
A BILL FOR AN ACT

RELATING TO UNMANNED AERIAL SYSTEMS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The legislature finds that a national need
2 exists to safely integrate unmanned aerial systems into the
3 national air space. To achieve this goal, the United States
4 Congress has directed the Federal Aviation Administration
5 (through the FAA Modernization and Reform Act of 2012) to
6 establish unmanned aerial systems research programs at six
7 national test sites that will be used to develop unmanned aerial
8 systems operating standards and regulations. This development
9 will include the creation of a body of standards for test range
10 operators and flight operations, with a safety goal equivalent
11 to that of manned flight. The development of unmanned aerial
12 systems operating standards and regulations will also provide
13 the Federal Aviation Administration with unmanned aerial systems
14 research, development, and operational data required to
15 facilitate the integration of unmanned aerial systems flights
16 into the national air space. This integration will help realize
17 the commercial potential of this technology, currently estimated
18 to be worth more than \$13,600,000,000 for the first three years



1 of integration and projected to expand to more than
2 \$82,100,000,000 between 2015 and 2025, with total job creation
3 estimated to be 103,776 by 2025.

4 The State of Hawaii, in partnership with the states of
5 Alaska and Oregon, submitted a tri-state proposal to establish a
6 Pan Pacific unmanned aerial systems test range complex to
7 support the Federal Aviation Administration's unmanned aerial
8 systems test site initiative. The University of Alaska, through
9 its Alaska center for unmanned aircraft systems integration,
10 served as the lead applicant for this proposal, and was recently
11 designated by the Federal Aviation Administration as one of the
12 six national test site operators. The tri-state team has now
13 been given six months to organize and begin implementation of
14 Pan Pacific unmanned aerial systems test range complex
15 operations.

16 Toward this end, the University of Alaska has established a
17 board of directors, comprising the Alaska center for unmanned
18 aircraft systems integration executive director; the senior
19 representative from Oregon (the vice-president for research at
20 Oregon State University); the senior representative from Hawaii
21 (the deputy adjutant general of the State of Hawaii); and the
22 chief executive officer of the Pan Pacific unmanned aerial



1 systems test range complex (the Alaska center for unmanned
2 aircraft systems integration deputy director). The board will
3 support performance of the management team, including task
4 allocations; review of performance and reports to the Federal
5 Aviation Administration; determination of overall research
6 objectives; approval of new partnerships; and approval of test
7 site policies, procedures, risk management, and mitigation. The
8 board will meet quarterly, with at least one meeting per year
9 held in person.

10 The University of Alaska is also establishing a Pan Pacific
11 unmanned aerial systems test range complex management team, to
12 be headed by a chief executive officer and to include the chief
13 operating officer from each of the three states. The chief
14 operating officers will provide programmatic guidance,
15 disseminate policies and standards, develop marketing programs,
16 foster customer relationships, activate and manage test range
17 operations, provide performance assessments, coordinate with all
18 other test site ranges and members, and collect data and reports
19 for compilation and submission to the Federal Aviation
20 Administration.

21 Hawaii offers many unique qualities to support unmanned
22 aerial systems operations including expansive over-water areas



1 unencumbered by other aviation uses; proximity to the United
2 States Pacific Command, which is projected to be a significant
3 user of future unmanned aerial systems; opportunities for joint
4 operations with the Pacific missile range facility on the island
5 of Kauai; and opportunities for long-range point-to-point tests
6 with partner ranges in Alaska and Oregon.

7 Hawaii's proposed test ranges link to military and
8 restricted areas used for current unmanned aerial systems
9 operations. These sites include the Pohakuloa training area on
10 the island of Hawaii, Bradshaw and Wheeler army airfields on
11 Oahu, and the Pacific missile range facility on the island of
12 Kauai. Test points within the ranges would be used to support
13 both shore and ship-based development, testing and certification
14 of new unmanned aerial systems, training and crew certification
15 of operational unmanned aerial systems, and development of
16 expanded and joint capabilities involving existing
17 communications systems and operations tactics using unmanned
18 aerial systems.

