

116TH CONGRESS  
2D SESSION

**S.** \_\_\_\_\_

To amend title 49, United States Code, to reform the Federal Aviation Administration’s aircraft certification process, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

Mr. WICKER (for himself and Ms. CANTWELL) introduced the following bill;  
which was read twice and referred to the Committee on

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**A BILL**

To amend title 49, United States Code, to reform the Federal Aviation Administration’s aircraft certification process, 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 “Aircraft Safety and  
5 Certification Reform Act of 2020”.

6 **SEC. 2. TABLE OF CONTENTS.**

7 The table of contents of this Act is as follows:

- Sec. 1. Short title.
- Sec. 2. Table of contents.
- Sec. 3. Definitions.
- Sec. 4. Safety management system for manufacturers.

- Sec. 5. Organization designation authorization.
- Sec. 6. Best practices for organization designation authorizations.
- Sec. 7. Review of human factors assumptions.
- Sec. 8. Human factors research.
- Sec. 9. FAA center of excellence for flight automation and human factors in aircraft.
- Sec. 10. Certification pilot operational evaluations.
- Sec. 11. FAA continuing education and training.
- Sec. 12. Authorization of appropriations for scientific and technical advisors.
- Sec. 13. Prohibition on certain performance-based incentives.
- Sec. 14. Safety reporting program.
- Sec. 15. Protection of whistleblowers.
- Sec. 16. Repeal of design and production organization certificate authority.
- Sec. 17. Ensuring appropriate responsibility of aircraft certification and flight standards performance objectives and metrics.
- Sec. 18. Review of FAA certification expertise.

1 **SEC. 3. DEFINITIONS.**

2 In this Act:

3 (1) ADMINISTRATOR.—The term “Adminis-  
4 trator” means the Administrator of the FAA.

5 (2) APPROPRIATE COMMITTEES OF CON-  
6 GRESS.—The term “appropriate committees of Con-  
7 gress” means the Committee on Commerce, Science,  
8 and Transportation of the Senate and the Com-  
9 mittee on Transportation and Infrastructure of the  
10 House of Representatives.

11 (3) FAA.—The term “FAA” means the Fed-  
12 eral Aviation Administration.

13 **SEC. 4. SAFETY MANAGEMENT SYSTEM FOR MANUFACTUR-**  
14 **ERS.**

15 (a) RULEMAKING PROCEEDING.—

16 (1) IN GENERAL.—The Administrator shall con-  
17 duct a rulemaking proceeding to require that manu-  
18 facturers that hold both a type certificate and a pro-

1       duction certificate issued pursuant to section 44704  
2       of title 49, United States Code, where the United  
3       States is the State of Design and State of Manufac-  
4       ture, have in place a safety management system that  
5       is consistent with the standards established by the  
6       International Civil Aviation Organization for such  
7       systems.

8               (2) AVIATION RULEMAKING COMMITTEE.—Not  
9       later than 90 days after the date of enactment of  
10      this Act, the Administrator shall establish an avia-  
11      tion rulemaking committee to make recommenda-  
12      tions on the rulemaking to be carried out under  
13      paragraph (1).

14             (b) FINAL RULE DEADLINE.—Not later than 24  
15      months after establishing the aviation rulemaking com-  
16      mittee under subsection (a)(2), the Administrator shall  
17      issue a final rule pursuant to the rulemaking proceeding  
18      required under subsection (a).

19             (c) SURVEILLANCE AND AUDIT REQUIREMENT.—  
20      The final rule issued pursuant to subsection (b) shall in-  
21      clude a requirement for the Administrator to implement  
22      a documented surveillance process by defining and plan-  
23      ning inspections, audits, and monitoring activities on a  
24      continuous basis, to ensure that design and production ap-  
25      proval holders of aviation products meet and continue to

1 meet safety management system requirements under the  
2 rule.

