



# The Aerospace States Association

## STATEMENT OF POLICY

*Adopted October, 2020*

*This is intended to be a quick reference guide to understand the positions of ASA. Issues are added as they are raised by members and the following information is not intended to address the entirety of aerospace issues. If an issue is not listed, it does not mean it is not important. It means the issue has either not yet been raised for policy action or the organization has not yet taken a position. Issues are added as necessary and some topics are detailed further in other documents such as resolutions and letters. This Statement should be considered as the position of the organization on just these topics discussed herein. Contact information for ASA is provided at the end of this document.*

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## **Section I: About the Aerospace States Association**

The Aerospace States Association (ASA) is a non-partisan 501(c)(3) organization comprising Lieutenant Governors, Governor-appointed delegates, state legislators, territorial and tribal government representatives. Associate members come from aerospace businesses, organizations, and academia working to advance aerospace and aviation in member states and throughout the nation. ASA is the only aerospace advocacy organization promoting state-based perspectives on federal aerospace policy.

ASA advocates on behalf of all 50 states, the territories, and tribal nations to keep America strong with vibrant and robust aerospace programs that lead the world in exploration, innovation, and technology, ensure national and economic security, and improve life here on Earth. We support research and development funding, workforce training, economic development in aerospace, excellence in science, technology, engineering, and math (STEM), and keeping states competitive in a global marketplace.

ASA brings together aviation and space interests across each state to educate state legislators and other officials on state-specific issues and provides networking opportunities to grow jobs and expand economic development. As leaders in our state governments, ASA members not only impact policy at the state level, but also at the federal level by informing our congressional delegations on aerospace priorities.

ASA is committed to:

- Enacting state-based initiatives to strengthen our nation's leadership in aviation and aerospace;
- Supporting the aerospace and aviation industries in all 50 states to strengthen industry contributions to our economies;
- Inspiring a younger generation to innovate, explore, and build;
- Educating young Americans to lead the world in science, technology, engineering, and math; and
- Linking the global community in peace and commerce via air travel.

## **Section II: Policy Positions**

ASA urges the Administration and Congress, as well as State, Local, and Tribal Governments, to provide the highest priority to the following issues to ensure the United States remains the preeminent global leader in aerospace for generations to come.

### **AVIATION**

- **Support a robust aviation industry and policies** that support maintaining U.S. leadership in aviation, aviation technology, and industrial capability. In particular, enable the introduction of supersonic flight capabilities. Additionally, ensure the United States leads in the development of urban air mobility capabilities.
- Support programs that **encourage youth to consider aviation careers** including pilots, air traffic controllers, maintenance, and all other aviation fields.
- Encourage policies that **prevent and mitigate encroachment to airspace** and sensitive/classified/commercial airspaces.
- Support the implementation of **Next Generation (NextGen) air traffic control** technologies to improve the safety, efficiency, and effectiveness of general, commercial, and business air traffic.
- Encourage the United States to **lead in UAV technology**, where we currently lag nations such as China in small commercial UAVs. Ensure that there are enabling regulatory frameworks (e.g., Federal Aviation Administration, Federal Communications Commission) to support U.S. innovation in all categories of UAVs.

### **BUSINESS**

- Support the **Export-Import (EXIM) Bank**. American Workers benefit from EXIM. U.S. export sales financed through EXIM support 1.7 million jobs in all 50 states. In FY2019, more than 90 percent of transactions directly supported American small businesses. In addition, tens of thousands of small business suppliers benefit from partnerships with large exporters. Since 1992, EXIM has generated \$9.6 billion for taxpayers in the 20 years, mostly through fees collected from foreign customers (2018 data). Eliminating EXIM would end up increasing the U.S. deficit. Other countries provide substantial support for their exporters — the EXIM Bank estimates there are at least 110 foreign export credit agencies around the world. Those export credit agencies work aggressively, often hand-in-hand with government, to support domestic industries. European and Asian governments provide several times more financing to their countries' exporters, and they're not likely to stop if EXIM goes away. Unilateral disarmament will hurt U.S. exports and eliminate American jobs. With 95 percent of the world's customers living outside the United States, exports are the key to America's future prosperity and jobs. Nearly one-

third of U.S. economic growth since mid-2009 has been driven by exports. EXIM is a key reason that U.S. exports are growing. During the fiscal year ended September 30, 2018, EXIM authorized \$3,323.2 million of loan guarantees, insurance, and direct loans in support of an estimated \$6,787.6 million of U.S. export sales which supported an estimated 33,000 U.S. jobs.

