

velopment programs that help preserve the role of the United States as a global leader in space technologies and their application.

(3) **CONSIDERATIONS.**—In developing the national space technology development policy, the President or the President's designee shall consider, and include a discussion in the report required by subsection (c), of the following issues:

(A) The extent to which NASA should focus on long term, high-risk research or more incremental technology development, and the expected impact of that decision on the United States economy.

(B) The extent to which NASA should address military and commercial needs.

(C) How NASA will coordinate its technology program with other Federal agencies.

(D) The extent to which NASA will conduct research in-house, fund university research, and collaborate on industry research and the expected impact of that mix of funding on the supply of United States workers for industry.

(4) **CONSULTATION.**—In the development of the national space technology development policy, the President or the President's designee shall consult widely with academic and industry experts and with other Federal agencies. The Administrator may enter into an arrangement with the National Academy of Sciences to help develop the policy.

**(c) Report**

**(1) Policy**

Not later than 1 year after October 11, 2010, the President shall transmit a report setting forth national space technology policy to the appropriate committees of Congress and to the Senate Committee on Appropriations and the House of Representatives Committee on Appropriations.

**(2) Implementation**

Not later than 60 days after the President transmits the report required by paragraph (1) to the Congress, the Administrator shall transmit a report to the same committees describing how NASA will carry out the policy.

(Pub. L. 111-267, title IX, §906, Oct. 11, 2010, 124 Stat. 2836.)

**§ 18405. Commercial Reusable Suborbital Research Program**

**(a) In general**

The report of the National Academy of Sciences, Revitalizing NASA's Suborbital Program: Advancing Science, Driving Innovation and Developing Workforce, found that sub-orbital science missions were absolutely critical to building an aerospace workforce capable of meeting the needs of current and future human and robotic space exploration.

**(b) Management**

The Administrator shall designate an officer or employee of the Space Technology Program to act as the responsible official for the Commercial Reusable Suborbital Research Program in the Space Technology Program. The designee

shall be responsible for the development of short- and long term strategic plans for maintaining, renewing and extending suborbital facilities and capabilities.

**(c) Establishment**

The Administrator shall establish a Commercial Reusable Suborbital Research Program within the Space Technology Program that shall fund the development of payloads for scientific research, technology development, and education, and shall provide flight opportunities for those payloads to microgravity environments and suborbital altitudes. The Commercial Reusable Suborbital Research Program may fund engineering and integration demonstrations, proofs of concept, or educational experiments for commercial reusable vehicle flights. The program shall endeavor to work with NASA's Mission Directorates to help achieve NASA's research, technology, and education goals.

**(d) Report**

The Administrator shall submit a report annually to the appropriate committees of Congress describing progress in carrying out the Commercial Reusable Suborbital Research program, including the number and type of suborbital missions planned in each fiscal year.

**(e) Authorization**

There are authorized to be appropriated to the Administrator \$15,000,000 for each of fiscal years 2011 through 2013 to carry out this section.

(Pub. L. 111-267, title IX, §907, Oct. 11, 2010, 124 Stat. 2837.)

SUBCHAPTER IX—EDUCATION

**§ 18421. Study of potential commercial orbital platform program impact on science, technology, engineering, and mathematics**

A fundamental and unique capability of NASA is in stimulating science, technology, engineering, and mathematics education in the United States. In ensuring maximum use of that capability, the Administrator shall carry out a study to—

(1) identify the benefits of and lessons learned from ongoing and previous NASA orbital student programs including, at a minimum, the Get Away Special (GAS) and Earth Knowledge Acquired by Middle School Students (EarthKAM) programs, on science, technology, engineering, and mathematics education;

(2) assess the potential impacts on science, technology, engineering, and mathematics education of a program that would facilitate the development of scientific and educational payloads involving United States students and educators and the flights of those payloads on commercially available orbital platforms, when available and operational, with the goal of providing frequent and regular payload launches;

(3) identify NASA expertise, such as NASA science, engineering, payload development, and payload operations, that could be made available to facilitate a science, technology,

engineering, and mathematics program using commercial orbital platforms; and

(4) identify the issues that would need to be addressed before NASA could properly assess the merits and feasibility of the program described in paragraph (2).

(Pub. L. 111-267, title X, §1003, Oct. 11, 2010, 124 Stat. 2838; Pub. L. 111-358, title II, §205(a), Jan. 4, 2011, 124 Stat. 3995.)