3 **SEC. 5. ORGANIZATION DESIGNATION AUTHORIZATION.**

4 (a) APPROVAL OF ODA UNIT MEMBERS.—Section  
5 44736 of title 49, United States Code, is amended by add-  
6 ing at the end the following:

7 “(d) APPROVAL OF ODA UNIT MEMBERS.—

8 “(1) IN GENERAL.—Beginning on the date that  
9 is 1 year after the date of enactment of this sub-  
10 section, each individual who is a new member of an  
11 ODA unit of an ODA holder and performs an au-  
12 thorized function pursuant to a delegation by the  
13 Administrator under section 44702(d) shall be an  
14 employee, a contractor, or the employee of a supplier  
15 of the ODA holder who is approved to be a member  
16 of the unit by the Administrator. The ODA holder  
17 may make provisional appointments of ODA unit  
18 members pending final approval by the Adminis-  
19 trator. The Administrator shall approve or reject ap-  
20 pointments within 120 days.

21 “(2) QUALIFICATIONS.—In approving appoint-  
22 ments to an ODA unit, the Administrator shall take  
23 into account the technical proficiency and expertise  
24 of individuals. The Administrator shall issue min-  
25 imum qualifications for ODA members that are sub-

1       ject to approval by the Administrator pursuant to  
2       paragraph (1).

3               “(3) RESCISSION OF APPROVAL.—The Adminis-  
4       trator may rescind an approval of an appointment to  
5       a ODA unit at any time for any reason the Adminis-  
6       trator considers appropriate. The Administrator  
7       shall develop procedures to provide for proper notice  
8       and opportunity to appeal rescission decisions made  
9       by the Administrator. Such decisions by the Admin-  
10      istrator are not subject to judicial review.

11              “(4) RECORDS AND REPORTS.—An ODA holder  
12      shall maintain, for a period to be determined by the  
13      Administrator—

14                      “(A) any data, applications, records, or  
15                      manuals required by the ODA holder’s ap-  
16                      proved procedures manual, as determined by  
17                      the Administrator;

18                      “(B) the names, responsibilities, qualifica-  
19                      tions, and example signature of each member of  
20                      the ODA unit who performs an authorized  
21                      function pursuant to a delegation by the Ad-  
22                      ministrator under section 44702(d);

23                      “(C) training records for ODA unit mem-  
24                      bers and ODA administrators; and

1           “(D) any other data, applications, records,  
2           or manuals determined appropriate by the Ad-  
3           ministrators.

4           “(5) AUDITS.—

5           “(A) IN GENERAL.—The Administrator  
6           shall perform a periodic audit of each ODA unit  
7           and its procedures.

8           “(B) DURATION.—An audit required under  
9           subparagraph (A) shall be performed with re-  
10          spect to an ODA holder once every 3 years (or  
11          more frequently as determined appropriate by  
12          the Administrator).

13          “(C) RECORDS.—The ODA holder shall  
14          maintain, for a period to be determined by the  
15          Administrator, a record of—

16                  “(i) each audit conducted under this  
17                  paragraph; and

18                  “(ii) any corrective actions resulting  
19                  from each such audit.

20          “(e) FEDERAL AVIATION SAFETY ADVISORS.—For  
21          ODA holders that are manufacturers that hold both a type  
22          and a production certificate for transport category air-  
23          planes with a maximum takeoff gross weight greater than  
24          150,000 pounds and manufacturers of engines for such  
25          airplanes, the Administrator shall assign FAA aviation

1 safety engineers or inspectors with appropriate expertise  
2 to be advisors to the ODA unit members that are author-  
3 ized to make findings of compliance on behalf of the Ad-  
4 ministrator. Advisors shall communicate with assigned  
5 unit members on an ongoing basis to ensure that they are  
6 knowledgeable of relevant FAA policies and acceptable  
7 methods of compliance and shall monitor their perform-  
8 ances to ensure consistency with those policies.

9 “(f) COMMUNICATION WITH THE FAA.—Neither the  
10 Administrator nor an ODA holder may prohibit an ODA  
11 unit member from communicating with, or seeking the ad-  
12 vice of, the Administrator or FAA staff.”.

