HOUSE OF REPRESENTATIVES
TWENTY-SEVENTH LEGISLATURE, 2014
STATE OF HAWAII

H.B. NO. 2621

A BILL FOR AN ACT

RELATING TO UNMANNED AERIAL SYSTEMS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The purpose of this Act is to:

(1) Establish an unmanned aerial systems program within the office of aerospace development;

(2) Establish a chief operating officer position to head the program;

(3) Establish an unmanned aerial systems test site advisory board that will formulate an implementation plan and oversee test site development statewide; and

(4) Provide funding for personnel and procurement costs associated with establishing the unmanned aerial systems program.

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

"**§201- Unmanned aerial systems program; established.** (a) There is established the unmanned aerial systems program to be placed in the office for administrative purposes. The program shall develop plans to safely integrate unmanned aerial systems into the national air space that shall include but not be limited to the development of unmanned aerial systems operating standards and regulations and the establishment of unmanned aerial systems test sites.

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

(c) The chief operating officer shall:

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

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

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

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

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

aerial systems technologies and applications can bring to the State;

(6) Monitor national and global trends in unmanned aerial systems development and testing, and recommend policies and programs to advance unmanned aerial systems testing in Hawaii;

(7) Serve as a clearinghouse for information on the unmanned aerial systems program;

(8) Establish and maintain a public website with updated information on the unmanned aerial systems program;

(9) Contract for services and implement agreements as may be necessary to conduct operations at Hawaii's unmanned aerial systems test site ranges statewide;

(10) Serve as Hawaii's representative on the University of Alaska's Pan Pacific unmanned aerial systems test range complex management team; and

(11) Participate as an ex-officio member of and report to the Hawaii unmanned aerial systems test site advisory board.

(d) The chief operating officer shall hire staff necessary to carry out the purposes of the program.

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

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

§201- Hawaii unmanned aerial systems test site advisory board. (a) There shall be established the Hawaii unmanned aerial systems test site advisory board that shall be a subcommittee of the aerospace advisory committee established pursuant to section 201-72.5, which shall oversee planning for, and operation of, unmanned aerial test sites.

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

(1) The adjutant general;

(2) The director of transportation;

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

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

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

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

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

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

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

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

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

H.B. NO. 2627

SECTION 5. New statutory material is underscored.

SECTION 6. This Act shall take effect on July 1, 2014.

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.

The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.