- Continue to **reduce export barriers and restrictions**. Without the ability to effectively compete in international markets, U.S. exports will be unable to grow and U.S. corporations will be forced to move operations and manufacturing overseas or close shop. This will result in increased reliance upon foreign parts and components in U.S. space systems or key industries will become unsustainable as the U.S. government and domestic markets become their only sources of revenue.
- Ensure the United States continues to lead in **aerospace research and development** by expanding programs such as Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), the Experimental Program to Stimulate Competitive Research (EPSCoR), and the National Institute of Standards and Technology's Manufacturing Extension Partnership (MEP). ASA recognizes the profound importance that investments in early stage, basic research, exploratory development, and advanced science and technology have in creating future mission capability and talent, as well as the positive economic impacts such investments have on society. We strongly encourage that budgetary authorizations and appropriations are not only preserved but increased to enable innovative scientific and technological advancements that can underpin future R&D.

## **EDUCATION AND WORKFORCE**

- **Educate** the next generation of scientists, engineers, technicians, and entrepreneurs through programs at all levels of education in Science, Technology, Engineering, and Math (STEM). ASA supports all ranges of STEM and aerospace workforce development, including continuing engineering education and pilot training programs.
- **Develop partnerships** between industry and educational institutions to provide hands-on experience for students planning to enter the aerospace workforce.
- **Support the Civil Air Patrol**. Founded in 1941 to mobilize the nation's civilian aviation resources for national defense service, CAP has evolved into a premier public service organization that still carries out emergency service missions when needed — in the air and on the ground. As a Total Force partner and Auxiliary of the U.S. Air Force, Civil Air Patrol is there to search for and find the lost, provide comfort in times of disaster and work to keep the homeland safe. Its 60,000 members selflessly devote their time, energy and expertise toward the well-being of their communities, while also promoting aviation and related fields through aerospace/STEM education and helping shape future leaders through CAP's cadet program.

- Provide full, predictable, and stable funding for **NASA’s STEM Education programs**, including Space Grant, the Experimental Program to Stimulate Competitive Research (EPSCoR), and the Minority University Research and Education Project (MUREP). These programs are critical in supporting the development of a STEM workforce that is essential to our nation’s competitiveness.
- Support computer science and cybersecurity youth and training programs including **“Computer Science for All.”** CSforALL is collaborating with the US Air Force JROTC HQ and additional partners to launch JROTC-CS, a demonstration project to design and test implementation models for the long-term scale-up of evidence-based computer science (CS) and cybersecurity education programs within the Junior Reserve Officers Training Corps (JROTC). This project supports Section 512 of the 2020 National Defense Authorization Act, which amends Section 2031(b)(3) of title 10, U.S. Code, to include instruction or activities in the fields of science, technology, engineering, and mathematics in the JROTC program. At scale, this project has the potential to engage over 500K high school students in computer science and cybersecurity education pathways, as well as build technology education capacity at over 3400 JROTC high schools, serving 4M students overall.
- Continued support for **Apprenticeship Programs** such the Advanced Manufacturing Technician Apprenticeship Program (AMTAP) – a U.S. Department of Labor (USDOL) Registered Apprenticeship, in partnership with State and Local workforce centers, that train candidates on the skills necessary to build aerospace-related electronics and create a gateway to a career in space manufacturing. The program is a 9-week up-front training program designed for candidates without four-year degrees and with no experience required. Participants are paid and offered benefits on day one and hired if they pass all their certifications. The program has provided a path to good paying jobs for hundreds and is currently active in Alabama and Colorado. We urge its expansion.

## **INDUSTRIAL BASE**

- Maintain and expand the **aerospace industrial base** of the United States to manufacture the advanced technology components necessary for space exploration here in the United States. Not only is maintaining this capability critical to our national security, but aerospace programs generate tens of thousands of manufacturing and engineering jobs across the country in small, medium, and large-scale manufacturing.
- **Ensure continuity of the industrial base** under all circumstances, including rare but cataclysmic events such as **pandemics**. Ensure continuity of critical operations during situations such as stay-at-home orders and ensure return-to-work requirements are practical without placing costly and undue restrictions and requirements. Ensure the supply chain is able to survive economic downturns by advancing payments, extending deadlines, and not holding contractors liable for things outside of their control.