13 (b) REPORT.—Not later than September 30, 2022,  
14 the Administrator shall submit to the appropriate commit-  
15 tees of Congress a report on the implementation of sub-  
16 sections (d) through (f) of section 44736 of title 49,  
17 United States Code, as added by subsection (a).

18 **SEC. 6. BEST PRACTICES FOR ORGANIZATION DESIGNA-**  
19 **TION AUTHORIZATIONS.**

20 (a) IN GENERAL.—Section 213 of the FAA Reau-  
21 thorization Act of 2018 (Public Law 115–254, 132 Stat.  
22 3249) is amended—

23 (1) by striking subsection (g);

24 (2) by redesignating subsections (e) through (f)

25 as subsections (d) through (g), respectively;

1           (3) by inserting after subsection (b), the fol-  
2           lowing:

3           “(c) BEST PRACTICES REVIEW.—In addition to con-  
4           ducting the survey required under subsection (b), the  
5           Panel shall conduct a review of all ODA holders to identify  
6           and develop best practices. At a minimum, the best prac-  
7           tices shall address preventing and deterring instances of  
8           undue pressure on or by an ODA unit member, within an  
9           ODA, or by an ODA holder, or instances of perceived reg-  
10          ulatory coziness or other failures to maintain independ-  
11          ence between the FAA and an ODA holder or ODA unit  
12          member. In carrying out such review, the Panel shall—

13                 “(1) examine other government regulated indus-  
14                 tries to gather lessons learned, procedures, or proc-  
15                 esses that address undue pressure of employees, per-  
16                 ceived regulatory coziness, or other failures to main-  
17                 tain independence;

18                 “(2) identify ways to improve communications  
19                 between an ODA Administrator, ODA unit mem-  
20                 bers, and FAA engineers and inspectors, consistent  
21                 with section 44736(g) of title 49, United States  
22                 Code, in order to enable direct communication of  
23                 technical concerns that arise during a certification  
24                 project without fear of reprisal to the ODA Adminis-  
25                 trator or ODA unit member; and

1           “(3) examine the FAA Designee Program, in-  
2           cluding the assignment of FAA advisors to des-  
3           ignees, to determine which components of the pro-  
4           gram may improve the FAA’s oversight of ODA  
5           units, ODA unit members, and the ODA program.”;

6           (4) in subsection (d) (as redesignated by para-  
7           graph (2))—

8                   (A) by striking paragraph (3) and redesign-  
9                   ating paragraphs (4) through (6) as para-  
10                  graphs (3) through (5), respectively;

11                  (B) in paragraph (4) (as redesignated by  
12                  subparagraph (A)), by striking “and” at the  
13                  end;

14                  (C) in paragraph (5) (as so redesignated),  
15                  by striking the period at the end and inserting  
16                  “; and”; and

17                  (D) by adding at the end the following:

18                   “(6) the results of the review conducted under  
19                   subsection (c).”; and

20                  (5) by inserting after subsection (g) (as redesign-  
21                  ated by paragraph (2)), the following:

22                   “(h) BEST PRACTICES ADOPTION.—

23                   “(1) IN GENERAL.—Not later than 180 days  
24                   after the date on which the Administrator receives  
25                   the report required under subsection (e), the Admin-

1 administrator shall establish best practices for all ODA  
2 holders and require such practices, as appropriate,  
3 to be incorporated into each ODA holder's approved  
4 procedures manual.

5 “(2) NOTICE AND COMMENT PERIOD.—The Ad-  
6 ministrators shall publish the established best prac-  
7 tices for public notice and comment for not fewer  
8 than 60 days prior to requiring the practices, as ap-  
9 propriate, be incorporated into each ODA holder's  
10 approved procedures manual.

