

payload developers, and the designated Coordination Center.”

**§ 70103. Commercial payloads on space launch system**

(a) DEFINITIONS.—In this section:

(1) LAUNCH VEHICLE.—The term “launch vehicle” means any vehicle constructed for the purpose of operating in, or placing a payload in, outer space.

(2) PAYLOAD.—The term “payload” means an object which a person undertakes to place in outer space by means of a launch vehicle, and includes subcomponents of the launch vehicle specifically designed or adapted for that object.

(b) IN GENERAL.—Commercial payloads may not be accepted for launch as primary payloads on the space launch system unless the Administrator determines that—

(1) the payload requires the unique capabilities of the space launch system; or

(2) launching of the payload on the space launch system is important for either national security or foreign policy purposes.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3428; Pub. L. 114–90, title I, § 117(a)(4), Nov. 25, 2015, 129 Stat. 718.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70103(a) .....	42 U.S.C. 2465c.	Pub. L. 101–611, title II, § 203, Nov. 16, 1990, 104 Stat. 3206; Pub. L. 105–303, title II, § 203(2), Oct. 28, 1998, 112 Stat. 2855.
70103(b) .....	42 U.S.C. 2465f.	Pub. L. 101–611, title II, § 206, Nov. 16, 1990, 104 Stat. 3207; Pub. L. 105–303, title II, § 203(4), Oct. 28, 1998, 112 Stat. 2855.

In subsection (a), the words “this section” are substituted for “this title”, meaning title II of Public Law 101–611, because title II of Public Law 101–611 was previously repealed except for section 201 (a short title provision, classified to 42 U.S.C. 2451 note, in which neither defined term appears) and sections 203 (42 U.S.C. 2465c) and 206 (42 U.S.C. 2465f) of Public Law 101–611, which are restated in this section.

**Editorial Notes**

AMENDMENTS

2015—Pub. L. 114–90 substituted “space launch system” for “space shuttle” in section catchline and wherever appearing in text.

**§ 70104. Definition of Space Launch System**

In this chapter, the term “Space Launch System” means the Space Launch System authorized under section 302 of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18322).

(Added Pub. L. 114–90, title I, § 117(a)(5), Nov. 25, 2015, 129 Stat. 718.)

**[CHAPTER 703—REPEALED]**

**[§§ 70301 to 70304. Repealed. Pub. L. 115–10, title IV, § 416(b), Mar. 21, 2017, 131 Stat. 35]**

Section 70301, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3428, set out Congressional findings.

Section 70302, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, related to purpose, policy, and goals of chapter.

Section 70303, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, defined “additive cost”.

Section 70304, Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3429, related to duties of Administrator.

**CHAPTER 705—EXPLORATION INITIATIVES**

Sec.

70501.	Space shuttle follow-on.
70502.	Exploration plan and programs.
70503.	Ground-based analog capabilities.
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70505.	Lunar outpost.
70506.	Exploration technology research.
70507.	Technology development.
70508.	Robotic or human servicing of spacecraft.

**§ 70501. Space shuttle follow-on**

(a) POLICY STATEMENT.—In order to ensure continuous United States participation and leadership in the exploration and utilization of space and as an essential instrument of national security, it is the policy of the United States to maintain an uninterrupted capability for human space flight and operations—

(1) in low-Earth orbit; and

(2) beyond low-Earth orbit once the capabilities described in section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017 become available.

(b) ANNUAL REPORT.—The Administrator shall transmit an annual report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion and the estimated time before they will demonstrate crewed, orbital spaceflight.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115–10, title IV, § 417, Mar. 21, 2017, 131 Stat. 35.)

HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70501(a) .....	42 U.S.C. 16761(a).	Pub. L. 109–155, title V, § 501(a), (b), Dec. 30, 2005, 119 Stat. 2927.
70501(b) .....	42 U.S.C. 16761(b).	

In subsection (b), the words “The Administrator shall transmit an annual report” are substituted for “Not later than 180 days after the date of enactment of this Act [December 30, 2005] and annually thereafter, the Administrator shall transmit a report” to eliminate obsolete language.

In subsection (b), the words “Committee on Science and Technology” are substituted for “Committee on Science” on authority of Rule X(1)(o) of the Rules of the House of Representatives, adopted by House Resolution No. 6 (110th Congress, January 5, 2007).

**Editorial Notes**

REFERENCES IN TEXT

Section 421(f) of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 421(f) of Pub. L. 115–10, which is set out as a note under section 20301 of this title.

## AMENDMENTS

2017—Subsec. (a). Pub. L. 115–10, §417(1), amended subsec. (a) generally. Prior to amendment, text read as follows: “It is the policy of the United States to possess the capability for human access to space on a continuous basis.”

Subsec. (b). Pub. L. 115–10, §417(2), substituted “Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space, and Technology of the House of Representatives describing the progress being made toward developing the Space Launch System and Orion” for “Committee on Science and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate describing the progress being made toward developing the Crew Exploration Vehicle and the Crew Launch Vehicle”.

