

Date of Hearing: March 13, 2018

ASSEMBLY COMMITTEE ON HIGHER EDUCATION

Jose Medina, Chair

ACR 145 (Lackey) – As Introduced January 4, 2018

**SUBJECT:** California Institute for Aerospace

**SUMMARY:** This measure would declare the Legislature’s support for the creation of a California Institute for Aerospace in southern California’s Antelope Valley. Specifically, **this resolution** makes the following legislative findings:

- 1) The aerospace industry began in California with a few aircraft builders around World War I, and then vastly expanded in the mobilization for World War II. By the 1980s, about 40 percent of the United States aerospace business resided in southern California; and;
- 2) The aerospace industry employs a highly skilled and specialized workforce of more than half a million people in commercial, military, and civil capacities, with statewide economic impact in 2012 exceeded \$100 billion. Average annual aerospace industry wages are among the nation’s highest, with California’s aerospace companies in 2012 contributed \$62 billion in tax revenues, equivalent to more than a third of the state budget. The key driver for aerospace industry success in California is rooted in technological innovation and research;
- 3) The Antelope Valley is home to: NASA’s Neil A. Armstrong Flight Research Center; the Air Force Test Center and Air Force Research Laboratory Rocket Lab at Edwards Air Force Base; the civilian Mojave Air & Space Port, home to Virgin Galactic, Scaled Composites; and BAE Systems; and Air Force Plant 42 in Palmdale, where Boeing, Lockheed Martin, and Northrop Grumman produce aircraft for both defense and civil applications. The region already has the necessary framework and the key industry players in order to establish a successful institute.
- 4) The enactment of a state aerospace tax credit in 2014 has positioned California to receive thousands of new jobs researching, designing, building, and testing the Long Range Strike Bomber following the awarding of the contract by the United States Air Force in 2015. The model provided by the Collaborative Center for Aerospace Sciences, a joint research venture of the United States Air Force Research Laboratory and the University of California (UC), Los Angeles, is an example of the type of partnership the California Institute for Aerospace could form and expand.

**EXISTING LAW:**

- 1) Establishes the Donahoe Higher Education, setting forth the mission of California’s higher education segments (Education Code (EC) Section 66010, et seq.).

**FISCAL EFFECT:** Unknown

**COMMENTS:** *Purpose.* According to the author, “California’s success in aerospace research, development and production is not only envied by other states, but highly coveted. We have already seen aerospace industry companies and programs lured away. If industry outmigration continues, California risks losing global aerospace market share, currently at 9%. To help the

industry attract and retain the talent it needs to propel it forward, California should continue to invest in the aerospace industry.”

“[The] institute [proposed in ACR 145] would strengthen California’s position as a global leader in the aerospace industry, increase public-private partnerships and fully maximize our role in designing and building technology for the future.”

*Background.* The Legislature, in 2014, debated a series of bills relative to the aerospace industry; a brief history of the industry was included in those bill analyses:

The aerospace industry began in California with a few aircraft builders around World War I, and then vastly expanded in the mobilization for World War II. The industry steadily grew during the Cold War encompassing a wide range of activities, including military and civilian aircraft, reconnaissance and communications satellites, strategic missiles, and space exploration. By the 1980s, about 40% of the aerospace business resided in southern California, and the industry employed close to a half-million people. One of the region's strongest selling points for aerospace was its environment: the clear blue skies and ample open spaces were ideal for testing new aircraft. California also was home to a variety of related industries, particularly petroleum, as well as top-notch research universities and a large labor pool.

Defense spending peaked at \$557 billion in 1985 (in constant fiscal 2009 dollars) and then began a downward trend. The collapse of the Soviet Union and the end the Cold War led to more than 50 major defense companies consolidating into only six. According to the Employment Development Department's Labor Market Information Division, employment in the Aerospace Production and Manufacturing sector declined from 139,300 in 1993 to 70,800 in 2013. Most of the decline occurred before 2004.

In 2000 the state created the California Institutes for Science and Innovation (Cal-ISIs) through the budget and legislation (AB 2883, Villaraigosa, Chapter 79) to speed up business growth in the state, develop research and innovations to meet California’s needs, and train future scientists. The four institutes are today the California Institute for Quantitative Biomedical Research, the California Nanosystems Initiative, the California Institute for Telecommunications and Information Technology, and the Center for Information Technology Research In the Interest of Society.

The California Institute for Quantitative Biomedical Research (QB3) uses quantitative science to increase modern scientific understanding of biological systems and serves as a major training center to California scientists. The ultimate goal of this institute is the research of new cures to improve human health and expand modern medicinal knowledge. The program includes researchers at UC Berkeley, UC San Francisco and UC Santa Cruz. The centers have more than 200 private-sector partners who work with them to translate research into products that help Californians.

The California Nanosystems Initiative (CNSI), led by the UCLA campus cooperating with UC Santa Barbara, explores new ways to manufacture products and advance information technology through the exploration of nano-biotechnology, electronics and mechanics.

The California Institute for Telecommunications and Information Technology (CALIT2), led at UC San Diego cooperating with UC Irvine, is a multi-disciplinary institute focusing on research and development of prototype technologies to extend the reach and capacity of the Internet, and vastly expanding the speed, scope and efficiency of communication in the 21st Century.

The Center for Information Technology Research In the Interest of Society (CITRIS), led by UC Berkeley cooperating with UC Santa Cruz, UC Davis, and UC Merced, is focused on harnessing information technology to tackle society's most critical needs, including energy, transportation, seismic safety, education, healthcare, farming, and the environment.

*Economic Impact of Aerospace Industry.* Aerospace is one of California's largest industries, with a total economic impact of more than \$100 billion annually including \$38.8 billion in indirect revenues that support related industries. The aerospace market sector includes two primary components:

- 1) Space industry: Launch Services; Satellite Manufacturing; Ground Equipment; Engineering Services; and Satellite Services.
- 2) Aircraft Industry: Aircraft; Engine and Parts; Search, Detection, Navigation, Guidance, and Nautical (SDNGN) Instruments; and Maintenance Repair, and Overhaul.

California is a global leader in space instrumentation, satellite services and manufacturing, and engineering services. The state provides more than 50% of all aerospace engineering services and 59% of aircraft SDNGN instrumentation. The California aerospace industry employs 230,000 workers directly and supports 511,000 jobs across related industry sectors. Other related industry sectors include Finance, Construction, and Transportation.

*Related legislation.* AB 427 (Muratsuchi), which is pending referral in the Senate, would establish the California Aerospace Commission for the purpose of serving as a central point of contact for related industries and to support the health and competitiveness of these industries in California. The Commission would be located under the administrative authority of the Governor's Office of Business and Economic Development

AB 2600 (Lackey) of 2016 and AB 240 (Lackey) of 2017 requested the UC Regents establish the California Institute for Aerospace. Both measures were held on suspense in the Assembly Appropriations Committee.

AB 2664 (Irwin), Chapter 862, Statutes of 2016, required the UC, among others, to make one-time expenditures on activities, using the \$22 million General Fund provided in the Budget Act of 2016, to expand or accelerate economic development in the state in ways that support innovation and entrepreneurship.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

City of Palmdale  
Mojave Air and Space Port  
R. Rex Parris, Mayor, City of Lancaster, California

Santa Clarita Valley Economic Development Corporation

**Opposition**

None on file.

**Analysis Prepared by:** Kevin J. Powers / HIGHER ED. / (916) 319-3960