

One Hundred Eighth Congress
of the
United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Tuesday,
the twentieth day of January, two thousand and four*

An Act

To promote the development of the emerging commercial human space flight industry, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Commercial Space Launch Amendments Act of 2004”.

SEC. 2. AMENDMENTS.

(a) FINDINGS AND PURPOSES.—Section 70101 of title 49, United States Code, is amended—

(1) in subsection (a)(3), by inserting “human space flight,” after “microgravity research,”;

(2) in subsection (a)(4)—

(A) by striking “satellite”; and

(B) by striking “services now available from” and inserting “capabilities of”;

(3) in subsection (a)(8), by striking “and” at the end;

(4) in subsection (a)(9), by striking the period and inserting a semicolon;

(5) by adding at the end of subsection (a) the following new paragraphs:

“(10) the goal of safely opening space to the American people and their private commercial, scientific, and cultural enterprises should guide Federal space investments, policies, and regulations;

“(11) private industry has begun to develop commercial launch vehicles capable of carrying human beings into space and greater private investment in these efforts will stimulate the Nation’s commercial space transportation industry as a whole;

“(12) space transportation is inherently risky, and the future of the commercial human space flight industry will depend on its ability to continually improve its safety performance;

“(13) a critical area of responsibility for the Department of Transportation is to regulate the operations and safety of the emerging commercial human space flight industry;

“(14) the public interest is served by creating a clear legal, regulatory, and safety regime for commercial human space flight; and

“(15) the regulatory standards governing human space flight must evolve as the industry matures so that regulations

neither stifle technology development nor expose crew or space flight participants to avoidable risks as the public comes to expect greater safety for crew and space flight participants from the industry.”;

(6) in subsection (b)(2)—

(A) by striking “and” at the end of subparagraph (A);

(B) by inserting “and” after the semicolon in subparagraph (B); and

(C) by adding at the end the following new subparagraph:

“(C) promoting the continuous improvement of the safety of launch vehicles designed to carry humans, including through the issuance of regulations, to the extent permitted by this chapter;”;

(7) in subsection (b)(3), by striking “issue and transfer” and inserting “issue permits and commercial licenses and transfer”.

(b) DEFINITIONS.—Section 70102 of title 49, United States Code, is amended—

(1) by redesignating paragraphs (2) through (17) as paragraphs (3), (4), (5), (6), (7), (8), (9), (10), (12), (13), (14), (15), (16), (18), (21), and (22), respectively;

(2) by inserting after paragraph (1) the following new paragraph:

“(2) ‘crew’ means any employee of a licensee or transferee, or of a contractor or subcontractor of a licensee or transferee, who performs activities in the course of that employment directly relating to the launch, reentry, or other operation of or in a launch vehicle or reentry vehicle that carries human beings.”;

(3) in paragraph (4), as so redesignated by paragraph (1) of this subsection, by inserting “, crew, or space flight participant” after “any payload”;

(4) in paragraph (6)(A), as so redesignated by paragraph (1) of this subsection, by striking “and payload” and inserting “, payload, crew (including crew training), or space flight participant”;

(5) in paragraph (8)(A), as so redesignated by paragraph (1) of this subsection, by inserting “or human beings” after “place a payload”;

(6) by inserting after paragraph (10), as so redesignated by paragraph (1) of this subsection, the following new paragraph:

“(11) except in section 70104(c), ‘permit’ means an experimental permit issued under section 70105a.”;

(7) in paragraph (13), as so redesignated by paragraph (1) of this subsection, by inserting “crew, or space flight participants,” after “and its payload,”;

(8) in paragraph (14)(A), as so redesignated by paragraph (1) of this subsection, by striking “and its payload” inserting “and payload, crew (including crew training), or space flight participant”;

(9) by inserting after paragraph (16), as so redesignated by paragraph (1) of this subsection, the following new paragraph:

“(17) ‘space flight participant’ means an individual, who is not crew, carried within a launch vehicle or reentry vehicle.”;

(10) by inserting after paragraph (18), as so redesignated by paragraph (1) of this subsection, the following new paragraphs:

“(19) unless and until regulations take effect under section 70120(c)(2), ‘suborbital rocket’ means a vehicle, rocket-propelled in whole or in part, intended for flight on a suborbital trajectory, and the thrust of which is greater than its lift for the majority of the rocket-powered portion of its ascent.

