

# HOUSE BILL REPORT

## HB 2295

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### As Reported by House Committee On: Transportation

**Title:** An act relating to encouraging the use of electric or hybrid-electric aircraft for regional air travel.

**Brief Description:** Encouraging the use of electric or hybrid-electric aircraft for regional air travel.

**Sponsors:** Representatives Slatter, Fey, McBride, Dolan, Macri and Doglio.

#### **Brief History:**

##### **Committee Activity:**

Transportation: 1/11/18, 1/17/18 [DPS].

#### **Brief Summary of Substitute Bill**

- Requires the Department of Transportation (WSDOT) to adopt goals for the use of electric or hybrid-electric aircraft in commercial air travel in Washington using solicited input from the established work group.
- Requires the WSDOT to provide a biennial report to the Legislature describing the state's progress toward achieving the goals.
- Directs the WSDOT to require commercial service airports and airlines operating in Washington to track, record, and report annually to the WSDOT on statistics related to electric or hybrid-electric flights.
- Directs the WSDOT to convene a work group to analyze the current state and future needs of the electric aircraft industry and develop a plan for achieving the developed goals.
- Updates the WSDOT's general supervision over aeronautics to include aeronautics involving electrically powered aircraft.

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#### HOUSE COMMITTEE ON TRANSPORTATION

**Majority Report:** The substitute bill be substituted therefor and the substitute bill do pass.  
Signed by 13 members: Representatives Clibborn, Chair; Wylie, Vice Chair; Chapman,

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*This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not a part of the legislation nor does it constitute a statement of legislative intent.*

Gregerson, Kloba, Lovick, McBride, Morris, Ortiz-Self, Pellicciotti, Riccelli, Tarleton and Valdez.

**Minority Report:** Do not pass. Signed by 6 members: Representatives Hargrove, Assistant Ranking Minority Member; Irwin, Rodne, Shea, Stambaugh and Van Werven.

**Minority Report:** Without recommendation. Signed by 5 members: Representatives Orcutt, Ranking Minority Member; Harmsworth, Assistant Ranking Minority Member; Hayes, Pike and Young.

**Staff:** Patricia Hasan (786-7292).

### **Background:**

The Department of Transportation (WSDOT) has general supervision over aeronautics within Washington. The WSDOT is directed to encourage, foster, and assist in the development of aeronautics in Washington and to encourage the establishment of airports and air navigation facilities. Air navigation facilities are used to provide aid in air navigation and include any structures, mechanisms, lights, beacons, markers, communicating systems, or other instruments or devices used as an aid to safe taking-off, navigation, and landing of an aircraft or of the safe operation and maintenance of an airport. The WSDOT is also directed to cooperate with and assist the federal government, municipalities of Washington, and other bodies in developing aeronautics.

The WSDOT maintains the statewide Washington Aviation System Plan (WASP) and updates it as necessary with findings from studies of the performance and interaction of Washington's aviation system. The most recent update was completed in July 2017 and includes discussion on emerging trends and issues in aircraft innovation that the WSDOT anticipates will become relevant during the next 20 years. According to the WASP, electrically powered aircraft is one such innovation that is likely to become more widespread. Aircraft with electric motors have been under development since the 1970s. Currently, these aircraft are used primarily for experiments and demonstrations; however, the WASP acknowledges that advances in lightweight motors and batteries with increased power supply will make electric aircraft more feasible in a broader scope. The WASP shows the anticipated industry transition to electric aircraft to begin with trainer class aircraft, then move to personal vertical take-off and landing aircraft, and finally shift to commercial grade aircraft. Anticipated infrastructure need to accommodate electric aircraft is also presented in the WASP. As electric aircraft become part of the aviation industry, infrastructure requirements will be driven by the need to allow for battery exchange or recharging at a station while an aircraft is parked at the airport apron (where passengers board the aircraft) or in a hangar. Fast chargers or battery exchange would likely be the most common method for commercial operations that require short turnaround times for aircraft.

