

House Science, Space, and Technology Committee

Ranking Member Frank Lucas

NATIONAL DRONE AND ADVANCED AIR MOBILITY INITIATIVE ACT

Section-by-Section

Section 1. Short Title; Table of Contents

This section establishes a table of contents for the bill and establishes the short title of the bill as the “National Drone and Advanced Air Mobility Initiative Act.”

Section 2. Findings.

This section contains Congressional findings, concerning unmanned aircraft systems (UAS), which have the potential to change and transform sectors of the U.S. economy through use in agriculture, public safety, fire detection, border security, weather forecasting, construction, and many other applications. Advanced Air Mobility (AAM) aims to transform the way people and goods are transported.

It finds that research, development, demonstration, testing, and evaluation of UAS and counter-UAS systems are critical to understanding the capabilities and threats posed by unmanned aircraft systems. UAS are subject to safety, privacy, cybersecurity, and supply chain risks, particularly as most in the U.S. are manufactured or assembled using parts from foreign countries. The U.S. needs to invest in domestic manufacturing and secure supply chains of UAS to reduce reliance on foreign-made systems.

National and homeland security threats posed by UAS include criminal and terrorist use for espionage, surveillance, and intelligence gathering, smuggling drugs and contraband, and more.

There is a lack of voluntary consensus standards for UAS, and the federal government has an important role in advancing research, development, voluntary consensus standards, and education activities in UAS through coordination between state, local, federal, and tribal governments, academia, and private sectors.

Section 3. Definitions.

This section provides the meaning of terms used throughout the legislative text.

Section 4. Purposes.

The purpose of this act is to ensure U.S. leadership in UAS and AAM by supporting UAS research and development; promoting development of facilities for UAS research, testing, and development; mitigating risks to supply chains, public safety, and national security; preparing the present and future U.S. workforce for the integration of UAS across sectors of the economy; addressing basic research knowledge gaps; maximizing the benefits of UAS; increasing environmental observations and establishing a data management strategy for scientific data collected by UAS; improving interagency coordination of federal UAS research and development; promoting research and development collaboration among state, local, tribal, and federal governments, National Laboratories, industry and universities; promoting development of voluntary standards for UAS; supporting continued development of the AAM ecosystem.

Title I – National Drone and Advanced Air Mobility Initiative

Section 101. National Drone and Advanced Air Mobility Initiative.

This section establishes the “National Drone and Advanced Air Mobility Initiative.” The Initiative will be carried out by the Initiative Office, the Interagency Committee, and various agency heads as the President sees appropriate. Initiative activities will include the following: sustained, consistent, and coordinated support for next-generation UAS research and development; support to enable AAM; support for the development of standards and best practices for the development of UAS; support for education and training activities; support partnerships between the public and private sectors to advance activities under the Initiative; leverage existing Federal investments to advance the objectives of the Initiative; promote hardware interoperability, open source systems, and standards-driven hardware.

Section 102. National Drone and Advanced Air Mobility Initiative Office.

This section directs the Director of the Office of Science and Technology Policy to establish and appoint a director of the “National Drone and Advanced Air Mobility Initiative Office” to carry out the responsibilities of the Initiative. The Director of the Initiative Office will provide support to the Interagency Committee and the Advisory Committee; serve as the point of contact on Federal civilian UAS activities for Government organizations, academia, industry, professional societies, state, local, tribal, and federal governments, and other stakeholders to exchange information; conduct public outreach and promote early application of technologies, expertise, and innovations derived from Initiative activities; establish a robust data management strategy that ensures digital access, promotes findability and reusability and ensures data are managed for wide use; develop and report to Congress no later than 90 days after the enactment of the Act an estimate of the necessary funds to carry out the activities of the Initiative; coordinate with the National Artificial Intelligence Initiative Office and Advanced Air Mobility Working group to avoid duplication of research and other activities to ensure all activities are complementary to those already being undertaken by other interagency efforts.

Section 103. Coordination by Interagency Committee.

