

Calendar No. 225

117TH CONGRESS
1ST SESSION

S. 516

[Report No. 117-53]

To plan for and coordinate efforts to integrate advanced air mobility aircraft into the national airspace system, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 1, 2021

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

DECEMBER 17, 2021

Reported by Ms. CANTWELL, with an amendment

[Strike out all after the enacting clause and insert the part printed in italic]

A BILL

To plan for and coordinate efforts to integrate advanced air mobility aircraft into the national airspace system, 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 “Advanced Air Mobility
5 Coordination and Leadership Act”.

1 **SEC. 2. ADVANCED AIR MOBILITY WORKING GROUP.**

2 (a) IN GENERAL.—Not later than 120 days after the
3 date of enactment of this Act, the Secretary of Transpor-
4 tation shall establish an advanced air mobility interagency
5 working group (in this section referred to as the “working
6 group”).

7 (b) SENSE OF CONGRESS.—It is the sense of Con-
8 gress that Advanced Air Mobility (AAM) represents a key
9 area of sustainable transportation and economic growth
10 for the United States and globally, and that it is impera-
11 tive that the United States take a leadership role in the
12 adoption and furtherance of this technology. Therefore,
13 given the path to initial operations is taking place utilizing
14 today’s regulatory framework, it is critical that govern-
15 ment agencies collaborate and focus on taking this vital
16 industry to the next level.

17 (c) PURPOSE.—The purpose of the working group es-
18 tablished under this section is to plan for and coordinate
19 efforts related to the physical and digital security, safety,
20 infrastructure, and Federal investment necessary for mat-
21 uration of the AAM ecosystem in the United States in
22 order to—

- 23 (1) further United States leadership;
24 (2) grow new transportation options;
25 (3) amplify economic activity and jobs;

1 (4) advance environmental sustainability and
2 new technologies; and

3 (5) support emergency preparedness and com-
4 petitiveness.

5 (d) MEMBERSHIP.—The working group shall be com-
6 prised of at least 1 representative of each of the following
7 Federal departments and agencies:

8 (1) Department of Transportation.

9 (2) Federal Aviation Administration.

10 (3) National Aeronautics and Space Adminis-
11 tration.

12 (4) Department of Commerce

13 (5) Department of Defense.

14 (6) Department of Energy.

15 (7) Department of Homeland Security.

16 (8) Department of Agriculture.

17 (9) Department of Labor.

18 (10) Such other departments or agencies as the
19 Secretary of Transportation determines appropriate.

20 (e) COORDINATION.—The working group shall en-
21 gage with aviation industry and labor stakeholders, certi-
22 fying organizations, and others determined appropriate by
23 the Secretary of Transportation, including—

1 (1) manufacturers of avionics, AAM aircraft,
2 propulsion systems, structures, and air traffic man-
3 agement systems;

4 (2) operators of AAM aircraft;

5 (3) air carriers and general aviation operators;

6 (4) airports;

7 (5) fixed-based operators;

8 (6) labor representatives of pilots, air traffic
9 controllers, and aviation safety inspectors;

10 (7) State, local, and Tribal officials or public
11 agencies, with representation of both urban and
12 rural areas;

13 (8) first responders;

14 (9) groups representing environmental interests;

15 (10) electric utilities, energy providers and mar-
16 ket operators;

17 (11) academia with experience working with in-
18 dustry on new technology and commercialization;
19 and

20 (12) training and maintenance providers.

21 (f) REVIEW AND EXAMINATION.—Not later than 1
22 year after the working group is established under sub-
23 section (a), the working group shall complete a review and
24 examination of, at a minimum—

1 (1) the steps which will mature AAM past ini-
2 tial operations;

3 (2) the evaluation of physical and digital secu-
4 rity and safety requirements involved with future air
5 traffic control concepts which might be considered as
6 part of evolving AAM to higher levels of traffic den-
7 sity;

8 (3) current Federal programs and policies that
9 could be leveraged to advance the maturation of the
10 AAM industry;

11 (4) infrastructure, including aviation, surface
12 and energy infrastructure, physical and digital secu-
13 rity, and utilities necessary to accommodate and
14 support expanded operations of AAM after initial
15 implementation;

16 (5) anticipated benefits associated with AAM
17 aircraft operations, including economic, environ-
18 mental, emergency response, and transportation ben-
19 efits; and

20 (6) other factors that may limit the full poten-
21 tial of the AAM industry, including community ac-
22 ceptance of such operations.