## Statutory Notes and Related Subsidiaries

## CHANGE OF NAME

Committee on Science and Technology of House of Representatives changed to Committee on Science, Space, and Technology of House of Representatives by House Resolution No. 5, One Hundred Twelfth Congress, Jan. 5, 2011.

## TRANSITION

Pub. L. 110–422, title VI, §613, Oct. 15, 2008, 122 Stat. 4799, provided that:

“(a) DISPOSITION OF SHUTTLE-RELATED ASSETS.—

“(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act [Oct. 15, 2008], the Administrator [of NASA] shall submit to Congress a plan describing the process for the disposition of the remaining Space Shuttle Orbiters and other Space Shuttle program-related hardware after the retirement of the Space Shuttle fleet.

“(2) PLAN REQUIREMENTS.—The plan submitted under paragraph (1) shall include a description of a process by which educational institutions, science museums, and other appropriate organizations may acquire, through loan or disposal by the Federal Government, Space Shuttle program hardware.

“(3) PROHIBITION ON DISPOSITION BEFORE COMPLETION OF PLAN.—The Administrator shall not dispose of any Space Shuttle program hardware before the plan required by paragraph (1) is submitted to Congress.

“(b) SPACE SHUTTLE TRANSITION LIAISON OFFICE.—

“(1) ESTABLISHMENT.—The Administrator shall develop a plan and establish a Space Shuttle Transition Liaison Office within the Office of Human Capital Management of NASA [National Aeronautics and Space Administration] to assist local communities affected by the termination of the Space Shuttle program in mitigating the negative impacts on such communities caused by such termination. The plan shall define the size of the affected local community that would receive assistance described in paragraph (2).

“(2) MANNER OF ASSISTANCE.—In providing assistance under paragraph (1), the office established under such paragraph shall—

“(A) offer nonfinancial, technical assistance to communities described in such paragraph to assist in the mitigation described in such paragraph; and

“(B) serve as a clearinghouse to assist such communities in identifying services available from other Federal, State, and local agencies to assist in such mitigation.

“(3) TERMINATION OF OFFICE.—The office established under paragraph (1) shall terminate 2 years after the completion of the last Space Shuttle flight.

“(4) SUBMISSION.—Not later than 180 days after the date of enactment of this Act [Oct. 15, 2008], NASA shall provide a copy of the plan required by paragraph (1) to the Congress.”

Pub. L. 110–161, div. B, title III, Dec. 26, 2007, 121 Stat. 1919, provided that: “The Administrator of the National

Aeronautics and Space Administration shall prepare a strategy for minimizing job losses when the National Aeronautics and Space Administration transitions from the Space Shuttle to a successor human-rated space transport vehicle. This strategy shall include: (1) specific initiatives that the National Aeronautics and Space Administration has undertaken, or plans to undertake, to maximize the utilization of existing civil service and contractor workforces at each of the affected Centers; (2) efforts to equitably distribute tasks and workload between the Centers to mitigate the brunt of job losses being borne by only certain Centers; (3) new workload, tasks, initiatives, and missions being secured for the affected Centers; and (4) overall projections of future civil service and contractor workforce levels at the affected Centers. The Administrator shall transmit this strategy to Congress not later than 90 days after the date of enactment of this Act [Dec. 26, 2007]. The Administrator shall update and transmit to Congress this strategy not less than every six months thereafter until the successor human-rated space transport vehicle is fully operational.”

Pub. L. 109–155, title V, §502, Dec. 30, 2005, 119 Stat. 2928, provided that:

“(a) IN GENERAL.—The Administrator [of the National Aeronautics and Space Administration] shall, to the fullest extent possible consistent with a successful development program, use the personnel, capabilities, assets, and infrastructure of the Space Shuttle program in developing the Crew Exploration Vehicle, Crew Launch Vehicle, and a heavy-lift launch vehicle.

“(b) PLAN.—Not later than 180 days after the date of enactment of this Act [Dec. 30, 2005], the Administrator shall transmit to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan describing how NASA [National Aeronautics and Space Administration] will proceed with its human space flight programs, which, at a minimum, shall describe—

“(1) how NASA will deploy personnel from, and use the facilities of, the Space Shuttle program to ensure that the Space Shuttle operates as safely as possible through its final flight and to ensure that personnel and facilities from the Space Shuttle program are used in NASA’s exploration programs in accordance with subsection (a);

“(2) the planned number of flights the Space Shuttle will make before its retirement;

“(3) the means, other than the Space Shuttle and the Crew Exploration Vehicle, including commercial vehicles, that may be used to ferry crew and cargo to and from the ISS [International Space Station];

“(4) the intended purpose of lunar missions and the architecture for those missions; and

“(5) the extent to which the Crew Exploration Vehicle will allow for the escape of the crew in an emergency.