11 “(i) SUNSET.—The Panel shall terminate on the ear-  
12 lier of—

13 “(1) the date of submission of the report under  
14 subsection (e); or

15 “(2) the date that is 2 years after the date on  
16 which the Panel is first convened under subsection  
17 (a).”.

18 (b) PROCEDURES MANUAL.—Section 44736(b)(3) of  
19 title 49, United States Code, is amended—

20 (1) in subparagraph (E), by striking “and”  
21 after the semicolon at the end;

22 (2) in subparagraph (F), by striking the period  
23 at the end and inserting “; and”; and

24 (3) by adding at the end the following:

1           “(G) ensure the ODA holders procedures  
2           manual contains procedures and policies based  
3           on best practices established by the Adminis-  
4           trator of the FAA to mitigate undue pressure  
5           and regulatory coziness or other failures to  
6           maintain independence.”.

7   **SEC. 7. REVIEW OF HUMAN FACTORS ASSUMPTIONS.**

8           (a) HUMAN FACTORS IN CERTIFICATION.—Not later  
9           than 60 days after the date of enactment of this Act, the  
10          Administrator shall initiate a review and may, after such  
11          review and as necessary, revise existing regulations, in-  
12          cluding, but not limited to, sections 25.1302, 25.1309, and  
13          25.1322 of title 14, Code of Federal Regulations, and sup-  
14          porting policies, guidelines, and advisory circulars, to inte-  
15          grate and emphasize human factors and human system  
16          integration, particularly those related to pilot and aircraft  
17          interfaces.

18          (b) REVIEW.—In carrying out subsection (a), the Ad-  
19          ministrators shall—

20                 (1) review existing assumptions on pilot rec-  
21                 ognition and response, including response to safety-  
22                 significant failure conditions, as part of the certifi-  
23                 cation process;

24                 (2) validate such assumptions with applicable  
25                 human factors research and the input of human fac-

1       tors experts, and as necessary modify the existing  
2       assumptions;

3           (3) ensure that when carrying out the certifi-  
4       cation of a new aircraft type, including an amended  
5       or supplemental type, the cumulative impact that  
6       new technologies may have on pilot response are  
7       properly assessed through system safety assessments  
8       or otherwise;

9           (4) ensure that any action carried out under  
10      this section accounts for the necessary adjustments  
11      to system safety assessments, pilot procedures and  
12      training needs, and design requirements; and

13          (5) notify other international regulators that  
14      certify transport-category airplane type designs of  
15      the review and encourage them to evaluate any regu-  
16      latory changes to their processes and address any  
17      changes, if applicable.

18      (c) REPORT.—Not later than 180 days after com-  
19      pleting the review required under subsection (a), the Ad-  
20      ministrators shall submit a report to the appropriate com-  
21      mittees of Congress detailing the results of the review and  
22      what revisions or other changes were made as a result of  
23      such review.

1 **SEC. 8. HUMAN FACTORS RESEARCH.**

2 (a) **AUTOMATION HUMAN FACTORS.**—Not later than  
3 180 days after the date of enactment of this Act, the Ad-  
4 ministrator, in consultation with aircraft manufacturers,  
5 operators, and pilots, and in coordination with the Admin-  
6 istrator of the National Aeronautics and Space Adminis-  
7 tration, shall develop a research plan to address the inte-  
8 gration of human factors in the design and certification  
9 of aircraft that are intended for use in air transportation.

10 (b) **REQUIREMENTS.**—In developing the plan re-  
11 quired under this section, the Administrator shall—

12 (1) establish goals for research and continuing  
13 education in areas of study relevant to advancing  
14 technology, improving design engineering and certifi-  
15 cation practices, and facilitating better under-  
16 standing of human factors concepts in the context of  
17 the growing development and reliance on automation  
18 in aircraft operations, including, but not limited to,  
19 the development of tools to validate pilot recognition  
20 and response assumptions and diagnostic tools to  
21 improve the clarity of failure indications presented  
22 to pilots;

23 (2) take into consideration and leverage any ex-  
24 isting or planned research that is conducted by, or  
25 conducted in partnership with, the FAA;

26 (3) focus on—

1 (A) preventing a recurrence of the types of  
2 recent accidents that have involved large trans-  
3 port category airplanes designed and manufac-  
4 tured in the United States; and

5 (B) increasingly complex aircraft systems  
6 and designs.