23 (g) AAM NATIONAL STRATEGY.—Based on the re-
24 view and examination performed under subsection (f), the

1 working group shall develop an AAM National Strategy
 2 that includes—

3 (1) recommendations regarding the safety, se-
 4 curity, infrastructure, air traffic concepts, and other
 5 Federal investment or actions necessary to support
 6 the evolution of early AAM to higher levels of activ-
 7 ity and societal benefit; and

8 (2) a comprehensive plan detailing the roles and
 9 responsibilities of each Federal department and
 10 agency necessary to facilitate implementing the rec-
 11 ommendations developed under paragraph (1).

12 (h) REPORT.—Not later than 180 days after the com-
 13 pletion of the review and examination performed under
 14 subsection (f), the working group shall submit to the ap-
 15 propriate committees of Congress a report—

16 (1) detailing the review and examination per-
 17 formed under subsection (f); and

18 (2) providing the AAM National Strategy, in-
 19 cluding the plan and associated recommendations,
 20 developed under subsection (g).

21 (i) DEFINITIONS.—In this section:

22 (1) ADVANCED AIR MOBILITY; AAM.—The terms
 23 “advanced air mobility” and “AAM” mean an air
 24 transportation system that moves people and cargo
 25 between places using new aircraft designs including

1 electric aircraft and electric vertical take-off and
 2 landing aircraft (eVTOL), which are integrated into
 3 existing airspace operations as well as operated in
 4 local, regional, intraregional, rural, and urban envi-
 5 ronments, and which may include unmanned or re-
 6 motely piloted vehicles.

7 (2) APPROPRIATE COMMITTEES OF CON-
 8 GRESS.—The term “appropriate committees of Con-
 9 gress” means—

10 (A) the Committee on Commerce, Science,
 11 and Transportation of the Senate;

12 (B) the Committee on Armed Services of
 13 the Senate;

14 (C) the Committee on Appropriations of
 15 the Senate;

16 (D) the Committee on Transportation and
 17 Infrastructure of the House of Representatives;

18 (E) the Committee on Armed Services of
 19 the House of Representatives; and

20 (F) the Committee on Appropriations of
 21 the House of Representatives.

22 (3) ELECTRIC AIRCRAFT.—The term “electric
 23 aircraft” means any fixed-wing airplane, rotorcraft,
 24 or VTOL aircraft with a fully electric or hybrid (fuel

1 and electric) driven propulsion system used for
2 flight.

3 (4) VERTICAL TAKE-OFF AND LANDING;
4 VTOL.—The terms “vertical take-off and landing”
5 and “VTOL” mean an aircraft with lift/thrust units
6 used to generate powered lift and control and with
7 more than two lift/thrust units used to provide lift
8 during vertical take-off or landing.

9 **SECTION 1. SHORT TITLE.**

10 *This Act may be cited as the “Advanced Air Mobility*
11 *Coordination and Leadership Act”.*

12 **SEC. 2. ADVANCED AIR MOBILITY WORKING GROUP.**

13 (a) *IN GENERAL.*—Not later than 120 days after the
14 *date of enactment of this Act, the Secretary of Transpor-*
15 *tation shall establish an advanced air mobility interagency*
16 *working group (in this section referred to as the “working*
17 *group”).*

18 (b) *SENSE OF CONGRESS.*—*It is the sense of Congress*
19 *that Advanced Air Mobility (AAM) represents a key area*
20 *of sustainable transportation and economic growth for the*
21 *United States and globally, and that it is imperative that*
22 *the United States take a leadership role in the adoption*
23 *and furtherance of this technology. Therefore, given the path*
24 *to initial operations is taking place utilizing today’s regu-*
25 *latory framework, it is critical that government agencies*

1 *collaborate and focus on taking this vital industry to the*
 2 *next level through policy and investment in energy, infra-*
 3 *structure, security and transportation. The focus of the*
 4 *working group is interagency coordination to enable the*
 5 *maturation and growth of AAM.*

6 (c) *PURPOSE.—The purpose of the working group es-*
 7 *tablished under this section is to plan for and coordinate*
 8 *efforts related to safety, infrastructure, physical security*
 9 *and cybersecurity, and Federal investment necessary for*
 10 *maturation of the AAM ecosystem, particularly passenger-*
 11 *carrying aircraft, in the United States in order to—*