“(20) ‘suborbital trajectory’ means the intentional flight path of a launch vehicle, reentry vehicle, or any portion thereof, whose vacuum instantaneous impact point does not leave the surface of the Earth.”; and

(11) in paragraph (21), as so redesignated by paragraph (1) of this subsection—

- (A) by striking “or” at the end of subparagraph (C);
- (B) by striking the period at the end of subparagraph (D) and inserting “; or”; and
- (C) by adding at the end the following new subparagraph:

“(E) crew or space flight participants.”

(c) COMMERCIAL HUMAN SPACE FLIGHT.—(1) Section 70103(b)(1) of title 49, United States Code, is amended by inserting “; including those involving space flight participants” after “private sector”.

(2) Section 70103 of title 49, United States Code, is amended by redesignating subsection (c) as subsection (d), and by inserting after subsection (b) the following new subsection:

“(c) SAFETY.—In carrying out the responsibilities under subsection (b), the Secretary shall encourage, facilitate, and promote the continuous improvement of the safety of launch vehicles designed to carry humans, and the Secretary may, consistent with this chapter, promulgate regulations to carry out this subsection.”.

(3) Section 70104(a) of title 49, United States Code, is amended—

(A) by striking “License Requirement.—A license issued or transferred under this chapter” and inserting “Requirement.—A license issued or transferred under this chapter, or a permit”; and

(B) by inserting after paragraph (4) the following: “Notwithstanding this subsection, a permit shall not authorize a person to operate a launch site or reentry site.”.

(4) Section 70104(b) of title 49, United States Code, is amended by inserting “or permit” after “holder of a license”.

(5) Section 70104 of title 49, United States Code, is amended by adding at the end the following new subsection:

“(d) SINGLE LICENSE OR PERMIT.—The Secretary of Transportation shall ensure that only 1 license or permit is required from the Department of Transportation to conduct activities involving crew or space flight participants, including launch and reentry, for which a license or permit is required under this chapter. The Secretary shall ensure that all Department of Transportation regulations relevant to the licensed or permitted activity are satisfied.”.

(6) Section 70105(a) of title 49, United States Code, is amended—

(A) in paragraph (1), by striking “a license is not issued” and inserting “the Secretary has not taken action on a license application”; and

(B) in paragraph (2), by inserting “(including approval procedures for the purpose of protecting the health and safety of crews and space flight participants, to the extent permitted by subsections (b) and (c))” after “or personnel”.

(7) Section 70105(b)(1) of title 49, United States Code, is amended by inserting “or permit” after “for a license”.

(8) Section 70105(b)(2)(B) of title 49, United States Code, is amended by striking “an additional requirement necessary to protect” and inserting “any additional requirement necessary to protect”.

(9) Section 70105(b)(2)(C) of title 49, United States Code, is amended—

(A) by inserting “or permit” after “for a license”; and

(B) by striking “and” at the end thereof.

(10) Section 70105(b)(2) of title 49, United States Code, is amended by redesignating subparagraph (D) as subparagraph (E) and inserting after subparagraph (C) the following new subparagraph:

“(D) additional license requirements, for a launch vehicle carrying a human being for compensation or hire, necessary to protect the health and safety of crew or space flight participants, only if such requirements are imposed pursuant to final regulations issued in accordance with subsection (c); and”.

(11) Section 70105(b)(2)(E) of title 49, United States Code, as so redesignated by paragraph (11) of this subsection, is amended by inserting “or permit” after “for a license”.

(12) Section 70105(b)(3) of title 49, United States Code, is amended by adding at the end the following: “The Secretary may not grant a waiver under this paragraph that would permit the launch or reentry of a launch vehicle or a reentry vehicle without a license or permit if a human being will be on board.”.