#### AMENDMENTS

2011—Pub. L. 111-358 amended section generally. Prior to amendment, text read as follows: “A fundamental and unique capability of NASA is in stimulating science, technology, engineering, and mathematics education in the United States. In ensuring maximum use of that capability, NASA shall—

“(1) establish a program to annually sponsor scientific and educational payloads developed with United States student and educator involvement to be flown on commercially available orbital platforms, when available and operational, with the goal of launching at least 50 such payloads (with at least one from each of the 50 States) to orbit on at least one mission per year;

“(2) contract with providers of commercial orbital platform services for their use by the STEM-Commercial Orbital Platform program, preceded by the issuance of a request for proposal, not later than 90 days after October 11, 2010, to enter into at least one funded, competitively-awarded contract for commercial orbital platform services and make awards within 180 days after such date; and

“(3) engage with United States students and educators and make available NASA’s science, engineering, payload development, and payload operations expertise to student teams selected to participate in the STEM-Commercial Orbital Platform program.”

#### EFFECTIVE DATE OF 2011 AMENDMENT

Pub. L. 111-358, title II, §205(c), Jan. 4, 2011, 124 Stat. 3996, provided that: “The amendment made by subsection (a) [amending this section] shall take effect on October 12, 2010.”

### SUBCHAPTER X—RE-SCOPING AND REVITALIZING INSTITUTIONAL CAPABILITIES

#### § 18431. Workforce stabilization and critical skills preservation

Prior to receipt by the Congress of the study, recommendations, and implementation strategy developed pursuant to section 1103,<sup>1</sup> none of the funds authorized for use under this Act may be used to transfer the functions, missions, or activities, and associated civil service and contractor positions, from any NASA facility without authorization by the Congress to implement the proposed strategy. The Administrator shall preserve the critical skills and competencies in place at NASA centers prior to October 11, 2010, in order to facilitate timely implementation of the requirements of this chapter and to minimize disruption to the workforce. The Administrator may not implement any reduction-in-force or other involuntary separations of permanent, non-Senior-Executive-Service, civil servant employees before September 30, 2013, except for cause on charges of misconduct, delinquency, or inefficiency.

(Pub. L. 111-267, title XI, §1105, Oct. 11, 2010, 124 Stat. 2840.)

<sup>1</sup> See References in Text note below.

#### REFERENCES IN TEXT

Section 1103, referred to in text, is Pub. L. 111-267, title XI, §1103, Oct. 11, 2010, 124 Stat. 2840, which is not classified to the Code.

This Act, referred to in text, is Pub. L. 111-267, Oct. 11, 2010, 124 Stat. 2805, known as the National Aeronautics and Space Administration Authorization Act of 2010, which enacted this chapter (§18301 et seq.) and various other provisions, including provisions authorizing appropriations, which were not classified to the Code. For complete classification of this Act to the Code, see Short Title note set out under section 18301 of this title and Tables.

### SUBCHAPTER XI—OTHER MATTERS

#### § 18441. National and international orbital debris mitigation

##### (a) Findings

Congress makes the following findings:

(1) A national and international effort is needed to develop a coordinated approach towards the prevention, negation, and removal of orbital debris.

(2) The guidelines issued by the Inter-Agency Space Debris Coordination Committee provide a consensus understanding of 10 national space agencies (including NASA) plus the European Space Agency on the necessity of mitigating the creation of space debris and measures for doing so. NASA’s participation on the Committee should be robust, and NASA should urge other space-relevant Federal agencies (including the Departments of State, Defense, and Commerce) to work to ensure that their counterpart agencies in foreign governments are aware of these national commitments and the importance in which the United States holds them.

(3) Key components of such an approach should include—

(A) a process for debris prevention through agreements regarding spacecraft design, operations, and end-of-life disposition plans to minimize orbiting vehicles or elements which are nonfunctional;

(B) the development of a robust Space Situational Awareness network that can identify potential collisions and provide sufficient trajectory and orbital data to enable avoidance maneuvers;

(C) the interagency development of an overall strategy for review by the President, with recommendations for proposed international collaborative efforts to address this challenge.

##### (b) International discussion

###### (1) In general

The Administrator shall, in consultation with such other departments and agencies of the Federal Government as the Administrator considers appropriate, continue and strengthen discussions with the representatives of other space-faring countries, within the Inter-Agency Space Debris Coordination Committee and elsewhere, to deal with this orbital debris mitigation.

###### (2) Interagency effort

For purposes of carrying out this subsection, the Director of OSTP, in coordination with the