- 12 (1) *further United States leadership;*
- 13 (2) *grow new transportation options;*
- 14 (3) *amplify economic activity and jobs;*
- 15 (4) *advance environmental sustainability and*
 16 *new technologies; and*
- 17 (5) *support emergency preparedness and com-*
 18 *petitiveness.*

19 (d) *MEMBERSHIP.—The working group shall be com-*
 20 *prised of at least 1 representative of each of the following*
 21 *Federal departments and agencies:*

- 22 (1) *Department of Transportation.*
- 23 (2) *Federal Aviation Administration.*
- 24 (3) *National Aeronautics and Space Administra-*
 25 *tion.*

1 (4) *Department of Commerce*

2 (5) *Department of Defense.*

3 (6) *Department of Energy.*

4 (7) *Department of Homeland Security.*

5 (8) *Department of Agriculture.*

6 (9) *Department of Labor.*

7 (10) *Federal Communications Commission.*

8 (11) *Such other departments or agencies as the*
9 *Secretary of Transportation determines appropriate.*

10 (e) *COORDINATION.—The working group shall engage*
11 *with State, local, and Tribal governments, industry and*
12 *labor stakeholders, stakeholder associations, and others de-*
13 *termined appropriate by the Secretary of Transportation,*
14 *including—*

15 (1) *manufacturers of avionics, AAM use aircraft,*
16 *propulsion systems, structures, and air traffic man-*
17 *agement systems;*

18 (2) *air carriers, commercial operators, general*
19 *aviation operators and future AAM operators;*

20 (3) *airports;*

21 (4) *fixed-based operators, as defined in FAA Ad-*
22 *visory Circular 150/5190-7;*

23 (5) *certified labor representatives for pilots asso-*
24 *ciations, air traffic control specialists employed by*

1 *the Federal Aviation Administration, and aviation*
 2 *safety inspectors;*

3 *(6) State, local, and Tribal officials or public*
 4 *agencies, with representation from both urban and*
 5 *rural areas;*

6 *(7) first responders;*

7 *(8) groups representing environmental interests;*

8 *(9) electric utilities, energy providers and market*
 9 *operators of electricity;*

10 *(10) academia with experience working with in-*
 11 *dustry on new technology and commercialization;*

12 *(11) groups representing the telecommunications*
 13 *industry; and*

14 *(12) aviation training and maintenance pro-*
 15 *viders.*

16 *(f) REVIEW AND EXAMINATION.—Not later than 1 year*
 17 *after the working group is established under subsection (a),*
 18 *the working group shall complete a review and examination*
 19 *of, at a minimum—*

20 *(1) the steps that will mature AAM past initial*
 21 *operations;*

22 *(2) the evaluation of air traffic control and man-*
 23 *agement concepts that might be considered as part of*
 24 *evolving AAM to higher levels of traffic density;*

1 (3) *current Federal programs and policies that*
 2 *could be leveraged to advance the maturation of the*
 3 *AAM industry;*

4 (4) *infrastructure, including aviation, surface,*
 5 *energy, and telecommunications infrastructure, phys-*
 6 *ical security and cybersecurity, and utilities nec-*
 7 *essary to accommodate and support expanded oper-*
 8 *ations of AAM after initial implementation;*

9 (5) *steps needed to ensure a robust domestic sup-*
 10 *ply chain;*

11 (6) *anticipated benefits associated with AAM*
 12 *aircraft operations, including economic, environ-*
 13 *mental, emergency response, and transportation bene-*
 14 *fits;*

15 (7) *the interests, roles, and responsibilities of*
 16 *Federal, State, local, and Tribal governments affected*
 17 *by AAM aircraft operations; and*

18 (8) *other factors that may limit the full potential*
 19 *of the AAM industry, including community accept-*
 20 *ance or restrictions of such operations.*

21 (g) *AAM NATIONAL STRATEGY.—Based on the review*
 22 *and examination performed under subsection (f), the work-*
 23 *ing group shall develop an AAM National Strategy that in-*
 24 *cludes—*

1 (1) *recommendations regarding the safety, secu-*
 2 *rity, infrastructure, air traffic concepts, and other*
 3 *Federal investment or actions necessary to support*
 4 *the evolution of early AAM to higher levels of activity*
 5 *and societal benefit; and*