(13) Section 70105(b) of title 49, United States Code, is amended by adding at the end the following new paragraphs:

“(4) The holder of a license or a permit under this chapter may launch or reenter crew only if—

“(A) the crew has received training and has satisfied medical or other standards specified in the license or permit in accordance with regulations promulgated by the Secretary;

“(B) the holder of the license or permit has informed any individual serving as crew in writing, prior to executing any contract or other arrangement to employ that individual (or, in the case of an individual already employed as of the date of enactment of the Commercial Space Launch Amendments Act of 2004, as early as possible, but in any event prior to any launch in which the individual will participate as crew), that the United States Government has not certified the launch vehicle as safe for carrying crew or space flight participants; and

“(C) the holder of the license or permit and crew have complied with all requirements of the laws of the United States that apply to crew.

“(5) The holder of a license or a permit under this chapter may launch or reenter a space flight participant only if—

“(A) in accordance with regulations promulgated by the Secretary, the holder of the license or permit has

informed the space flight participant in writing about the risks of the launch and reentry, including the safety record of the launch or reentry vehicle type, and the Secretary has informed the space flight participant in writing of any relevant information related to risk or probable loss during each phase of flight gathered by the Secretary in making the determination required by section 70112(a)(2) and (c);

“(B) the holder of the license or permit has informed any space flight participant in writing, prior to receiving any compensation from that space flight participant or (in the case of a space flight participant not providing compensation) otherwise concluding any agreement to fly that space flight participant, that the United States Government has not certified the launch vehicle as safe for carrying crew or space flight participants;

“(C) in accordance with regulations promulgated by the Secretary, the space flight participant has provided written informed consent to participate in the launch and reentry and written certification of compliance with any regulations promulgated under paragraph (6)(A); and

“(D) the holder of the license or permit has complied with any regulations promulgated by the Secretary pursuant to paragraph (6).

“(6)(A) The Secretary may issue regulations requiring space flight participants to undergo an appropriate physical examination prior to a launch or reentry under this chapter. This subparagraph shall cease to be in effect three years after the date of enactment of the Commercial Space Launch Amendments Act of 2004.

“(B) The Secretary may issue additional regulations setting reasonable requirements for space flight participants, including medical and training requirements. Such regulations shall not be effective before the expiration of 3 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004.”.

(14) Section 70105 of title 49, United States Code, is amended by redesignating subsection (c) as subsection (d), and by adding after subsection (b) the following new subsection:

“(c) SAFETY REGULATIONS.—(1) The Secretary may issue regulations governing the design or operation of a launch vehicle to protect the health and safety of crew and space flight participants.

“(2) Regulations issued under this subsection shall—

“(A) describe how such regulations would be applied when the Secretary is determining whether to issue a license under this chapter;

“(B) apply only to launches in which a vehicle will be carrying a human being for compensation or hire;

“(C) be limited to restricting or prohibiting design features or operating practices that—

“(i) have resulted in a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew or space flight participants during a licensed or permitted commercial human space flight;

or

“(ii) contributed to an unplanned event or series of events during a licensed or permitted commercial

human space flight that posed a high risk of causing a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew or space flight participants; and

“(D) be issued with a description of the instance or instances when the design feature or operating practice being restricted or prohibited contributed to a result or event described in subparagraph (C).

“(3) Beginning 8 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary may propose regulations under this subsection without regard to paragraph (2)(C) and (D). Any such regulations shall take into consideration the evolving standards of safety in the commercial space flight industry.

“(4) Nothing in this subsection shall be construed to limit the authority of the Secretary to issue requirements or regulations to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States.”

(15) Section 70105(d) of title 49, United States Code, as so redesignated by paragraph (15) of this subsection, is amended by inserting “or permit” after “of a license”.

(16) Chapter 701 of title 49, United States Code, is amended by inserting after section 70105 the following new section:

“§ 70105a. Experimental permits

“(a) A person may apply to the Secretary of Transportation for an experimental permit under this section in the form and manner the Secretary prescribes. Consistent with the protection of the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 120 days after receiving an application pursuant to this section, shall issue a permit if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 90 days after receiving an application. The Secretary shall transmit to the Committee on Science of the House of Representatives and Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 15 days after any occurrence when the Secretary has failed to act on a permit within the deadline established by this section.

“(b) In carrying out subsection (a), the Secretary may establish procedures for safety approvals of launch vehicles, reentry vehicles, safety systems, processes, services, or personnel that may be used in conducting commercial space launch or reentry activities pursuant to a permit.

“(c) In order to encourage the development of a commercial space flight industry, the Secretary may when issuing permits use the authority granted under section 70105(b)(2)(C).