- A key component of the industrial base is the **Maintenance, Repair, and Overhaul (MRO)** industry where additional capacity is needed in the United States to ensure continued safe, economical, and reliable aircraft operation.
- Recognize the reemergence of the role of states in the development, maintenance, and recapitalization of **critical space infrastructure**. For most of this nation's proud history, transportation infrastructure was a state responsibility. With distinct tools more suited for commercialization, states are once again proving to be partners with the Federal Government in securing a new future of U.S. leadership in space exploration and commercial space enterprise.
- Support infrastructure funding for State **Spaceports** which provide critical launch capabilities for the national security, civil, and commercial space launch markets, as well as suborbital markets. FAA-licensed State Spaceports serve a variety of government and industry customers. These locally owned and State-owned and operated spaceports, which are the backbone of America's 21st Century infrastructure to access space, provide an opportunity for the Administration and Congress to support new launch capabilities.
- Ensure the United States continues to lead the world in the development and improvement of **Artificial Intelligence** and **Quantum Computing** to maintain our nation's technological advantages and ensure systems are developed for and used in ways that improve security, economic prosperity, and the world's quality of life.
- Support development of **propulsion technologies** such as solar electric and nuclear that speeds exploration of space and makes operations more efficient.

## **POLICY PROCESS**

**Federal Funding:** NASA absorbs a minimal of our nation's financial resources (less than 1/2 of 1% of the federal budget) yet returns extraordinary value that benefits all. Benefits range from technological leadership, advances in science, a strong national industrial base, economic development and commerce, global influence, and STEM-related inspiration for future generations of scientists, engineers, and entrepreneurs.

ASA recognizes the aerospace industry has unique characteristics that require long system and technology development lead times. Industry requires a high degree of **program certainty and funding stability** to successfully invest in equipment, facilities, and jobs. While there is always leeway to examine and adjust program priorities and strategy over time, history has demonstrated repeated policy shifts in major program architectures can delay key exploration and technology goals, erode the industry base, and thereby result in higher costs. Continuity of purpose and the continuation of large-scale science and exploration programs over successive Congresses and Administrations are vital for securing and extending U.S. leadership in aerospace.

## **SPACE EXPLORATION**

- Maintain the nation's ability to transport crew and cargo to the International Space Station through **NASA's Commercial Crew and Cargo Program**. This will also facilitate the development of business-led space activities in low Earth orbit and enable NASA to focus on deep space exploration and other activities for which there is not a near-term commercial market.
- Support **NASA's Communications Services Program (CSP)** to encourage the transition of mission communications services from government-owned and operated to commercially owned and operated, where feasible. CSP will demonstrate the feasibility of commercially provided mission planning, data relay services, and ground segment operations. By allowing NASA the option to purchase services from the communications industry, the CSP and commercial market may be able to better identify requirements and explore opportunities that are mutually beneficial, allowing NASA to focus less on operations and more on exploration.
- Maintain the United States as the undisputed leader in space exploration by completing and launching NASA's Orion Spacecraft atop the world's largest and most powerful rocket, NASA's Space Launch System (SLS), utilizing NASA's Exploration Ground Systems as part of the **Artemis Program**, and establish a defined and funded plan to enable the first woman and next man to return to the Moon by 2024 and to reach Mars with astronauts in the 2030s.
- Support continued international cooperation and research and development on the **International Space Station**, as well as look to robotic and human tended follow-ons and alternatives for a continuous U.S. presence in low Earth orbit. Such research is critical to scientific and commercial advancements that benefit life on Earth, as well as to serve as a development and proving ground for technologies required for deep space exploration.
- Enhance the prestige and influence of the United States by encouraging continued international engagement on the **Artemis Accords** and by leading partnerships to develop planetary surface systems, including membership in the International Moonbase Alliance, Moon Village Association, and other thought-leading institutions.
- Establish a vibrant set of **lunar and Martian environmental analog test facilities** across the country, including a **Lunar Research and Development Park**, with the goal to establish a prototype Moon base facility in a simulated lunar-like environment to facilitate the development, testing and validation of lunar robotics, renewable energy, in-situ resource utilization, and other innovative technologies and procedures, as well as astronaut training, that could both enable and support a sustainable human settlement on Earth's Moon and beyond. [Expanded in ASA Resolution 2019-001]