7 (c) IMPLEMENTATION.—In implementing the plan re-  
8 quired under this section, the Administrator shall, to the  
9 maximum extent practicable, work with the Center of Ex-  
10 cellence for Technical Training and Human Performance  
11 and the Center of Excellence focused on flight automation  
12 and human factors in aircraft that are intended for use  
13 in air transportation established under section 9.

14 (d) AUTHORIZATION OF APPROPRIATIONS.—There  
15 are authorized to be appropriated to the Administrator  
16 such sums as may be necessary to carry out this section.

17 **SEC. 9. FAA CENTER OF EXCELLENCE FOR FLIGHT AUTO-**  
18 **MATION AND HUMAN FACTORS IN AIRCRAFT.**

19 (a) CENTER.—

20 (1) IN GENERAL.—The Administrator shall de-  
21 velop a Center of Excellence focused on flight auto-  
22 mation and human factors in aircraft that are in-  
23 tended for use in air transportation.

24 (2) DUTIES.—The Center for Excellence  
25 shall—

1 (A) promote and facilitate collaboration  
2 among academia, the FAA, and the aircraft  
3 and airline industries, including aircraft, en-  
4 gine, and equipment manufacturers, air car-  
5 riers, and representatives of the airline pilot  
6 community;

7 (B) establish goals for research and con-  
8 tinuing education in areas of study relevant to  
9 advancing technology, improving engineering  
10 practices, and facilitating better understanding  
11 of human factors concepts in the context of the  
12 growing development and reliance on automa-  
13 tion in commercial aircraft; and

14 (C) examine issues related to human sys-  
15 tem integration and flight crew and aircraft  
16 interfaces.

17 (3) AVOIDING DUPLICATION OF WORK.—In es-  
18 tablishing the Center of Excellence, the Adminis-  
19 trator shall ensure the work of the Center of Excel-  
20 lence does not duplicate or overlap with the work of  
21 any other established center of excellence.

22 (b) AUTHORIZATION OF APPROPRIATIONS.—There  
23 are authorized to be appropriated to the Administrator  
24 such sums as may be necessary to carry out this section.

1 **SEC. 10. CERTIFICATION PILOT OPERATIONAL EVALUA-**  
2 **TIONS.**

3 (a) CERTIFICATION OPERATIONAL EVALUATIONS.—  
4 Not later than 1 year after the date of enactment of this  
5 Act, the Administrator shall revise existing policies for  
6 manufacturers of large transport category airplanes that  
7 are expected to be operated for scheduled passenger air  
8 transportation to ensure that pilot operational evaluations  
9 for airplanes that are in the process of being certified use  
10 pilots from foreign and domestic air carriers that are ex-  
11 pected to operate such airplanes.

12 (b) REQUIREMENT.—The air carrier pilots used for  
13 such evaluations shall include a representative sample of  
14 such carriers' pilots with respect to levels of experience.

15 **SEC. 11. FAA CONTINUING EDUCATION AND TRAINING.**

16 (a) IN GENERAL.—Chapter 445 of title 49, United  
17 States Code, is amended by adding at the end the fol-  
18 lowing:

19 **“§ 44519. Certification personnel continuing edu-**  
20 **cation and training**

21 “(a) OFFICE.—Not later than 120 days after the  
22 date of enactment of this section, the Administrator of the  
23 FAA shall establish an Office of Continuing Education.

24 “(b) PROGRAM.—The Office of Continuing Education  
25 shall administer a continuing education and training pro-  
26 gram.