“(d) The Secretary may issue a permit only for reusable sub-orbital rockets that will be launched or reentered solely for—

“(1) research and development to test new design concepts, new equipment, or new operating techniques;

“(2) showing compliance with requirements as part of the process for obtaining a license under this chapter; or

“(3) crew training prior to obtaining a license for a launch or reentry using the design of the rocket for which the permit would be issued.

“(e) Permits issued under this section shall—

“(1) authorize an unlimited number of launches and reentries for a particular suborbital rocket design for the uses described in subsection (d); and

“(2) specify the type of modifications that may be made to the suborbital rocket without changing the design to an extent that would invalidate the permit.

“(f) Permits shall not be transferable.

“(g) A permit may not be issued for, and a permit that has already been issued shall cease to be valid for, a particular design for a reusable suborbital rocket after a license has been issued for the launch or reentry of a rocket of that design.

“(h) No person may operate a reusable suborbital rocket under a permit for carrying any property or human being for compensation or hire.

“(i) For the purposes of sections 70106, 70107, 70108, 70109, 70110, 70112, 70115, 70116, 70117, and 70121 of this chapter—

“(1) a permit shall be considered a license;

“(2) the holder of a permit shall be considered a licensee;

“(3) a vehicle operating under a permit shall be considered to be licensed; and

“(4) the issuance of a permit shall be considered licensing.

This subsection shall not be construed to allow the transfer of a permit.”.

(17) Section 70106(a) of title 49, United States Code, is amended—

(A) by inserting “at a site used for crew or space flight participant training,” after “assemble a launch vehicle or reentry vehicle.”; and

(B) by striking “section 70104(c)” and inserting “sections 70104(c), 70105, and 70105a”.

(18) Section 70107(b) of title 49, United States Code, is amended—

(A) by inserting “(1)” before “On the initiative”; and

(B) by adding the following new paragraph at the end:

“(2) The Secretary shall modify a license issued or transferred under this chapter whenever a modification is needed for the license to be in conformity with a regulation that was issued pursuant to section 70105(c) after the issuance of the license. This paragraph shall not apply to permits.”.

(19) Section 70107 of title 49, United States Code, is amended by redesignating subsections (d) and (e) as subsections (e) and (f), respectively, and by inserting after subsection (c) the following new subsection:

“(d) ADDITIONAL SUSPENSIONS.—(1) The Secretary may suspend a license when a previous launch or reentry under the license has resulted in a serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew or space flight participants and the Secretary has determined that continued operations under the license are likely to cause additional serious or fatal injury (as defined in 49 CFR 830, as in effect on November 10, 2004) to crew or space flight participants.

“(2) Any suspension imposed under this subsection shall be for as brief a period as possible and, in any event, shall cease when the Secretary—

“(A) has determined that the licensee has taken sufficient steps to reduce the likelihood of a recurrence of the serious or fatal injury; or

“(B) has modified the license pursuant to subsection (b) to sufficiently reduce the likelihood of a recurrence of the serious or fatal injury.

“(3) This subsection shall not apply to permits.”.

(20) Section 70110(a)(1) of title 49, United States Code, is amended by inserting “or 70105a” after “70105(a)”.

(21) Section 70112(b)(2) of title 49, United States Code, is amended—

(A) by inserting “crew, space flight participants,” after “transferee, contractors, subcontractors,”; and

(B) by inserting “or by space flight participants,” after “its own employees”.

(22) Section 70113(a)(1) of title 49, United States Code, is amended by inserting “but not against a space flight participant,” after “subcontractor of a customer.”

(23) Section 70113(f) of title 49, United States Code, is amended by inserting at the end the following: “This section does not apply to permits.”.

(24) Section 70115(b)(1)(D)(i) of title 49, United States Code, is amended by inserting “crew or space flight participant training site,” after “site of a launch vehicle or reentry vehicle.”.

(25) Section 70120 of title 49, United States Code, is amended by adding at the end the following new subsections:

“(c) AMENDMENTS.—(1) Not later than 12 months after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary shall publish proposed regulations to carry out that Act, including regulations relating to crew, space flight participants, and permits for launch or reentry of reusable suborbital rockets. Not later than 18 months after such date of enactment, the Secretary shall issue final regulations.

