



The Aerospace Industries Association (AIA), representing over 320 aerospace manufacturers and suppliers and more than 2 million U.S. workers, urges Congress to affirm its consistent, bipartisan support for the national security space enterprise through the Fiscal Year 2024 National Defense Authorization Act and Intelligence Authorization Act. In drafting these pieces of legislation, AIA requests the Congress to consider the following priorities from the aerospace and defense industry.

Bipartisan Support and Budget Stability

- Authorize appropriations for the President’s budget request level of funding for the U.S. Space Force and space activities within other Department of Defense (DoD) and Intelligence Community (IC) agencies. To outpace the rapidly advancing adversary threat, real dollar increases across these organizations are needed.

Future Space Mission Architectures

- Prioritize investments toward an open and interoperable national security space architecture that optimizes operational capabilities of current programs, evolves to address emerging threats, and enhances U.S. commercial capabilities. Increased resiliency in these architectures, comprised of systems of varying capability and orbital regime, will evolve, enhance, and expand the innovative and competitive space industrial base required for long-term success. During this evolution, it is important that the Space Force continue to ensure industry partner involvement – both those who already support the defense space enterprise and potential new entrants – early and throughout the force design process. Increasing the engagement between industry and government on policy, requirements, and acquisition is essential to developing the capabilities to preserve, protect, and defend space capabilities that contribute to U.S. and allied joint all-domain operations while minimizing capability gaps, and risks to schedule, interoperability, and the space industrial base.
- We recognize that in-space connectivity between the national security space enterprise and commercial satellite communications constellations can enhance the resiliency and redundancy of military space capabilities. AIA recommends the Committees direct the Assistant Secretary of the Air Force for Space Acquisitions and Integration to provide a briefing, not later than 90 days after the enactment of this Act, on opportunities and steps needed for, as well as policy or technical barriers preventing, the development of capabilities to connect military satellite networks and commercial constellations in space.

U.S.-Allied Military Space Cooperation

- Support deepened and enhanced coordination and cooperation in the space domain with international allies and partners, including information-sharing, policy, requirements development, system interoperability, joint mission execution, and leveraging allied space systems and infrastructure. AIA also encourages the Department of Defense to include commercial industry in its development and execution of allied and international partnerships.

Classification

- Reduce over-classification to improve the acquisition process, capability delivery times, and operations information sharing, including removing duplicative classification of the same programs and architectures amongst different DoD and Intelligence Community (IC)

organizations. Overly classifying space systems creates a bevy of national security risks and downstream impacts that: 1) undermine deterrence; 2) slow program delivery timelines; 3) prevent integration of space assets into operational planning; 4) eliminate opportunities to share data and capabilities with allies and partners; 5) hinder public understanding of threats and support for space organizations and budgets; 6) constrain industry from leveraging existing technologies and targeting IRAD investments to deliver solutions to the threats we face; 7) restrict new entrants; and 8) limit competition to those currently cleared.

- Ensure the Congress, DoD, and IC leverage the current focus on reducing over-classification to clearly communicate legislative priorities, create better collaboration with allies and industry, and ease the barriers to partnership between the government, allies, and industry.

Space Launch

- Ensure Phase 3 of the U.S. Space Force's National Security Space Launch Program leverages new game-changing space capabilities and advances U.S. launch capability to provide the DoD and IC the most assured access to space.
- Reinforce the Space Force's current Lane 1 and Lane 2 approach ensuring opportunities for companies to compete for launches they are capable of performing.
- Encourage the Space Force to consider objective standards and relevant provider credibility before basic award under NSSL Phase 3 Lane 1 to help ensure the government only onboards providers likely to be capable of performing a task order over the Phase 3 period of performance. Private investment in the space industry is still heavily influenced by government actions and onramp into NSSL Lane 1 will be seen as a meaningful vote of confidence by the government for an onboarded provider.

Responsive Space

- Support the maturation of a responsive space program of record to rapidly place and reconstitute space assets and capability on operational timelines in response to growing threats from adversaries. The lack of an operational capability to respond to these threats quickly leaves a gap in our architecture resilience and deterrence. This program element leverages U.S. industry leadership, expands private sector innovation and investment in launch and satellite systems, and utilizes new and emerging mission sets that use a diversity of launch systems to meet tactically responsive mission requirements.