“(c) PERSONNEL.—The Administrator shall consult with other appropriate Federal agencies and with NASA contractors and employees to develop a transition plan for any Federal and contractor personnel engaged in the Space Shuttle program who can no longer be retained because of the retirement of the Space Shuttle. The plan shall include actions to assist Federal and contractor personnel in taking advantage of training, retraining, job placement and relocation programs, and any other actions that NASA will take to assist the employees. The plan shall also describe how the Administrator will ensure that NASA and its contractors will have an appropriate complement of employees to allow for the safest possible use of the Space Shuttle through its final flight. The Administrator shall transmit the plan to the Committee on Science [now Committee on Science, Space, and Technology] of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate not later than March 31, 2006.”

**§ 70502. Exploration plan and programs**

The Administrator shall—

(1) construct an architecture and implementation plan for the Administration's human exploration program that is not critically dependent on the achievement of milestones by fixed dates;

(2) implement an exploration research and technology development program to enable human and robotic operations consistent with section 20302(b) of this title;

(3) conduct an in-situ resource utilization technology program to develop the capability to use space resources to increase independence from Earth, and sustain exploration beyond low-Earth orbit; and

(4) pursue aggressively automated rendezvous and docking capabilities that can support the International Space Station and other mission requirements.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3430; Pub. L. 115-10, title IV, §415, Mar. 21, 2017, 131 Stat. 34.)

## HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70502 .....	42 U.S.C. 16763.	Pub. L. 109-155, title V, §503, Dec. 30, 2005, 119 Stat. 2929.

**Editorial Notes**

## AMENDMENTS

2017—Par. (2). Pub. L. 115-10 amended par. (2) generally. Prior to amendment, par. (2) read as follows: “implement an exploration technology development program to enable lunar human and robotic operations consistent with section 20302(b) of this title, including surface power to use on the Moon and other locations;”.

**§ 70503. Ground-based analog capabilities**

(a) IN GENERAL.—The Administrator may establish a ground-based analog capability in remote United States locations in order to assist in the development of lunar operations, life support, and in-situ resource utilization experience and capabilities.

(b) ENVIRONMENTAL CHARACTERISTICS.—The Administrator shall select locations for the activities described in subsection (a) that—

(1) are regularly accessible;

(2) have significant temperature extremes and range; and

(3) have access to energy and natural resources (including geothermal, permafrost, volcanic, or other potential resources).

(c) INVOLVEMENT OF LOCAL POPULATIONS AND PRIVATE SECTOR PARTNERS.—In carrying out this section, the Administrator shall involve local populations, academia, and industrial partners as much as possible to ensure that ground-based benefits and applications are encouraged and developed.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3430.)

## HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70503 .....	42 U.S.C. 16764.	Pub. L. 109-155, title V, §504, Dec. 30, 2005, 119 Stat. 2929.

**§ 70504. Stepping stone approach to exploration**

(a) IN GENERAL.—The Administration—

(1) may conduct missions to intermediate destinations in sustainable steps in accordance with section 20302(b) of this title, and on a timetable determined by the availability of funding, in order to achieve the objective of human exploration of Mars specified in section 202(b)(5) of the National Aeronautics and Space Administration Authorization Act of 2010 (42 U.S.C. 18312(b)(5)); and

(2) shall incorporate any such missions into the human exploration roadmap under section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017.

(b) COST-EFFECTIVENESS.—In order to maximize the cost-effectiveness of the long-term space exploration and utilization activities of the United States, the Administrator shall take all necessary steps, including engaging international, academic, and industry partners, to ensure that activities in the Administration's human space exploration program balance how those activities might also help meet the requirements of future exploration and utilization activities leading to human habitation on the surface of Mars.

(c) COMPLETION.—Within budgetary considerations, once an exploration-related project enters its development phase, the Administrator shall seek, to the maximum extent practicable, to complete that project without undue delays.

(d) INTERNATIONAL PARTICIPATION.—In order to achieve the goal of successfully conducting a crewed mission to the surface of Mars, the President may invite the United States partners in the ISS program and other nations, as appropriate, to participate in an international initiative under the leadership of the United States.

(Pub. L. 111-314, §3, Dec. 18, 2010, 124 Stat. 3431; Pub. L. 115-10, title IV, §414, Mar. 21, 2017, 131 Stat. 34.)

## HISTORICAL AND REVISION NOTES

<i>Revised Section</i>	<i>Source (U.S. Code)</i>	<i>Source (Statutes at Large)</i>
70504 .....	42 U.S.C. 17731.	Pub. L. 110-422, title IV, §403, Oct. 15, 2008, 122 Stat. 4789.

**Editorial Notes**

## REFERENCES IN TEXT

Section 432 of the National Aeronautics and Space Administration Transition Authorization Act of 2017, referred to in subsec. (a)(2), is section 432 of Pub. L. 115-10, which is set out in a note under section 20302 of this title.

## AMENDMENTS

2017—Pub. L. 115-10 amended section generally. Prior to amendment, text read as follows: “In order to maxi-