“(2)(A) Starting 3 years after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary may issue final regulations changing the definition of suborbital rocket under this chapter. No such regulation may take effect until 180 days after the Secretary has submitted the regulation to the Congress.

“(B) The Secretary may issue regulations under this paragraph only if the Secretary has determined that the definition in section 70102 does not describe, or will not continue to describe, all appropriate vehicles and only those vehicles. In making that determination, the Secretary shall take into account the evolving nature of the commercial space launch industry.

“(d) EFFECTIVE DATE.—(1) Licenses for the launch or reentry of launch vehicles or reentry vehicles with human beings on board and permits may be issued by the Secretary prior to the issuance of the regulations described in subsection (c).

“(2) As soon as practicable after the date of enactment of the Commercial Space Launch Amendments Act of 2004, the Secretary shall issue guidelines or advisory circulars to

guide the implementation of that Act until regulations are issued.

“(3) Notwithstanding paragraphs (1) and (2), no licenses for the launch or reentry of launch vehicles or reentry vehicles with human beings on board or permits may be issued starting three years after the date of enactment of the Commercial Space Launch Amendments Act of 2004 unless the final regulations described in subsection (c) have been issued.”

(26) The table of sections for chapter 701 of title 49, United States Code, is amended by inserting after the item relating to 70105 the following new item:

“70105a. Experimental permits.”

SEC. 3. STUDIES.

(a) RISK SHARING.—Not later than 60 days after the date of enactment of this Act, the Secretary of Transportation shall enter into an arrangement with a nonprofit entity for the conduct of an independent comprehensive study of the liability risk sharing regime in the United States for commercial space transportation under section 70113 of title 49, United States Code. To ensure that Congress has a full analysis of the liability risk sharing regime, the study shall assess methods by which the current system could be eliminated, including an estimate of the time required to implement each of the methods assessed. The study shall assess whether any alternative steps would be needed to maintain a viable and competitive United States space transportation industry if the current regime were eliminated. In conducting the assessment under this subsection, input from commercial space transportation insurance experts shall be sought. The study also shall examine liability risk sharing in other nations with commercial launch capability and evaluate the direct and indirect impact that ending this regime would have on the competitiveness of the United States commercial space launch industry in relation to foreign commercial launch providers and on United States assured access to space.

(b) SAFETY.—The Secretary of Transportation, in consultation with the Administrator of the National Aeronautics and Space Administration, shall enter into an arrangement with a nonprofit entity for a report analyzing safety issues related to launching human beings into space. In designing the study, the Secretary should take into account any recommendations from the Commercial Space Transportation Advisory Committee and the National Aeronautics and Space Administration’s Aerospace Safety Advisory Panel. The report shall be submitted to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science within 4 years of the date of enactment of this Act. The report shall analyze and make recommendations about—

(1) the standards of safety and concepts of operation that should guide the regulation of human space flight and whether the standard of safety should vary by class or type of vehicle, the purpose of flight, or other considerations;

(2) the effectiveness of the commercial licensing and permitting regime under chapter 701 of title 49, United States Code, particularly in ensuring the safety of the public and of crew and space flight participants during launch, in-space transit, orbit, and reentry, and whether any changes are needed to that chapter;

(3) whether there is a need for commercial ground operations for commercial space flight, including provision of launch support, launch and reentry control, mission control, range operations, and communications and telemetry operations through all phases of flight, and if such operations developed, whether and how they should be regulated;

(4) whether expendable and reusable launch and reentry vehicles should be regulated differently from each other, and whether either of those vehicles should be regulated differently when carrying human beings;

(5) whether the Federal Government should separate the promotion of human space flight from the regulation of such activity;

(6) how third parties could be used to evaluate the qualification and acceptance of new human space flight vehicles prior to their operation;

(7) how nongovernment experts could participate more fully in setting standards and developing regulations concerning human space flight safety; and

(8) whether the Federal Government should regulate the extent of foreign ownership or control of human space flight companies operating or incorporated in the United States.

SEC. 4. TECHNICAL AMENDMENT.

Section 102(c) of the Commercial Space Act of 1998 is repealed.

Speaker of the House of Representatives.

*Vice President of the United States and
President of the Senate.*