Space Acquisition Reform

- Continue to enhance the acquisition system for space programs. The U.S. Space Force has the charge from Congress and DoD leadership to create an acquisition system suited for the unique needs of space programs and to rapidly acquire and field new capabilities. We support providing the U.S. Space Force the ability to incrementally fund space system procurements and drive down acquisition decision-making authorities to the lowest level possible.

Supply Chain Resiliency

- Assure resiliency of the space supply chain, which is dependent on specialized materials, technologies, and workforce, with onshore supplies of items such as space-qualified, radiation-hardened microelectronics, carbon fiber composites, raw materials for digital manufacturing, and solar cells.

- Ensure the DoD and the IC make investments to expand the capacity and capability of the U.S. space solar cell, panel, and array industrial base, and in-space propulsion components and systems, reducing the nation's dependence on foreign suppliers.

National Security Space Workforce

- Ensure the U.S. Space Force reforms how DoD operates space platforms and develops and utilizes its cadre of space professionals. AIA supports development of the U.S. Space Force workforce to recruit, retain, train, and educate the diverse cadre of space experts the service needs. This includes:
 - Reevaluating the Active Duty and Reserve models to allow better ability for members to flow between the two statuses;
 - Increasing opportunities for talent exchanges with industry, both with service and industry members interning in each other's organizations;
 - Supporting STEM education at all levels and utilizing recruitment tools to access new talent;
 - Expediting the security clearance process to quickly access required talent;
 - Leveraging innovative plans to access the best of America's national security talent from entry-level to senior levels, both from outside DoD (lateral entry, etc.) and from other services seeking to transfer; and
 - Establishing new initiatives to make diversity, equity, and inclusion foundational cornerstones of the service's talent management.

U.S. Space Command

- Maintain U.S. Space Command as the DoD's lead space warfighting command. AIA supports a collaborative relationship between USSPACECOM and industry to ensure the command maintains its competitive edge. This includes:
 - Clearly articulating USSPACECOM requirements and priorities to industry
 - Continuing to integrate with industry, where appropriate, to include operational missions and exercises
 - Leveraging commercial capabilities and data to the maximum extent possible

Space Research and Development

- Provide robust funding for Space Research, Development, Test and Evaluation efforts, including major space program office investments, as well as those for Air Force Research Lab, Space Rapid Capabilities Office, Defense Innovation Unit, Space Development Agency, and Defense Advanced Research Projects Agency space programs. These programs support technology development and the nascent private space sector, enabling the U.S. Space Force to retain its military edge over potential near peer competitors.

Additional Provisions

- Four provisions to improve and create efficiencies within the national security space launch enterprise are included in the pages that follow.
- One provision to improve information sharing from the Department of Defense to commercial satellite companies on threats to space systems.

AIA and our member companies thank you for your leadership and your consideration of these requests. For further information, please reach out to Kayla.Renner@aia-aerospace.org

1 – Updates to the TNT Equivalency for Methane

Request: Language supporting research into updating the TNT equivalency for methane propellants.

Issue: The U.S. government currently utilizes a 100% TNT equivalency for methane. Research is underway to determine a more accurate TNT equivalency for methane, which will result in more accurate requirements for safety hazard areas around vehicles utilizing methane as a propellant. A more accurate approach will contribute to reducing congestion challenges at US ranges.

Background: There are numerous methane propelled launch vehicles under development across the space launch industry, and current equivalency standards are not appropriately tailored to the technology requirements. This issue needs to be addressed in order to increase the acceptable proximity of launch operations.

Recognizing the USSF's concern regarding congestion at the Cape, industry supports solutions that optimize the density of operations. Safe, available locations for conducting launch operations are extremely limited. Given the constraints to launching elsewhere in the U.S. described above, solutions should recognize that the DOD benefits from a robust market of launch service providers who can operate at a facility suitable to the USG customer. Proposed policy and/or legislative changes would support increased utilization of USG launch facilities while recognizing that the fundamentals of orbital mechanics cannot be changed.