6 (2) *a comprehensive plan detailing the roles and*
 7 *responsibilities of each Federal department and agen-*
 8 *cy, and of State, local, and Tribal governments, nec-*
 9 *essary to facilitate implementing the recommenda-*
 10 *tions developed under paragraph (1).*

11 (h) *REPORT.*—*Not later than 180 days after the com-*
 12 *pletion of the review and examination performed under sub-*
 13 *section (f), the working group shall submit to the appro-*
 14 *priate committees of Congress a report—*

15 (1) *detailing the review and examination per-*
 16 *formed under subsection (f); and*

17 (2) *providing the AAM National Strategy, in-*
 18 *cluding the plan and associated recommendations, de-*
 19 *veloped under subsection (g).*

20 (i) *EVALUATION OF TERMINATION OF WORKING*
 21 *GROUP.*—*Not later than 30 days after the date on which*
 22 *the working group submits the report required under sub-*
 23 *section (h), the Secretary of Transportation shall evaluate*
 24 *and decide whether to terminate the working group and*

1 *shall notify the appropriate committees of Congress of such*
 2 *decision.*

3 *(j) DEFINITIONS.—In this section:*

4 *(1) ADVANCED AIR MOBILITY; AAM.—The terms*
 5 *“advanced air mobility” and “AAM” mean an air*
 6 *transportation system that moves people and cargo*
 7 *between places using innovative aircraft designs (such*
 8 *as vertical take-off and landing (VTOL)) and new*
 9 *technologies (such as electric or hybrid (fuel and elec-*
 10 *tric) driven propulsion), which are integrated into ex-*
 11 *isting airspace operations as well as operated in*
 12 *local, regional, intraregional, rural, and urban envi-*
 13 *ronments, and which may include remotely piloted or*
 14 *autonomous aircraft.*

15 *(2) APPROPRIATE COMMITTEES OF CONGRESS.—*
 16 *The term “appropriate committees of Congress”*
 17 *means—*

18 *(A) the Committee on Commerce, Science,*
 19 *and Transportation of the Senate;*

20 *(B) the Committee on Armed Services of the*
 21 *Senate;*

22 *(C) the Committee on Appropriations of the*
 23 *Senate;*

24 *(D) the Committee on Transportation and*
 25 *Infrastructure of the House of Representatives;*

1 (E) the Committee on Armed Services of the
2 House of Representatives; and

3 (F) the Committee on Appropriations of the
4 House of Representatives.

5 (3) *VERTICAL TAKE-OFF AND LANDING; VTOL.*—
6 The terms “vertical take-off and landing” and
7 “VTOL” mean an aircraft with lift/thrust units used
8 to generate powered lift and control and with more
9 than two lift/thrust units used to provide lift during
10 vertical take-off or landing.

11 **SEC. 3. GAO STUDY AND REPORT.**

12 (a) *IN GENERAL.*—Not later than 180 days after the
13 date of enactment of this Act, the Comptroller General of
14 the United States shall—

15 (1) conduct a study on the interests, roles, and
16 responsibilities of Federal, State, local, and Tribal
17 governments affected by AAM aircraft and operations;
18 and

19 (2) submit to the appropriate committees of Con-
20 gress a report on the study, including the Comptroller
21 General’s findings and conclusions.

22 (b) *REQUIREMENTS.*—In conducting the study re-
23 quired under subsection (a), the Comptroller General shall
24 review the following:

1 (1) *The state of the law as of the enactment of*
2 *this Act with respect to Federal authority over oper-*
3 *ations of AAM aircraft systems in the national air-*
4 *space system.*

5 (2) *The state of the law as of the enactment of*
6 *this Act with respect to State, local, and Tribal au-*
7 *thority over operations of AAM aircraft in the na-*
8 *tional airspace system.*

9 (3) *Potential gaps between authorities under*
10 *paragraphs (1) and (2).*

11 (4) *Proposals to facilitate the safe and finan-*
12 *cially viable growth and development of the AAM in-*
13 *dustry and integration of AAM aircraft into the na-*
14 *tional airspace system.*

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A BILL

To plan for and coordinate efforts to integrate advanced air mobility aircraft into the national air-space system, and for other purposes.

DECEMBER 17, 2021

Reported with an amendment