19 The proposed Hawaii ranges have historically provided an
20 important focus for the development of scientific applications
21 of unmanned aerial systems, with significant milestones
22 including test flights of the Aerovironment Pathfinder,



1 Pathfinder Plus, and the Helios solar-hybrid propulsion high
2 altitude, long endurance unmanned aerial systems. Scientific
3 applications led by federal agencies have established Hawaii as
4 a focal point for the National Oceanic and Atmospheric
5 Administration's exploration of unmanned aerial systems as a
6 tool for marine park surveillance. Since 2007, the National
7 Oceanic and Atmospheric Administration has used unmanned aerial
8 systems to monitor Papahānaumokuākea Marine National Monument,
9 as well as performed initial trials using small hand launched
10 systems.

11 The University of Hawaii is testing unmanned aerial systems
12 in several of its research programs and evaluating the utility
13 and impact of unmanned aerial systems through analysis of
14 coastal resource management, terrestrial and aquatic
15 environmental monitoring, natural source management and
16 inventory, and human impact studies. The University of Hawaii is
17 also developing programs to train students and research
18 professionals on unmanned aerial systems and plans to integrate
19 this capacity into accredited degree programs.

20 Existing and potential civilian use of unmanned aerial
21 systems is wide ranging, including such diverse applications as
22 emergency search and rescue operations; wildfire detection and



1 management; fisheries management; agricultural monitoring
2 (including invasive species detection and mapping); reef health
3 surveys; hazardous spills monitoring; dam and reservoir overflow
4 detection; tsunami damage surveys and assessment; algae bloom
5 detection and mapping; air quality monitoring; motor vehicle
6 traffic management; lava flow monitoring; aerial photography for
7 mapping; disaster management and damage assessment; power line
8 monitoring; flood and pollution control; land use surveys;
9 watershed management; wildlife tracking; geographical,
10 geological, and archaeological surveys; atmospheric monitoring
11 for commercial airline turbulence avoidance; and LiDAR mapping
12 of coastal topography to detect beach erosion.

13 In developing these applications, innovative research,
14 business, and education opportunities will emerge, such as the
15 development of new miniaturized, high performance remote sensing
16 instruments; unmanned aerial systems tracking systems, including
17 command and control hardware and software; training courses and
18 certification programs for unmanned aerial systems operators;
19 and education programs for potential users of unmanned aerial
20 systems technologies.



1 The purpose of this Act is to:

- 2 (1) Establish an unmanned aerial systems program within
- 3 the office of aerospace development;
- 4 (2) Establish a chief operating officer position to head
- 5 the program;
- 6 (3) Establish an unmanned aerial systems test site
- 7 advisory board that will formulate an implementation
- 8 plan and oversee test site development statewide; and
- 9 (4) Provide funding for personnel and procurement costs
- 10 associated with establishing the unmanned aerial
- 11 systems program.

12 SECTION 2. Chapter 201, Hawaii Revised Statutes, is
13 amended by adding two new sections to part V be appropriately
14 designated and to read as follows:

15 "§201- Unmanned aerial systems program; established.

16 (a) There is established the unmanned aerial systems program to
17 be placed in the office for administrative purposes. The
18 program shall develop plans to safely integrate unmanned aerial
19 systems into the national air space that shall include but not
20 be limited to the development of unmanned aerial systems
21 operating standards and regulations and the establishment of
22 unmanned aerial systems test sites.



1 (b) The program shall be headed by a chief operating
2 officer who shall have experience in aerospace engineering and
3 aerospace development. The chief operating officer shall be
4 appointed by the governor without regard to chapter 76.

5 (c) The chief operating officer shall:

6 (1) Supervise and direct operations of the program and
7 activities at any test site established by the
8 program;

9 (2) Facilitate opportunities for public and private use of
10 any unmanned aerial systems test site established by
11 the program;

12 (3) Assist research institutions, including the University
13 of Hawaii, local businesses, and other interested
14 organizations in formalizing agreements to operate at
15 any unmanned aerial systems test site;

16 (4) Leverage aerospace and related technological
17 capabilities in the State's academic, public, and
18 private sectors to support testing and evaluation at
19 any unmanned aerial systems test site;

20 (5) Promote innovative education and workforce development
21 programs that will enhance public awareness of the
22 multiple benefits and opportunities that unmanned



- 1 aerial systems technologies and applications can bring
2 to the State;
- 3 (6) Monitor national and global trends in unmanned aerial
4 systems development and testing, and recommend
5 policies and programs to advance unmanned aerial
6 systems testing in Hawaii;
- 7 (7) Serve as a clearinghouse for information on the
8 unmanned aerial systems program;
- 9 (8) Establish and maintain a public website with updated
10 information on the unmanned aerial systems program;
- 11 (9) Contract for services and implement agreements as may
12 be necessary to conduct operations at Hawaii's
13 unmanned aerial systems test site ranges statewide;
- 14 (10) Serve as Hawaii's representative on the University of
15 Alaska's Pan Pacific unmanned aerial systems test
16 range complex management team; and
- 17 (11) Participate as an ex-officio member of and report to
18 the Hawaii unmanned aerial systems test site advisory
19 board.
- 20 (d) The chief operating officer shall hire staff necessary
21 to carry out the purposes of the program.



