

118TH CONGRESS
1ST SESSION

S. 1506

To improve the processes for type certification, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 9, 2023

Mr. WARNOCK (for himself and Mr. MORAN) introduced the following bill;
which was read twice and referred to the Committee on Commerce,
Science, and Transportation

A BILL

To improve the processes for type certification, 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 “FAA Advancements
5 Act”.

6 **SEC. 2. DEFINITIONS.**

7 In this Act:

8 (1) ADMINISTRATOR.—The term “Adminis-
9 trator” means the Administrator of the Federal
10 Aviation Administration.

1 (2) APPROPRIATE COMMITTEES OF CON-
2 GRESS.—The term “appropriate committees of Con-
3 gress” means the Committee on Transportation and
4 Infrastructure of the House of Representatives and
5 the Committee on Commerce, Science, and Trans-
6 portation of the Senate.

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

9 (4) INTERNATIONAL VALIDATION BRANCH.—
10 The term “International Validation Branch” means
11 the International Validation Branch of the Compli-
12 ance and Airworthiness Division of the Aircraft Cer-
13 tification Service of the FAA.

14 (5) REGULATORY MATERIALS.—The term “reg-
15 ulatory materials” means rules, orders, advisory cir-
16 culars, statements of policy, guidance, and other ma-
17 terials related to aviation safety regulations, as well
18 as other materials pertaining to training and oper-
19 ation of aeronautical products.

20 (6) SECRETARY.—The term “Secretary” means
21 the Secretary of Transportation.

22 **SEC. 3. INDEPENDENT STUDY ON A FUTURE STATE ON**
23 **TYPE CERTIFICATION PROCESSES.**

24 (a) REVIEW AND STUDY.—Not later than 60 days
25 after the date of enactment of this section, subject to the

1 availability of appropriations, the Administrator shall
2 enter into an agreement with an appropriate federally
3 funded research and development center, or other inde-
4 pendent nonprofit organization that recommends solutions
5 to aviation policy challenges through objective analysis, to
6 conduct a review and study in accordance with the require-
7 ments and elements set forth in this section.

8 (b) ELEMENTS.—The review and study under sub-
9 section (a) shall provide analyses, assessments, and rec-
10 ommendations that address the following:

11 (1) A vision for a future state of type certifi-
12 cation that reflects the highly complex, highly inte-
13 grated nature of today's aircraft.

14 (2) A review of the current tools and techniques
15 used for type certification and an evaluation of
16 whether use of advanced digital tools and tech-
17 niques, including model-based system engineering,
18 would improve the type certification process and en-
19 hance aviation safety.

20 (3) How the FAA could develop a risk-based
21 model for type certification and implement proce-
22 dures where the FAA could rely solely on an appli-
23 cant's showing of compliance in those areas of low-
24 risk, subject to tests, means of compliance, and sub-

1 stantiating data the Administrator considers nec-
2 essary in the interest of safety.

3 (4) What changes are needed to ensure that
4 corrective actions for continued operational safety
5 issues can be approved and implemented quickly,
6 particularly with respect to software modifications.

7 (5) What efficiencies are needed in the FAA's
8 type certification system that will facilitate the as-
9 sessment and integration of innovating technologies
10 that advance aviation safety.

11 (6) Best practices and tools used by other cer-
12 tification authorities that could be adopted by the
13 FAA and the United States, as well as the best
14 practices and tools used by the United States which
15 can be shared with other certification authorities.

16 (c) REPORT.—Not later than 15 months after the
17 date of enactment of this section, the organization con-
18 ducting the review and study shall submit to the Adminis-
19 trator and the appropriate committees of Congress a re-
20 port on the results of the review and study that includes
21 the findings and recommendations of the organization.

22 (d) CONGRESSIONAL BRIEFING.—Not later than 270
23 days after the report required under subsection (c) is sub-
24 mitted to the Administrator, the Administrator shall brief
25 the appropriate committees of Congress regarding the

1 FAA’s response to the findings and recommendations of
2 such report, what actions the FAA will take as a result
3 of such findings and recommendations, and the FAA ra-
4 tionale for not taking action on any specific recommenda-
5 tion.

6 **SEC. 4. REPORT ON VALIDATION PROGRAM PERFORM-**
7 **ANCE.**

8 (a) IN GENERAL.—Not later than 120 days after the
9 date of enactment of this section, the Secretary shall
10 evaluate the performance of the FAA’s type certificate val-
11 idation program under bilateral agreements, with ref-
12 erence to agreed implementation procedures.

13 (b) CONTENTS.—The evaluation under subsection (a)
14 shall consider, at minimum, the following:

15 (1) Progress under section 243(a) of the FAA
16 Reauthorization Act of 2018 (49 U.S.C. 44701 note)
17 with respect to improving the FAA’s leadership
18 abroad.

19 (2) Performance with reference to metrics such
20 as the number and types of projects, timeline mile-
21 stones, the validating authority level of involvement
22 and certifying authority delegation, and trends relat-
23 ing to the repeated use of non-basic criteria to re-
24 view systems or methods of compliance that have
25 been validated previously in similar context.

1 (3) Training on the minimum standards for val-
2 idation work plan content, such as the validating au-
3 thority level of involvement, and what constitutes
4 justification for level of involvement and compliance
5 document requests.

6 (4) The perspectives of FAA employees respon-
7 sible for type validation projects, bilateral civil avia-
8 tion regulator partners, and industry applicants on
9 the FAA's performance in carrying out validation
10 projects.

11 (5) The levels of funding and staffing for the
12 International Validation Branch compared to the
13 Branch's workload and goals.

14 (6) The effectiveness of FAA training for em-
15 ployees and outreach conducted to improve and en-
16 force validation processes.