- Fully fund and implement **NASA's Mars Exploration Program (MEP)**, including the **Mars Sample Return Program**, to explore Mars and continue scientific progress following the discovery of water. Implement MEP with a balanced portfolio of competed and flagship missions, including robotic orbiters, landers, and mobile laboratories. Provide scientific continuity and high-bandwidth Mars/Earth communications network with an ongoing presence of multiple orbiter missions, including existing assets such as Mars Odyssey and Mars Reconnaissance Orbiter. Use this robotic Mars Exploration Program to buy down risk for future human exploration of Mars, while initiating development of the Exploration Crew Module (ECM) habitation and deep-space propulsion systems required for the first human Martian mission.
- Complete the **James Webb Space Telescope (JWST)** and programs in **NASA's Lunar Exploration and Planetary Sciences** portfolio. These programs and international partnerships expand the American sphere of influence, address major scientific questions concerning our solar system and the universe, and lead to the development of technologies that enhance the U.S. economy and the worldwide quality of life.
- Support **NASA's Plan for Commercial LEO Development** to achieve a robust low Earth orbit economy from which NASA can purchase services as one of many customers. Commercial space activities, including space tourism, should be facilitated only to the degree that it does not impede the goals otherwise stated in this document. NASA should utilize the services of private astronauts in low Earth orbit only to the extent that it benefits NASA's overall exploration and science objectives.

## **NATIONAL SECURITY**

- Enhance support for the many federal departments, agencies, and organizations with space programs critical to the national security of the United States. These programs provide security and financial benefits to the United States and include:
  - o Ensuring assets are **delivered to space** safely and on time by ensuring competitive procurements that evaluate past performance and schedule reliability, not solely cost.
  - o Fully funding and supporting **classified programs** which are essential to the security of our nation (that cannot be mentioned in this forum by name).
  - o Completion of the **GPSIII** constellation to provide more powerful and secure GPS technology for the U.S. military and a variety of business and civilian uses.
  - o Meeting 21st century global security threats by continuing to support the **Space-Based Infrared System (SBIRS)** and **Overhead Persistent Infrared (OPIR)**, which address warfighter needs in missile warning, missile defense, battlespace awareness, and technical intelligence.

o Close gaps in military satellite communications capabilities by providing more resiliency and capacity for national security users through support of the **Advanced Extremely High Frequency (AEHF)**, **Wideband Global Satellite (WGS)**, and **Mobile User Objective System (MUOS)** programs. These systems provide unique capabilities for United States and allied users, that are not all available commercially.

o Support national development of Space Domain Awareness (SDA) capabilities and long-term sustainability measures to realize the maximum economic potential in space. With rapid growth in launching of space assets by various entities, it is critical to support the development of open architecture data repository (OADR) and international collaboration in SDA to promote the rules, research, development, and best practices in traffic management, collision avoidance, and debris mitigation.

- ASA agrees that the **highest U.S. nuclear policy and strategy priority** is to deter potential adversaries from nuclear attack of any scale. Given the diverse threats and profound uncertainties of the current and future threat environment, U.S. nuclear forces play the following critical roles in U.S. national security strategy. They contribute to the:
  - Deterrence of nuclear and non-nuclear attack;
  - Assurance of allies and partners;
  - Achievement of U.S. objectives if deterrence fails; and
  - Capacity to hedge against an uncertain future.
  
- ASA supports the **modernization of today's strategic nuclear triad**, largely deployed in the 1980s or earlier, consists of: submarines (SSBNs) armed with submarine-launched ballistic missiles (SLBM); land-based intercontinental ballistic missiles (ICBM); and strategic bombers carrying gravity bombs and air-launched cruise missiles (ALCMs). The triad and non-strategic nuclear forces, with supporting NC3, provides diversity and flexibility as needed to tailor U.S. strategies for deterrence, assurance, achieving objectives should deterrence fail, and hedging.
  
- **Hypersonics** are arenas where substantial private sector entrepreneurial investment is occurring for next generation reusable launch systems and associated state spaceports. Similarly, on the military side, hypersonic weapons are being deployed by near peer competitors placing the United States in the difficult position of having to catch-up. ASA urges the Administration and Congress to support and invest in both commercial and military hypersonic strike and defense opportunities. The goal of the United States should be to leapfrog foreign competitors, not simply to catch-up. Emerging hypersonic weapons and reusable rockets promise to revolutionize how we will access space, how we will travel and transport cargo from point-to-point, and how we will help protect the 21st century peace using hypersonic strike and defense systems. Moreover, our state spaceports can support the development of military hypersonic flight by providing a widely distributed network of flight locations for rapidly testing and maturing high speed flight systems, and eventually providing routine commercial spaceport services.