1 (e) The chief operating officer and employees of the
2 program shall be included in any benefit program generally
3 applicable to the officers and employees of the State.

4 (f) As used in this section, "program" means the unmanned
5 aerial systems program.

6 §201- Hawaii unmanned aerial systems test site advisory
7 board. (a) There shall be established the Hawaii unmanned

8 aerial systems test site advisory board that shall be a
9 subcommittee of the aerospace advisory committee established
10 pursuant to section 201-72.5, which shall oversee planning for,
11 and operation of, unmanned aerial test sites.

12 (b) The advisory board shall consist of the following
13 persons or their representatives:

14 (1) The adjutant general;

15 (2) The director of transportation;

16 (3) The director of business, economic development, and
17 tourism;

18 (4) The president of the University of Hawaii; and

19 (5) An individual from the Hawaii business community
20 appointed by the aerospace advisory committee.

21 Board members shall serve for a term of not more than four
22 years.



1 (c) Members of the advisory board shall serve without
2 compensation, but shall be reimbursed for necessary expenses,
3 including travel, incurred during the performance of their
4 duties as members of the advisory board."

5 SECTION 3. There is appropriated out of the general
6 revenues of the State of Hawaii the sum of \$ or so much
7 thereof as may be necessary for fiscal year 2014-2015 for the
8 establishment of one full-time equivalent (1.00 FTE) chief
9 operating officer position in the office of aerospace
10 development to supervise and direct the operations and
11 activities of the unmanned aerial systems program.

12 The sum appropriated shall be expended by the office of
13 aerospace development for the purposes of this Act.

14 SECTION 4. There is appropriated out of the general
15 revenues of the State of Hawaii the sum of \$470,000 or so much
16 thereof as may be necessary for fiscal year 2014-2015 for
17 operating costs, including personnel costs, for the unmanned
18 aerial systems program.

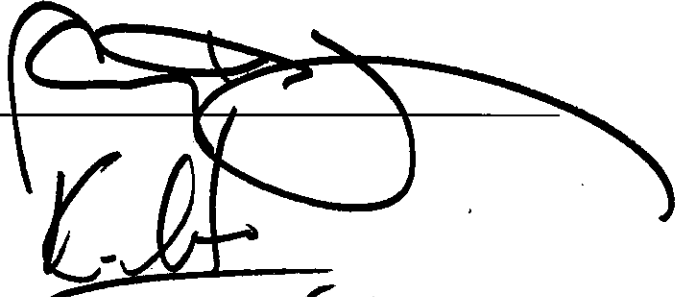

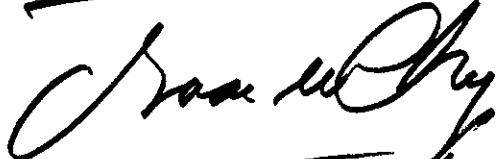



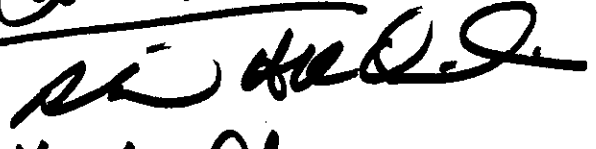

19 The sum appropriated shall be expended by the office of
20 aerospace development for the purposes of this Act.



1 SECTION 5. New statutory material is underscored.
2 SECTION 6. This Act shall take effect on July 1, 2014.

3

INTRODUCED BY:

JAN 23 2014



H.B. NO. 2627

Report Title:

Unmanned Aerial Systems Program; Office of Aerospace Development; Appropriation

Description:

Establishes an unmanned aerial systems program within the Office of Aerospace Development to develop plans to safely integrate unmanned aerial systems into the national air space.

Establishes a Chief Operating Officer of the program and an advisory board for program oversight. Appropriates funds.

Effective July 1, 2014.

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