In 2016 the Federal Aviation Administration (FAA) revised the airworthiness standards for normal, utility, acrobatic, and commuter category airplanes under 14 CFR Part 23 by replacing prescriptive design requirements with performance-based airworthiness safety standards. In the Notice of Proposed Rulemaking, the FAA noted that the former regulations did not account for airplanes designed with new technologies, such as electric propulsion

systems. Formerly, a manufacturer of an electric aircraft would not have met the standards for design requirements and would have needed to demonstrate that its design should be exempt from the particular regulatory standard. The FAA has replaced the design requirements with performance- and risk-based airworthiness standards for airplanes with a maximum seating capacity of 19 passengers or less and a maximum take-off weight of 19,000 pounds or less, which covers normal, utility, acrobatic, and commuter category airplanes.

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### **Summary of Substitute Bill:**

The WSDOT is given general supervision over aeronautics that involve electrically powered aircraft in Washington. The WSDOT is required to adopt goals for the use of electric or hybrid-electric aircraft in commercial air travel in Washington using solicited input from a work group the WSDOT is required to convene. Goals must be developed for the years 2030, 2040, and 2050, and must reflect progressive and substantial increases in the use of electric and hybrid-electric commercial aircraft.

The WSDOT must report to the Legislature on Washington's progress toward achieving the goals every two years beginning on January 1, 2025. By 2020 the WSDOT must require commercial service airports and airlines operating in Washington to track, record, and report annually to the WSDOT on the total number of operations, miles flown, and number of passengers on electric or hybrid-electric aircraft used for commercial service flights.

The WSDOT must also convene a work group comprised of representatives from several industries related to electric or hybrid-electric aircraft. The work group must analyze the current state of the electric aircraft industry and available infrastructure, determine feasibility of electric or hybrid-electric flight given current parameters such as battery technology and FAA regulations, and develop a sustainable plan to achieve the developed goals. The work group must submit a report with its findings and recommendations to the transportation committees of the Legislature by December 1, 2019, and the chair of the work group must provide an interim report to the transportation committees of the Legislature by December 1, 2018. The work group expires on July 1, 2020.

### **Substitute Bill Compared to Original Bill:**

Specific goals for the utilization of electric or hybrid-electric aircraft for commercial air travel in Washington are removed, and the WSDOT is required to develop such goals in collaboration with the convened work group. The WSDOT is directed to require commercial service airports and airlines operating in Washington to track, record, and report annually to the WSDOT on statistics related to electric or hybrid-electric flights. The required stakeholder representation within the established work group is expanded to additional industries and departments. The required topics the established work group must consider and include in their report on findings and recommendations are expanded.

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**Appropriation:** None.

**Fiscal Note:** Available.

**Effective Date of Substitute Bill:** The bill takes effect 90 days after adjournment of the session in which the bill is passed.

**Staff Summary of Public Testimony:**

(In support) The bill has the potential to fill the need to provide additional regional air travel options in a cost-effective manner to areas across the state. Several airports in Washington have seen a reduction in the number of available flights, and two have lost commercial service entirely. The bill provides an opportunity to grow and restore affordable commercial air travel. Electric aircraft would provide regional air travel service in the same way jet engine aircraft provide long-haul air travel service. Small, electric aircraft are ideal for providing affordable and frequent regional air travel service because electric engines will perform better than jet engines on a smaller scale. This can be done with less infrastructure than what is needed for highways or high-speed rail service.

The technological innovation and impacts to climate change addressed in the bill aim to keep Washington at the forefront of the aviation industry as it shifts into the electric aircraft age. Communities in Washington should be among the first to benefit from this technology. Electric propulsion is widely recognized as a major growth sector in the aerospace industry with about 70 active programs worldwide. Aerospace and the air system are shaped by propulsion, and when new propulsion methods emerge, the sector transforms. It is important that Washington respond to this shift in aviation to remain a leader in the aerospace industry. Other states and countries are currently working with electric aircraft manufacturers to bring the industry to their jurisdictions.

A wide range of commercial and personal electric aircraft is expected to be on the market by 2030.

(Opposed) None.

**Persons Testifying:** Representative Slatter, prime sponsor; David Fleckenstein, Washington State Department of Transportation; and Ashish Kamar and Matt Knapp, Zunum Aero.

**Persons Signed In To Testify But Not Testifying:** None.