- Support innovation in **aircraft sustainment** technologies to improve aircraft readiness and life-cycle affordability by fully funding the U.S. Air Force Rapid Sustainment Office.
- Continue to press development and improvement of **Missile Defense** systems that can spot and identify threat missile launches against the United States and our allies, identify intended targets, calculate exact trajectory, launch an interceptor, and guide it to destroy the threat in mid-air, all in a matter of seconds.
- Support development of technologies required to establish space national security to increasingly contested **cislunar space**. This includes synergizing existing deep-space systems and operations with new technology counters to emerging threats, including nuclear power, projected energy, kinetic energy systems, and nuclear propulsion.
- Support the maturation and integration of **the United States Space Force (USSF)** into the aerospace and defense systems of the Department of Defense. It is critical the new force effectively implement personnel and procurement policies and integrate its operations with those of the other services, including the creation of a **Space National Guard** so current Air National Guard Units with space missions are fully and properly integrated and to recognize the importance of the National Guard.
- Support **United States Space Command (USSPACECOM)** as the Unified Combatant Command to deter aggression and conflict, defend U.S. and allied freedom of action, deliver space combat power for the Joint/Combined force, and develop joint warfighters to advance U.S. and allied interests in, from, and through the space domain.

## **WEATHER AND EARTH SCIENCE**

- Continue support for the nation's advanced Polar Weather Satellites, the **Joint Polar Satellite System (JPSS)/Polar Follow On**, and the geostationary sentinels, **GOES-R Series**. The combination of these satellite systems provides critical observations that drive forecast accuracy and real-time warnings of severe weather, saving lives and protecting commerce.
- Support **NOAA NESDIS** in the development of the nation's **Next Generation Weather Architecture**. Now is the time to begin investing in the technologies of the future that will ensure continuity and advance our capabilities in predicting and issuing warnings for tornadoes, extreme precipitation and flooding, and hurricanes. It is essential to fund development while our current satellite programs are being deployed and are performing so that there is no interruption in services – data gaps cost lives.
- Support the funding and launch calendar for the **Landsat 9** program, which has delivered over four decades of continuous space-based, moderate-resolution, land remote sensing data critical to providing key information about the world's food, forests, and water, and

how these and other global resources are being utilized. A Landsat 9 launch in 2021 will be critical to ensure continuity in the 45-year data record of the Earth's surface.

- Support deployment of the two remaining satellite constellations for the **Constellation Observing System for Meteorology, Ionosphere and Climate** (COSMIC-2A and COSMIC-2B) program, which will provide precision radio occultation soundings for improved numerical weather prediction model forecasts, and includes space weather payloads to benefit research and operational communities, such as the U.S. Air Force.
- Support **NASA's Earth Science Division** as it implements the Earth Science Decadal Survey's highest priority observations for advancing our understanding of the Earth system and how it is changing. Such missions leverage academic, industry, and government collaboration to provide the research, technology demonstrations, and operational capabilities that advance measurements driving weather and climate prediction models, allow for strategic resource management, and implement sustainable agricultural practices.
- Support efforts to improve our understanding and prediction of **space weather events** that have the potential to cause major disruption to our economic infrastructure and social well-being. Priorities include continued enforcement of the Space Weather Action Plan, Space Weather Strategy, and recently released Executive Order – Coordinating Efforts to Prepare the Nation for Space Weather Events; and passage of S.2817, the Space Weather Research and Forecasting Act.

### **Section III: The Role of the States and Tribal Nations**

ASA encourages state legislatures to form or continue an Aerospace and Defense Caucus as a forum for legislators to discuss and learn more about these issues and we encourage Tribal Nations to hold occasional meetings and activities on these subjects. We encourage partnership with the state chapters of Citizens for Space Exploration.

ASA encourages states to designate a point of contact in the executive branch to focus on aerospace and defense issues and to be the lead for day to day contacts with aerospace groups such as ASA. We encourage the model where this contact is within the Office of the Governor, Lt. Governor, or the Office of Economic Development and is supported with state resources. Models that rely on private funding are unreliable and can be perceived as biased if they are supported by private contributions. The state contact is encouraged to participate in aerospace organizations such as ASA Chapters.

We encourage states to consider reasonable indemnity protections for spaceport and commercial spaceflight operations to facilitate growth and development in the states.

Finally, ASA asks that we be consulted and allowed to comment on aerospace policy as the Administration and Congress work for the betterment of the nation. We intend to serve as collaborative and supportive partners.

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