

116TH CONGRESS  
1ST SESSION

# S. 2837

To amend title 51, United States Code, to require a National Aeronautics and Space Administration initiative on reduction of greenhouse gas emissions and noise emissions from aircraft, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

NOVEMBER 12, 2019

Mr. CARDIN (for himself, Mr. VAN HOLLEN, Ms. WARREN, Mr. KING, Mr. MERKLEY, and Mrs. FEINSTEIN) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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## A BILL

To amend title 51, United States Code, to require a National Aeronautics and Space Administration initiative on reduction of greenhouse gas emissions and noise emissions from aircraft, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Cleaner, Quieter Air-  
5 planes Act”.

6 **SEC. 2. FINDINGS.**

7 Congress makes the following findings:

1           (1) Air travel currently contributes approxi-  
2           mately 3 percent to global carbon emissions, but  
3           emissions from this sector are expected to triple by  
4           2050.

5           (2) A healthy, thriving aviation sector contrib-  
6           utes to the quality of life and economic well-being of  
7           the United States. In 2014, aviation accounted for  
8           5.1 percent of the United States gross domestic  
9           product and supported 10,600,000 jobs.

10          (3) Existing aircraft technologies contribute to  
11          noise pollution that has adverse impacts on the qual-  
12          ity of life in affected communities. As air traffic vol-  
13          umes increase and the adoption of performance-  
14          based navigation technology proceeds, the problem of  
15          noise pollution is becoming more severe in some  
16          areas.

17          (4) The United States has adopted a goal of  
18          carbon-neutral growth in aviation from 2020.

19          (5) Research on technologies to lessen the envi-  
20          ronmental and noise impacts of aviation is ongoing,  
21          but should accelerate, and should include work on  
22          integration of multiple enabling technologies, includ-  
23          ing novel integrated systems at the aircraft level.

1 **SEC. 3. NATIONAL AERONAUTICS AND SPACE ADMINISTRA-**  
2 **TION INITIATIVE ON REDUCTION OF GREEN-**  
3 **HOUSE GAS EMISSIONS AND NOISE EMIS-**  
4 **SIONS FROM AIRCRAFT.**

5 (a) INITIATIVE REQUIRED.—Section 40112 of title  
6 51, United States Code, is amended—

7 (1) by redesignating subsections (b) through (e)  
8 as subsections (c) through (f), respectively; and

9 (2) by inserting after subsection (a) the fol-  
10 lowing new subsection (b):

11 “(b) TECHNOLOGIES FOR GREENHOUSE GAS EMIS-  
12 SIONS AND NOISE EMISSIONS REDUCTION.—

13 “(1) INITIATIVE REQUIRED.—The Adminis-  
14 trator shall establish an initiative to build upon and  
15 accelerate previous or ongoing work to develop and  
16 demonstrate new technologies, including systems ar-  
17 chitecture, components, or integration of systems  
18 and airframe structures, in electric aircraft concepts  
19 that are capable of reducing both greenhouse gas  
20 emissions and noise emissions from aircraft by at  
21 least 50 percent compared to the highest-performing  
22 aircraft technologies in service as of December 31,  
23 2019, with the goal of deploying new technologies  
24 developed pursuant to the initiative on regional  
25 transport aircraft intended to enter into service by  
26 2030 and on single-aisle aircraft designed to accom-

1 modate more than 125 passengers intended to enter  
2 into service by 2040.

3 “(2) APPROACH.—In carrying out the initiative,  
4 the Administrator shall do the following:

5 “(A) Continue and expand work of the Ad-  
6 ministration on research, development, and  
7 demonstration of electric aircraft concepts, and  
8 the integration of such concepts, with the goal  
9 of carrying out test flights by 2025.

10 “(B) To the extent practicable, work with  
11 multiple partner organizations, including small  
12 businesses and new entrants, on research and  
13 development activities related to both regional  
14 transport aircraft and aircraft designed to ac-  
15 commodate more than 125 passengers in order  
16 to achieve an industry-wide shift towards elec-  
17 tric aircraft concepts for reduction of green-  
18 house gas emissions and noise emissions.

19 “(C) Provide guidance to the Federal Avia-  
20 tion Administration (FAA) on technologies de-  
21 veloped and tested pursuant to the initiative in  
22 order to assist the work of the Federal Aviation  
23 Administration to identify new requirements for  
24 policy, infrastructure, and administrative capac-  
25 ity necessary to enable the safe deployment of

1           such technologies, including learning from the  
2           certification and operation of small aircraft  
3           using electric propulsion in order to inform sub-  
4           sequent standards for larger aircraft.”.

5           (b) REPORTS.—Not later than 180 days after the  
6           date of the enactment of this Act and annually thereafter,  
7           the Administrator of the National Aeronautics and Space  
8           Administration shall submit to Congress a report on the  
9           progress of the work under the initiative required by sub-  
10          section (b) of section 40112 of title 51, United States  
11          Code (as amended by subsection (a) of this section), in-  
12          cluding a description of any perceived obstacles to achiev-  
13          ing the goal of a 50 percent reduction in both greenhouse  
14          gas emissions and noise emissions from aircraft as con-  
15          templated for the initiative.

16          (c) AUTHORIZATION OF APPROPRIATIONS.—There is  
17          authorized to be appropriated for the National Aero-  
18          nautics and Space Administration for the initiative re-  
19          quired by subsection (b) of section 40112 of title 51,  
20          United States Code (as so amended), amounts as follows:

- 21                 (1) For fiscal year 2021, \$125,000,000.  
22                 (2) For fiscal year 2022, \$225,000,000.  
23                 (3) For each of fiscal years 2023 and 2024,  
24                 \$275,000,000.  
25                 (4) For fiscal year 2025, \$225,000,000.

1 (5) For fiscal year 2026, \$75,000,000.

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