1       “(c) PURPOSE OF PROGRAM.—The purpose of the  
2 continuing education and training program shall be to pro-  
3 vide continuing education and training to FAA personnel  
4 who hold positions involving aircraft and flight standards  
5 certification, including engineers and inspectors.

6       “(d) FUNCTIONS.—In administering the continuing  
7 education and training program, the Office of Continuing  
8 Education shall—

9               “(1) in consultation with outside experts, de-  
10       velop—

11                       “(A) an education and training curriculum  
12               on current and new aircraft technologies,  
13               project management, and the roles and respon-  
14               sibilities associated with oversight of designees;  
15               and

16                       “(B) best practices for compliance with  
17               FAA regulations; and

18               “(2) hire and manage a staff of qualified indi-  
19               viduals to educate and train FAA personnel de-  
20               scribed in subsection (c) using the education and  
21               training curriculum and best practices developed  
22               under paragraph (1).

23       “(e) AUTHORIZATION OF APPROPRIATIONS.—There  
24 are authorized to be appropriated to the Administrator,  
25 \$10,000,000 for each of fiscal years 2021 through 2025

1 to carry out this section. Amounts appropriated under the  
2 preceding sentence for any fiscal year shall remain avail-  
3 able until expended.

4 “(f) DEFINITION OF FAA.—In this section, the term  
5 ‘FAA’ means the Federal Aviation Administration.”.

6 (b) TABLE OF CONTENTS.—The analysis for chapter  
7 445 of title 49, United States Code, is amended by insert-  
8 ing after the item relating to section 44518 the following:  
“44519. Certification personnel continuing education and training.”.

9 **SEC. 12. AUTHORIZATION OF APPROPRIATIONS FOR SCI-**  
10 **ENTIFIC AND TECHNICAL ADVISORS.**

11 There are authorized to be appropriated to the Ad-  
12 ministrator, \$10,000,000 for each of fiscal years 2021  
13 through 2030 for salaries of specialized technical per-  
14 sonnel with expertise in new and emerging technologies  
15 for such personnel to advise the Administrator on the de-  
16 velopment of technical standards for new technologies and  
17 operations to be implemented in the FAA’s regulatory and  
18 certification programs. Amounts appropriated under the  
19 preceding sentence for any fiscal year shall remain avail-  
20 able until expended.

21 **SEC. 13. PROHIBITION ON CERTAIN PERFORMANCE-BASED**  
22 **INCENTIVES.**

23 Section 106(l) of title 49, United States Code, is  
24 amended by adding at the end the following:

1           “(7) PROHIBITION ON CERTAIN PERFORMANCE-  
2           BASED INCENTIVES.—No employee of the Adminis-  
3           tration shall be given an award, financial incentive,  
4           other compensation, or recognition as a result of ac-  
5           tions to meet performance goals related to meeting  
6           schedules or quotas for certificates issued under sec-  
7           tion 44704.”.

8   **SEC. 14. SAFETY REPORTING PROGRAM.**

9           (a) IN GENERAL.—Not later than 1 year after the  
10          date of enactment of this Act, in order to improve safety  
11          in the individual certification application review process  
12          and potential trends relating to safety concerns, the Ad-  
13          ministrators shall maintain a safety reporting program for  
14          FAA employees to anonymously and voluntarily report in-  
15          stances where they have identified safety concerns during  
16          the certification process.

17          (b) SAFETY REPORTING PROGRAM REQUIRE-  
18          MENTS.—In maintaining the safety reporting program  
19          under subsection (a), the Administrator shall ensure the  
20          following:

21                 (1) The FAA maintains a reporting culture that  
22                 encourages engineers and other appropriate FAA  
23                 employees to voluntarily report when they believe an  
24                 aspect of an aircraft design may be noncompliant,  
25                 nonconforming, or unsafe.

1           (2) The safety reporting program is non-puni-  
2           tive and anonymous.

3           (3) The Administrator thoroughly reviews safe-  
4           ty reports to determine whether there is a hazard,  
5           defect, noncompliance, nonconformance, or process  
6           error.