17 (7) Efforts undertaken to strengthen relation-
18 ships with international certification authorities to
19 maximize safety cooperation and the use of approv-
20 als issued by other certifying authorities in compli-
21 ance with applicable bilateral agreements and imple-
22 mentation procedures.

23 (c) REPORT.—The Administrator shall issue a report
24 regarding the evaluation required under subsection (a) to

1 the appropriate committees of Congress not later than 1
2 year after enactment of this section.

3 **SEC. 5. INTERNAL REGULATORY PROCESS REVIEW.**

4 (a) IN GENERAL.—The Secretary shall establish an
5 internal regulatory process review team (in this section re-
6 ferred to as the “review team”) comprising of FAA em-
7 ployees and individuals described in subsection (b) to de-
8 velop recommendations to improve the timeliness of, and
9 performance accountability in, the development and pro-
10 mulgation of regulatory materials (as defined in section
11 2). The review team shall deliver a report with rec-
12 ommendations to the Secretary in accordance with the
13 deadlines specified in subsection (e).

14 (b) OTHER MEMBERS; CONSULTATION.—

15 (1) IN GENERAL.—The review team shall in-
16 clude outside experts and academics with relevant
17 experience or expertise in aviation and commercial
18 space transportation safety and in improving the
19 performance, accountability, and transparency of the
20 Federal regulatory process, particularly as it relates
21 to aviation and commercial space transportation
22 safety. The review team shall include at least 1 out-
23 side expert or academic with relevant experience or
24 expertise in aviation and commercial space transpor-
25 tation safety and at least 1 outside expert or aca-

1 demic with relevant experience or expertise in im-
2 proving the performance, accountability, and trans-
3 parency of the Federal regulatory process, particu-
4 larly as it relates to aviation and commercial space
5 transportation safety.

6 (2) CONSULTATION.—The review team may, as
7 appropriate, consult with industry stakeholders.

8 (c) CONTENTS OF REVIEW.—In conducting the re-
9 view required under subsection (a), the review team shall
10 do the following:

11 (1) Develop a proposal for rationalizing proc-
12 esses and eliminating redundant administrative re-
13 view of regulatory materials within the FAA, par-
14 ticularly when FAA-sponsored rulemaking commit-
15 tees and stakeholders have collaborated on the pro-
16 posed regulations to address airworthiness standards
17 deficiencies.

18 (2) With respect to each office within the FAA
19 that reviews regulatory materials, assess—

20 (A) the timeline assigned to each such of-
21 fice to complete the review of regulatory mate-
22 rials;

23 (B) the actual time spent for such review;

24 (C) opportunities to reduce the actual time
25 for such review; and

1 (D) whether clear roles, responsibilities, re-
2 quirements, and expectations are clearly defined
3 for each office required to review the regulatory
4 materials.

5 (3) Define and document the roles and respon-
6 sibilities of each office within the FAA that develops,
7 drafts or reviews each kind of regulatory material in
8 order to ensure that hiring reflects who, where, and
9 how these employees function in the rulemaking
10 framework.

11 (4) Describe any organizational changes or the
12 need to hire additional FAA employees, if necessary
13 and taking into consideration whether current posi-
14 tions are staffed, to reduce delays in publication of
15 proposed and final regulatory materials.

16 (5) In order to provide the public with detailed
17 information on the progress of the development of
18 regulatory materials, identify reporting mechanisms
19 and develop a template and appropriate system
20 metrics for making publicly available on a website a
21 real-time progress tracker that updates itself to
22 show the major stages (as determined by the Sec-
23 retary) of the development of regulatory materials as
24 they are initiated, in progress, and completed, from
25 inception of a proposed development of regulatory

1 materials to publication of the final version of such
2 materials.

3 (6) Consider changes to the FAA's best prac-
4 tices under rules governing ex parte communications
5 with other validating authorities, including inter-
6 national validating authorities, and with consider-
7 ation of the public interest in transparency, to pro-
8 vide flexibility for FAA employees to discuss regu-
9 latory materials, particularly for those related to en-
10 hancing aviation safety and commercial space trans-
11 portation safety, and the United States aviation and
12 commercial space transportation international lead-
13 ership.

14 (7) Recommend methods by which the FAA can
15 incorporate research funded by the Department of
16 Transportation, in addition to consensus standards
17 and conformance assessment processes set by private
18 sector standards-developing organizations into regu-
19 latory materials, to keep pace with rapid changes in
20 aviation and commercial space transportation tech-
21 nologies and processes.

22 (8) Recommend mechanisms to optimize the
23 roles of the Office of the Secretary of Transpor-
24 tation and the Office of Management and Budget,

1 with the objective of improving the efficiency of reg-
2 ulatory activity.

3 (d) ACTION PLAN.—The Administrator shall develop
4 an action plan to implement the recommendations devel-
5 oped by the review team. The Administrator shall publish
6 the action plan on the internet website of the FAA and
7 shall transmit the plan to the appropriate committees of
8 Congress.

9 (e) DEADLINES.—The requirements of this section
10 shall be subject to the following deadlines:

11 (1) The review team shall complete the evalua-
12 tion required under subsection (a) and submit the
13 review team’s report on such evaluation to the Sec-
14 retary not later than 120 days after the date of en-
15 actment of this section.

16 (2) The Administrator shall develop and publish
17 the action plan under subsection (d) not later than
18 30 days after the date on which the review team
19 submits the report required by subsection (a) to the
20 Administrator.

21 (f) ADMINISTRATIVE PROCEDURE REQUIREMENTS
22 INAPPLICABLE.—The provisions of subchapter II of chap-
23 ter 5, and chapter 7, of title 5, United States Code (com-
24 monly known as the “Administrative Procedure Act”)

- 1 shall not apply to any activities of the review team in car-
- 2 rying out the requirements of this section.