This section directs the Director of the Office of Science and Technology Policy to establish an Interagency Committee to coordinate federal programs and activities in support of the Initiative. The Interagency Committee will include participation from the National Institute of Standards and Technology, the National Science Foundation, the National Aeronautics and Space Administration, the Department of Homeland Security, the National Oceanic and Atmospheric Administration, the Department of Energy, the Federal Aviation Administration, the Department of Defense, the Office of Management and Budget the Office of the Director of National Intelligence, the office of Science and Technology Policy, the General Services Administration, the Department of Justice, the Department of Agriculture, the Department of Interior, the Federal Communications Commission, and any other agency considered appropriate by the president.

The responsibilities of the Interagency Committee will include coordination of federal UAS research and development, demonstration activities, development of standards, testing, scientific data management, and education activities.

The Interagency Committee will prepare and submit a report to the House Committee on Science Space and Technology and the Senate Committee on Commerce Science and Transportation that includes a summarized budget for each fiscal year and an assessment of how Federal agencies are implementing their plan.

Section 104. National Drone and Advanced Air Mobility Initiative Advisory Committee.

This section directs the President to establish a National Drone and Advanced Air Mobility Initiative Advisory Committee. The President will appoint qualified members from industry, academic institutions, state and local governments, federal laboratories, etc. to provide advice and information on UAS.

The Advisory Committee will advise the President and the Initiative Office on matters related to U.S. competitiveness and leadership in UAS; trends in UAS technology and barriers to adoption, and whether the strategic plan developed by the Interagency Committee is helping to maintain U.S. leadership and if national concerns are adequately addressed by the Initiative.

The Advisory Committee will submit a report on their recommendations every 3 years to the President, House Committee on Science Space and Technology, and Senate Committee on Commerce Science and Technology.

Section 105. GAO Study on Foreign Drones.

This section directs the Comptroller General to conduct a study on the use of foreign-made UAS in the federal government UAS fleet. The study will review the policies and practices of the federal government for the operation of UAS and assess the risks, trustworthiness, availability, and resilience of these technologies.

Title II – National Drone and Advanced Air Mobility Research Institutes

Section 201. National Drone and Advanced Air Mobility Research Institutes.

This section establishes a program to award financial assistance for planning, establishment, and support of a network of institutes for drone and advanced air mobility research. Institutes may focus on any relevant implications or challenges to the research, development, testing, or application of UAS in different sectors.

Institutes will support and coordinate interdisciplinary research and development and education activities at all levels, will establish a robust data management strategy, and will support workforce development in UAS-related disciplines.

Funding provided by federal agencies for the Institutes may be used to manage researchers; develop and manage UAS test sites; conduct research, development, and education activities involving UAS; provide access to resources and technical assistance relevant to the institute's research goals; support the purpose of UAS software; engage in outreach to broaden participation in UAS research; support artificial intelligence and machine learning research related to UAS and other activities that contribute to fulfilling the funding agency's missions.

Title III – National Institute of Standards and Technology Activities

Section 301. National Institute of Standards and Technology Activities.

This section directs the Director of the National Institute of Standards and Technology (NIST) to support and coordinate the development of voluntary consensus standards for UAS with other necessary federal agencies; support one or more National Drone and Advanced Air Mobility Research Institute; produce and prioritize data for high-value UAS research.

Pursuant to appropriations, the Director of NIST will carry out a competitive program to award prizes to stimulate research and development of innovative UAS technologies.

Section 302. National Institute of Standards and Technology Manufacturing Activities.

This section amends The National Institute of Standards and Technology (NIST) Act to establish an Unmanned Aircraft Systems Pilot Program as part of the Manufacturing Extension Partnership. The purpose of this amendment is to strengthen U.S. industrial base by bolstering domestic supply chains and developing innovative manufacturing processes to secure U.S. international leadership in UAS.

Title IV – National Science Foundation Activities

Section 401. National Science Foundation Activities.

This section directs the director of the National Science Foundation (NSF) to support research and STEM education and related activities in UAS. As part of the initiative, NSF will support fundamental research on the underlying technologies, data modeling of uses, security, and ethical uses of UAS. The agency will support middle and high-school-level STEM education research and related activities relevant to UAS and related technologies and support undergraduate and graduate education and workforce development research and related activities.