Recommended Language:

Support the research by the Department of Defense and engagement with other federal agencies assessing the appropriate methane levels in relation to TNT equivalency metrics used for all orbital launch missions. The DOD should leverage all appropriate partnerships between the defense industry and commercial industry to support timely research results.

(a) COMMERCIAL SPACE OPERATIONS WAIVER AUTHORITY-- The Secretary of the Air Force may waive requirements for explosive safety board review of the functions described under 10 USC 172(c); exclusively for propellants used by commercial space launch providers as needed to ensure safe and efficient commercial launch range operations.

(1) DELEGATION OF AUTHORITY -- The Secretary may delegate to this authority to the Directors of the Space Launch Ranges.

(2) EXPLOSIVE SAFETY BOARD REVIEW – Not later than 180 days following the granting of a waiver described under subsection (a), the chair of the explosive safety board shall make a recommendation to the Under Secretary of Defense for Acquisition and Sustainment with respect to resolution of any differences between the explosive safety board and the Secretary.

(2) REPORT REQUIRED – Not later than 60 days after the granting of a waiver described under subsection (a), the Secretary shall submit to the Committees on Armed Services of the Senate and House of Representatives a report on the propellants waived for review, the reasons for granting this waiver, and a timeline for expected review by the explosive safety board.

Report language: "The committee is encouraged by efforts being made the Space Launch Ranges to implement a risk-based approach to ground explosive siting plans and approvals in order to reduce unnecessary disruption to government and commercial launch activity. Given the coming widespread use of methane / liquid-oxygen propellants, the committee directs the Defense Explosive Safety Board to re-evaluate the TNT equivalency of menthane / liquid-oxygen propellants and apply realistic failure modes to those calculations within 180 days of the passage of this act.

The committee is encouraged by ongoing development of the Army-created HAZX software tool has potential to provide improved modeling of failure modes of launch vehicles. Therefore, the committee directs the Secretary of Defense to brief within 90 days on a timeline for the implementation of the HAZX tool by the Defense Explosive Safety Board and efforts taken to incorporate the latest vehicle characteristics and data from industry."

2 – Historical Designations at CCSFS

Request: Policy update on historical designations at Cape Canaveral Space Force Station.

Issue: Historically designated facilities and launch pads at CCSFS restrict available expansion of useable launch ports in support of the USSF's Range of the Future (ROTF) mission requirements

Background: The history of American spaceflight at the Cape is unique and should be celebrated. However, given the unique location necessary for orbital launch, approaches should be sought that facilitate launch from historical pads while preserving their history. There is precedence for being able to preserve history while still utilizing important infrastructure for U.S. competitiveness; for example, NASA's LC-39A.

Recognizing the USSF's concern regarding congestion at the Cape, industry supports solutions that optimize the density of operations. Safe, available locations for conducting launch operations are extremely limited. Given the constraints to launching elsewhere in the U.S. described above, solutions should recognize that the DOD benefits from a robust market of launch service providers who can operate at a facility suitable to the USG customer. Proposed policy and/or legislative changes would support increased utilization of USG launch facilities while recognizing that the fundamentals of orbital mechanics cannot be changed.

Recommended Language:

The Secretary of the Air Force shall evaluate all conditions, restrictions, or covenants provided under the protections of historically designated facilities at USSF space launch facilities to allow for the maximum utility of critical launch enterprise resources while providing for the recognition of historic property, notwithstanding the effect space launch activities may have on reuse of the property.

3 – Sonic Boom Overpressure – Report Language

Request: Report from the USSF evaluating its policy on sonic boom overpressure that involves Range users and provides recommendations for preserving safety while facilitating rapid re-flight capabilities.

Issue: Current acceptable limits on space range overpressure constrains rocket technology by hindering the ability to fulfill more powerful rocket missions or support rapid reflight capabilities.

Background: As industry looks to future DoD's space lift needs, a key enabler of rapid response/reusability will be the ability to land the vehicle at or proximate to its launch site for rapid reflight. The generally accepted limit on sonic boom overpressure at the Range for EELV vehicles is 7.3 pounds per square foot (psf). As technologies advance and the need to rapidly reuse larger rockets becomes realized, whether 7.3 psf is the right limit will need to be addressed, as will whether Range-side mitigations are possible to support a higher targeted overpressure for return to launch site operations.

