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FLOOR AMENDMENT No. 12

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HOUSE OF REPRESENTATIVES

AMENDMENT TO: S.B. No. 930, S.D.1 H.D.1

OFFERED BY: Representative Angus L.K. McKelvey

DATE: April 5, 2013

SECTION 1. Senate Bill No. 930 S.D. 1, H.D.1, RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS SUSTAINABLE CONCRETE INITIATIVE, is amended as follows:

1. By amending section 1 to read:

"SECTION 1. The legislature finds that the Pacific international space center for exploration systems, including its proposed aerospace technology research and development park project, is an economic driver for the island of Hawaii that promotes the establishment and growth of new sustainable and green industries along with associated jobs, workforce development, internships, and science, technology, engineering, and math education programs.

The legislature also finds that the Pacific international space center for exploration systems aerospace technology research and development park project will attract investment that will help leverage the costs of expanding the island of Hawaii's broadband capacity.

Current market demands for concrete in Hawaii are primarily met through cement and asphalt imports. Research and development enabling innovative technologies in basalt concrete composition and delivery is an attractive and self-sustaining alternative to continued cement and bitumen imports.

There is also interest in and work being done on developing various basaltic concrete binding methods at the National Aeronautics and Space Administration, Hanyang University of Korea, Purdue University, American Society of Civil Engineers, and many other professional organizations. In addition to enabling three dimensional concrete printing technology, this work holds amazing potential for creating advanced manufacturing jobs and inexpensive building options in the State of Hawaii.

The proposed Pacific international space center for exploration systems sustainable concrete initiative is an important step toward realizing this potential, providing an investment in the future of Hawaii and its economy by offering a self-sufficient and in-situ source of concrete for local applications.

The purpose of this Act is to provide state funding to support the investigative stage of the Pacific international space center for exploration systems sustainable concrete initiative. This investigative stage will help identify appropriate binding methods and technologies; quantifiably test

and validate the identified technologies in terms of durability, compressive strength, and other ASTM International certification standards; and help identify appropriate out-of-state partners and investors, as well as other extramural funding sources, for program development."

2. By amending section 2 to read:

"SECTION 2. 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 2013-2014 to support the investigative stage of the Pacific international space center for exploration systems sustainable concrete initiative.

The sum appropriated shall be expended by the department of business, economic development, and tourism for the purposes of this Act."

3. By amending section 3 to read:

"SECTION 3. The Pacific international space center for exploration systems shall submit a report to the legislature on September 1 of each year, commencing on September 1, 2013, that includes:

- (1) An updated business plan regarding the aerospace technology research and development park project;
- (2) Details on any progress made toward the development of a world-class space center in Hawaii;

- (3) The development of technologies for basalt concrete composition and delivery and any effect on the level of cement and bitumen imports into the State;
- (4) The status of all working relationships with educational and research institutions, federal agencies, and local industry on the use of existing basalt resources in the State to identify, verify, and validate sustainable and in-situ concrete binders;
- (5) Details on any progress made toward the development of a robotic operator training and certification program, including program location, course and curriculum development, and when the program is expected to begin accepting students;
- (6) The level of private sector investment in aerospace and related industries, including the number and nature of any partnerships with private industry to facilitate state-based manufacturing and operations related to green energy technology;
- (7) The status of the memorandum of understanding with Hawaii Techworks and the east Hawaii community development corporation regarding the cultivation of a skilled local workforce to support planned manufacturing operations; and

- (8) A detailed statement of assets, liabilities, revenues, and expenses for the corresponding fiscal year ending June 30."

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<i>Brian L. Tolshet</i> CHIEF CLERK, HOUSE OF REPRESENTATIVES		