Title V – National Aeronautics and Space Administration Activities

Section 501. National Aeronautics and Space Administration Activities.

This section directs the Administrator of the National Aeronautics and Space Administration (NASA) to consult with the Administrator of the Federal Aviation Administration (FAA) to direct and facilitate the safe integration of UAS into the National Airspace System.

Section 502. National Student Unmanned Aircraft Systems Competition Program.

This section establishes a national program through the National Aeronautics and Space Administration (NASA) to carry out UAS and AAM systems competitions for students at the high school and undergraduate levels in which students will design, create, and demonstrate an UAS. The Administrator of NASA will select a higher education institution to administer the competition.

Title VI – Department of Energy Activities

Section 601. Department of Energy Research Program.

This section directs the Secretary of Energy to carry out a cross-cutting research, development, and demonstration program to advance UAS and counter-UAS technologies, capabilities, and workforce needs to improve the reliability of UAS and counter-UAS systems implementation methods relevant to the Department of Energy.

Title VII – Department of Homeland Security Activities

Section 701. Department of Homeland Security Activities.

This section directs the Secretary of the Department of Homeland Security to establish a center of excellence to carry out research and development activities to support research and development to advance counter-UAS capabilities. The Secretary will select a higher education institution to host and maintain the center of excellence and carry out the fundamental research, evaluation, education, workforce development, and training efforts related to counter-UAS systems subject areas relevant to the Department of Homeland Security.

Title VIII – National Oceanic and Atmospheric Administration Activities

Section 801. National Oceanic and Atmospheric Administration Research and Development.

This section directs the Administrator of the National Oceanic and Atmospheric Administration (NOAA) to carry out and support research, development, and demonstration activities to advance UAS and unmanned maritime systems (UMS), technologies, and capabilities and to enhance the deployment of UAS and (UMS) relevant to the mission of NOAA.

In carrying out these activities, NOAA will award financial assistance to eligible entities for projects on the use of UAS and UMS to collect environmental data and monitor climate impacts including weather forecasting, rapid flood mapping, enhanced atmospheric monitoring, marine mammal detection, harmful algal bloom measurements, navigation safety, wildfire observations, and other areas related to science and stewardship of any areas NOAA deems necessary and appropriate.

Title IX – Federal Aviation Administration Activities

Section 901. Federal Aviation Administration Research and Development.

This section directs the Federal Aviation Administration (FAA) to coordinate with the National Aeronautics and Space Administration (NASA) and other agencies to carry out and support research, development, testing, and demonstration activities to advance UAS and to facilitate the safe integration of UAS into the national airspace system.

As part of these activities, the FAA will conduct comprehensive research and testing for UAS safety and report to the House Committee on Science Space and Technology and the Senate Committee on Commerce Science and Transportation to summarize the results of the research.

The FAA will commission an independent study to conduct research and development for metrics to enable the identification of hazards to make determinations that certain UAS may operate safely in the national airspace and identify additional research needed to effectively develop and use such metrics to make determinations.

Section 902. University Unmanned Aircraft Systems Centers

This section directs the Federal Aviation Administration (FAA) to distribute grants to one or more higher education institutions to establish and operate a regional university UAS center in each of the 10 federal regions which compromise the Standards of Federal Regional Boundary System. The responsibility of each center will be to AAM research and research concerning safely integrating UAS into the national airspace system.

The Administrator of the FAA will establish a national advisory council composed of the directors of the UAS centers and 19 other appointed members to coordinate the research and training to be carried out by grant recipients.

Section 903. Allowance for the Purposes of Research and Development.

This section outlines how the Federal Aviation Administration (FAA) may not promulgate certain rules or regulations regarding the operation of UAS under specific parameters, except as necessary to support enforcement action under the law against persons operating UAS in a manner that endangers the safety of the national airspace system.

Section 904. Authorization of Appropriations.

This section lists the funds authorized to be appropriated to the Federal Aviation Administration to carry out UAS research and development activities from 2023-2027.

Section 905. Definitions.

This section provides the meaning of terms used throughout Title 9.

Title X – Limitation

Section 1001. Limitation.

This section provides limitations on how the funds authorized to be appropriated by this act may be used.