7           (4) The Administrator thoroughly reviews safe-  
8           ty reports to determine whether potential weaknesses  
9           in the aircraft certification processes led to safety  
10          concerns being raised regarding aircraft, engine,  
11          propeller, and appliance designs, including systems,  
12          components, parts, and materials.

13          (5) If the Administrator determines that a haz-  
14          ard, defect, noncompliance, nonconformance, or  
15          process error exists, the root cause is identified and  
16          appropriate action is taken to remedy the defect,  
17          noncompliance, nonconformance, or process error.

18          (c) OUTCOMES.—Results of safety report reviews  
19          under this section may be used to—

20               (1) improve—

21                   (A) safety systems, hazard control, and  
22                   risk reduction;

23                   (B) certification systems;

24                   (C) FAA oversight; and

25                   (D) compliance and conformance; and

1           (2) implement lessons learned.

2           (d) REPORT FILING.—The Administrator shall estab-  
3 lish requirements for when in the certification process re-  
4 ports may be filed, which may include certification mile-  
5 stones, timelines, or other decision-making points, with the  
6 goals of ensuring that identified issues can be timely ad-  
7 dressed and fostering open dialogue between applicants  
8 and FAA employees throughout the certification process.

9           (e) INTEGRATION WITH OTHER SAFETY REPORTING  
10 PROGRAMS.—The Administrator shall harmonize the safe-  
11 ty reporting program maintained under subsection (a)  
12 with other internal safety reporting programs the FAA  
13 maintains.

14          (f) REPORT TO CONGRESS.—Not later than 2 years  
15 after the date of enactment of this Act, and annually  
16 thereafter, the Administrator shall submit to the appro-  
17 priate committees of Congress a report on the effective-  
18 ness of the safety reporting program maintained under  
19 subsection (a).

20 **SEC. 15. PROTECTION OF WHISTLEBLOWERS.**

21          Section 42121(a) of title 49, United States Code, is  
22 amended—

23           (1) by redesignating paragraphs (1) through  
24           (4) as subparagraphs (A) through (D), respectively,

1 and moving the margins of such subparagraphs 2  
2 ems to the right;

3 (2) in the subsection heading, by striking “AIR-  
4 LINE”;

5 (3) by striking “No air carrier” and inserting  
6 the following:

7 “(1) AIR CARRIERS.—No air carrier”; and

8 (4) by adding at the end the following:

9 “(2) AIRCRAFT MANUFACTURERS.—No aircraft,  
10 engine, or propeller manufacturer that holds a cer-  
11 tificate issued pursuant to section 44704 of title 49,  
12 United States Code, or contractor of, subcontractor  
13 of, or supplier to, such a manufacturer may dis-  
14 charge an employee or otherwise discriminate  
15 against an employee with respect to compensation,  
16 terms, conditions, or privileges of employment be-  
17 cause the employee (or any person acting pursuant  
18 to a request of the employee)—

19 “(A) provided, caused to be provided, or is  
20 about to provide (with any knowledge of the  
21 employer) or cause to be provided to the em-  
22 ployer or Federal Government information re-  
23 lating to any violation or alleged violation of  
24 any order, regulation, or standard of the Fed-  
25 eral Aviation Administration or any other provi-

1 sion of Federal law relating to aircraft, engine,  
2 or propeller manufacturer safety (including  
3 parts or components provided by contractors,  
4 subcontractors, or suppliers) under this subtitle  
5 or any other law of the United States;

6 “(B) has filed, caused to be filed, or is  
7 about to file (with any knowledge of the em-  
8 ployer) or cause to be filed a proceeding relat-  
9 ing to any violation or alleged violation of any  
10 order, regulation, or standard of the Federal  
11 Aviation Administration or any other provision  
12 of Federal law, relating to aircraft, engine, or  
13 propeller manufacturer safety (including parts  
14 or components provided by contractors, sub-  
15 contractors, or suppliers) under this subtitle or  
16 any other law of the United States;

17 “(C) testified or is about to testify in such  
18 a proceeding; or

19 “(D) assisted or participated or is about to  
20 assist or participate in such a proceeding.”.