Recognizing the USSF's concern regarding congestion at the Cape, industry supports solutions that optimize the density of operations. Safe, available locations for conducting launch operations are extremely limited. Given the constraints to launching elsewhere in the U.S. described above, solutions should recognize that the DoD benefits from a robust market of launch service providers who can operate at a facility suitable to the USG customer. Proposed policy and/or legislative changes would support increased utilization of USG launch facilities while recognizing that the fundamentals of orbital mechanics cannot be changed.

Recommended Language: Not later than 90 days after the date of the enactment of this Act, the Chief of Space Operations, and in consultation with the Secretary of the Air Force, shall submit to the appropriate congressional committees a briefing on the USSF's current acceptable limits on space range overpressure and recommendations for any policy updates to facilitate rapid reflight capabilities while appropriately preserving safety. In developing that report, launch and reentry vehicle operators shall be consulted.

4 – Ordnance/Explosive Commodity Handling

Request: Report language directing the DOD to develop a Memorandums of Understanding with the Bureau of Alcohol, Tobacco, Firearms to enable streamlined ordnance storage requirements

Issue: Bureau of Alcohol, Tobacco, Firearms and Explosives ordnance storage requirements do not match Department of the Air Force ordnance storage requirements, which places commercial orbital launch providers in a position of conflict.

Background: Space vehicle operators located on a Federal Range are required to have a license from and follow the requirements of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) to store ordnance. Typically, operators work with the Air Force to store this ordnance in their munition storage area (MSA); however, the Range does not follow ATF requirements. This results in a problem each time industry needs to update or renew an ATF license, as it takes several months and rounds of paperwork between the Air Force and ATF to get approval to store the ordnance in the MSA. Developing a process between the Air Force and the ATF, where commercial launch providers do not get caught between two government agencies, would save time and cost for all parties and help Ranges run more efficiently.

Recommended Language:

Not later than 90 days after the date of the enactment of this Act, the Secretary of Defense, in coordination with the Bureau of Alcohol, Tobacco, Firearms and Explosives, and in consultation with the Secretary of the Air Force/Space Force, shall submit to the appropriate congressional committees a briefing on the effects of current ordnance storage policies on commercial launch providers supporting DOD space launch missions.

5 – Improved Threat Information Sharing with Commercial Space Operators

Request: The proposed language seeks to encourage the Department of Defense to develop improved mechanisms for threat sharing with commercial space operators.

Issue: Potential adversaries continue to develop counterspace threat capabilities to disrupt or negate commercial space capabilities, and some adversaries message that civilian space industry infrastructure is a legitimate military target during a conflict. Commercial operators do not have clear, consistent mechanisms for sharing information about threatened systems with the U.S. government.

Background: A new approach for threat sharing with commercial space operators is needed due to the unique space threat landscape. This unique threat landscape exists because 1) space exists beyond national boundaries; 2) degrading space infrastructure carries no direct risk to human life; and 3) space systems are generally associated with national security. Existing threat sharing mechanisms are inadequate – they are not designed with this unique threat landscape in mind and do not include all commercial space operators. As the Department of Defense uses commercial space capabilities to do its mission, it is important to address this issue. Improving threat sharing enhances the safety and security of these commercial capabilities, which benefits the national security space enterprise.

Recommended Language: Given the unique threat environment of space, the Committee believes that U.S. commercial space infrastructure is particularly vulnerable to physical and cyber threats. In addition to general responsibilities for protecting public and private sector U.S. property and infrastructure from foreign threats, the U.S. government should be particularly attentive to mitigating threats to space and associated ground-based infrastructure operated by U.S. companies as such infrastructure is used by the military and national security community. Therefore, the Committee directs the Assistant Secretary of Defense for Space Policy to provide a briefing, not later than 90 days after the enactment of this Act, on plans to develop improved threat-sharing arrangements with commercial space operators and a strategy to work with commercial operators to reduce or mitigate threats to their systems.