

ment that facilitate a broad range of users (including military and commercial) and applications defining the architecture and design of such missions.

(3) Spacesuit development and associated life support technology.

(4) Flagship missions.

(b) Investments

In developing technologies and capabilities under subsection (a), the Administrator may make investments—

(1) in space technologies such as advanced propulsion, propellant depots, in situ resource utilization, and robotic payloads or capabilities that enable human missions beyond low-Earth orbit ultimately leading to Mars;

(2) in a space-based transfer vehicle including these technologies with an ability to conduct space-based operations that provide capabilities—

(A) to integrate with the Space Launch System and other space-based systems;

(B) to provide opportunities for in-space servicing of and delivery to multiple space-based platforms; and

(C) to facilitate international efforts to expand human presence to deep space destinations;

(3) in advanced life support technologies and capabilities;

(4) in technologies and capabilities relating to in-space power, propulsion, and energy systems;

(5) in technologies and capabilities relating to in-space propellant transfer and storage;

(6) in technologies and capabilities relating to in situ resource utilization; and

(7) in expanded research to understand the greatest biological impediments to human deep space missions, especially the radiation challenge.

(c) Utilization of ISS as testbed

The Administrator may utilize the ISS as a testbed for any technology or capability developed under subsection (a) in a manner consistent with the provisions of this chapter.

(d) Coordination

The Administrator shall coordinate development of technologies and capabilities under this section through an overall agency technology approach, as authorized by section 905 of this Act.

(Pub. L. 111-267, title III, §308, Oct. 11, 2010, 124 Stat. 2818.)

REFERENCES IN TEXT

Section 905 of this Act, referred to in subsec. (d), is Pub. L. 111-267, title IX, §905, Oct. 11, 2010, 124 Stat. 2836, which is not classified to the Code.

§ 18327. Report requirement

Within 90 days after October 11, 2010, or upon completion of reference designs for the Space Launch System and Multi-purpose Crew Vehicle authorized by this chapter, whichever occurs first, the Administrator shall provide a detailed report to the appropriate committees of Congress that provides an overall description of the

reference vehicle design, the assumptions, description, data, and analysis of the systems trades and resolution process, justification of trade decisions, the design factors which implement the essential system and vehicle capability requirements established by this chapter, the explanation and justification of any deviations from those requirements, the plan for utilization of existing contracts, civil service and contract workforce, supporting infrastructure utilization and modifications, and procurement strategy to expedite development activities through modification of existing contract vehicles, and the schedule of design and development milestones and related schedules leading to the accomplishment of operational goals established by this chapter. The Administrator shall provide an update of this report as part of the President's annual Budget Request.

(Pub. L. 111-267, title III, §309, Oct. 11, 2010, 124 Stat. 2819.)

SUBCHAPTER III—DEVELOPMENT AND USE OF COMMERCIAL CREW AND CARGO TRANSPORTATION CAPABILITIES

§ 18341. Commercial Cargo Development program

The Administrator shall continue to support the existing Commercial Orbital Transportation Services program, aimed at enabling the commercial space industry in support of NASA to develop reliable means of launching cargo and supplies to the ISS throughout the duration of the facility's operation. The Administrator may apply funds towards the reduction of risk to the timely start of these services, specifically—

(1) efforts to conduct a flight test;

(2) accelerate development; and

(3) develop the ground infrastructure needed for commercial cargo capability.

(Pub. L. 111-267, title IV, §401, Oct. 11, 2010, 124 Stat. 2820.)

§ 18342. Requirements applicable to development of commercial crew transportation capabilities and services

(a) FY 2011 contracts and procurement agreements

(1) In general

Except as provided in paragraph (2), the Administrator may not execute a contract or procurement agreement with respect to follow-on commercial crew services during fiscal year 2011.

(2) Exception

Notwithstanding paragraph (1), the Administrator may execute a contract or procurement agreement with respect to follow-on commercial crew services during fiscal year 2011 if—

(A) the requirements of paragraphs (1), (2), and (3) of subsection (b) are met; and

(B) the total amount involved for all such contracts and procurement agreements executed during fiscal year 2011 does not exceed \$50,000,000 for fiscal year 2011.

(b) Support

The Administrator may, beginning in fiscal year 2012 through the duration of the program,