21 **SEC. 16. REPEAL OF DESIGN AND PRODUCTION ORGANIZA-**  
22 **TION CERTIFICATE AUTHORITY.**

23 (a) IN GENERAL.—Section 44704 of title 49, United  
24 States Code, is amended—

1           (1) in the section heading, by striking “**air-**  
2           **worthiness certificates, and design and**  
3           **production organization certificates**” and  
4           inserting “**and airworthiness certificates**”;  
5           and

6           (2) by striking subsection (e).

7           (b) CONFORMING AMENDMENT.—Section 44702(a)  
8           of title 49, United States Code, is amended, in the matter  
9           preceding paragraph (1), by striking “design organization  
10          certificates,”.

11   **SEC. 17. ENSURING APPROPRIATE RESPONSIBILITY OF AIR-**  
12                           **CRAFT CERTIFICATION AND FLIGHT STAND-**  
13                           **ARDS PERFORMANCE OBJECTIVES AND**  
14                           **METRICS.**

15          (a) REPEALS.—Sections 211 and 221 of the FAA Re-  
16          authorization Act of 2018 (49 U.S.C. 44701 note) are re-  
17          pealed.

18          (b) CONFORMING REPEALS.—Paragraphs (8) and (9)  
19          of section 202(e) of the FAA Reauthorization Act of 2018  
20          (49 U.S.C. 44701 note) are repealed.

21   **SEC. 18. REVIEW OF FAA CERTIFICATION EXPERTISE.**

22          (a) IN GENERAL.—Not later than 60 days after the  
23          date of enactment of this Act, and without duplicating any  
24          recently completed or ongoing reviews, the Administrator  
25          shall initiate a review of—

1           (1) the inspectors, engineers, managers, and ex-  
2           ecutives in the FAA who are responsible for the cer-  
3           tification of the design, manufacture, and operation  
4           of aircraft intended for air transportation for pur-  
5           poses of determining whether the FAA has the ex-  
6           pertise and capability to adequately understand the  
7           safety implications of, and oversee the adoption of,  
8           new or innovative technologies, materials, and proce-  
9           dures that designers and manufacturers of such air-  
10          craft may adopt or introduce;

11          (2) the Chief Scientific and Technical Advisors  
12          program to determine whether the program should  
13          be enhanced or expanded to bolster and support the  
14          FAA's aircraft certification and safety programs,  
15          particularly with respect to understanding the safety  
16          implications of new or innovative technologies, mate-  
17          rials, aircraft, and procedures, that designers and  
18          manufacturers of such aircraft may adopt or intro-  
19          duce; and

20          (3) the FAA's compensation policies for aircraft  
21          certification engineers relative to those of industry to  
22          determine whether compensation is adequate to at-  
23          tract personnel with adequate experience.

24          (b) DEADLINE FOR COMPLETION.—Not later than  
25          270 days after the date of enactment of this Act, the Ad-

1 administrator shall complete the review required by sub-  
2 section (a).

3 (c) BRIEFING.—Not later than 30 days after the  
4 completion of the review required by subsection (a), the  
5 Administrator shall brief the appropriate committees of  
6 Congress on the results of the review and any other related  
7 review. The briefing shall include the following:

8 (1) An analysis of the FAA's ability to hire  
9 safety inspectors, engineers, managers, executives,  
10 scientists, and technical advisors, who have the req-  
11 uisite expertise to oversee new developments in aero-  
12 space design and manufacturing.

13 (2) A plan for the FAA to improve the overall  
14 expertise of the FAA's personnel who are responsible  
15 for the oversight of the design and manufacture of  
16 aircraft.

17 (3) Recommendations for such legislation, if  
18 any, as the Administrator determines necessary to  
19 carry out the plan required under paragraph (2).