

establish a rotorcraft and other runway-independent air vehicles initiative with the objective of developing and demonstrating improved safety, noise, and environmental impact in a relevant environment.

(c) **HYPERSONICS RESEARCH.**—The Administrator may establish a hypersonic research program with the objective of exploring the science and technology of hypersonic flight using air-breathing propulsion concepts, through a mix of theoretical work, basic and applied research, and development of flight research demonstration vehicles. The program may also include the transition to the hypersonic range of Mach 3 to Mach 5.

(d) **REVOLUTIONARY AERONAUTICAL CONCEPTS.**—The Administrator may establish a research program which covers a unique range of subsonic, fixed wing vehicles and propulsion concepts. This research is intended to push technology barriers beyond current subsonic technology. Propulsion concepts include advanced materials, morphing engines, hybrid engines, and fuel cells.

(e) **FUEL CELL-POWERED AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a fuel cell-powered aircraft research program whose objective shall be to develop and test concepts to enable a hydrogen fuel cell-powered aircraft that would have no hydrocarbon or nitrogen oxide emissions into the environment.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(f) **MARS AIRCRAFT RESEARCH.**—

(1) **OBJECTIVE.**—The Administrator may establish a Mars Aircraft project whose objective shall be to develop and test concepts for an uncrewed aircraft that could operate for sustained periods in the atmosphere of Mars.

(2) **APPROACH.**—The Administrator may establish a program of competitively awarded grants available to teams of researchers that may include the participation of individuals from universities, industry, and government for the conduct of this research.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3379.)

HISTORICAL AND REVISION NOTES

| <i>Revised Section</i> | <i>Source (U.S. Code)</i> | <i>Source (Statutes at Large)</i> |
|------------------------|---------------------------|---|
| 40112(a) | 42 U.S.C. 16722(b). | Pub. L. 109–155, title IV, § 422(b)–(g), Dec. 30, 2005, 119 Stat. 2925. |
| 40112(b) | 42 U.S.C. 16722(c). | |
| 40112(c) | 42 U.S.C. 16722(d). | |
| 40112(d) | 42 U.S.C. 16722(e). | |
| 40112(e) | 42 U.S.C. 16722(f). | |
| 40112(f) | 42 U.S.C. 16722(g). | |

NATIONAL AERO-SPACE PLANE PROGRAM

Pub. L. 101–611, title I, § 116, Nov. 16, 1990, 104 Stat. 3202, provided that:

“(a) **NATIONAL AERO-SPACE PLANE PROGRAM.**—The Secretary of Defense (hereafter in this section referred to as the ‘Secretary’) and the Administrator shall jointly pursue on a high priority basis a National Aero-Space Plane program whose objective shall be the development and demonstration, by 1997, of a primarily

air breathing single-stage-to-orbit and long range hypersonic cruise research flight vehicle. The program shall be a research program, and to the extent practicable technological information developed shall be transferred to the military and to the domestic civil aviation and other private industries.

“(b) **MANAGEMENT PLAN.**—

“(1) The Secretary and the Administrator [sic] shall jointly develop a management plan for the program established under subsection (a), which shall include goals, major tasks, anticipated schedules, organizational structure, funding profiles, details of the respective responsibilities of the Secretary and the Administrator, and resource procurement strategies.

“(2) The management plan developed pursuant to paragraph (1) shall be submitted to the Congress within 120 days after the date of enactment of this Act [Nov. 16, 1990].”

[Pub. L. 101–611, title I, § 127, Nov. 16, 1990, 104 Stat. 3205, provided that: “For purposes of this title [see Tables for classification], the term ‘Administrator’ means the Administrator of the National Aeronautics and Space Administration.”]

§ 40113. **Airspace systems research**

(a) **OBJECTIVE.**—The Airspace Systems Research program shall pursue research and development to enable revolutionary improvements to and modernization of the National Airspace System, as well as to enable the introduction of new systems for vehicles that can take advantage of an improved, modern air transportation system.

(b) **ALIGNMENT.**—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Airspace Systems Research program so that they directly support the objectives of the Joint Planning and Development Office’s Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3380.)

HISTORICAL AND REVISION NOTES

| <i>Revised Section</i> | <i>Source (U.S. Code)</i> | <i>Source (Statutes at Large)</i> |
|------------------------|---------------------------|--|
| 40113 | 42 U.S.C. 16723. | Pub. L. 109–155, title IV, § 423, Dec. 30, 2005, 119 Stat. 2925. |

In subsection (b), the date “December 30, 2005” is substituted for “the date of enactment of this Act” to reflect the date of enactment of the National Aeronautics and Space Administration Authorization Act of 2005 (Public Law 109–155, 119 Stat. 2895).

§ 40114. **Aviation safety and security research**

(a) **OBJECTIVE.**—The Aviation Safety and Security Research program shall pursue research and development activities that directly address the safety and security needs of the National Airspace System and the aircraft that fly in it. The program shall develop prevention, intervention, and mitigation technologies aimed at causal, contributory, or circumstantial factors of aviation accidents.

(b) **ALIGNMENT.**—Not later than 1 year after December 30, 2005, the Administrator shall align the projects of the Aviation Safety and Security Research program so that they directly support the objectives of the Joint Planning and Development Office’s Next Generation Air Transportation System Integrated Plan.

(Pub. L. 111–314, § 3, Dec. 18, 2010, 124 Stat. 3380.)