perform research at the ISS, and less than \$1 million to integrate existing suborbital research programs. CBO estimates that an additional \$2 million over the 2011-2015 period also would be necessary under the act for other federal agencies, including NOAA, OSTP, GAO, and the Department of Defense. Under the legislation those agencies would be responsible for reporting on NASA's procurement policy, international collaboration to reduce space debris, and agency collaboration regarding space weather.

PAY-AS-YOU-GO CONSIDERATIONS

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. Section 503 of the legislation would prohibit NASA from terminating certain contracts that support the space shuttle and could be used to develop space launch capabilities after the space shuttle is retired. Under NASA's current plans for the shuttle program, the agency anticipates that it will have sufficient funds to continue those contracts. If those plans changed to further extend the shuttle program and NASA was unable to pay for performance under such contracts, contractors could pursue a claim for payment from the U.S. Treasury's Judgment Fund, which is available to pay judgments against the federal government without further appropriation. Based on information from NASA, CBO expects that the chance of such a claim over the next 10 years is remote.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 3729 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

ESTIMATE PREPARED BY:

Federal Costs: Martin von Gnechten

Impact on State, Local, and Tribal Governments: Ryan Miller

Impact on the Private Sector: Amy Petz

ESTIMATE APPROVED BY:

Theresa Gullo

Deputy Assistant Director for Budget Analysis