U.S. Space Force Commercial Space Strategy

Annex 1

USSF Principles for Space Access Resourcing Decisions

Introduction

> *"The ability to control and exploit the space domain always begins with physical access to orbit."*
>
> *Space Capstone Publication: Spacepower, June 2020*

The U.S. Space Force (USSF) assures space access for national security purposes. Since the 1950s, the military's access to space has involved Government-industry partnerships. Initially, industry supported rockets launched by and for the Government on Department of Defense (DoD) test ranges. Since then, the space access industry has matured, allowing the Government to pivot to procuring launch services, and many range services, from industry while retaining control of the DoD Ranges and infrastructure at Cape Canaveral Space Force Station and Vandenberg Space Force Base. The USSF will continue to foster and employ a robust, innovative, and competitive space access industry that offers unprecedented reliability, capacity, and responsiveness to maintain strategic advantage.

The space access landscape has now evolved from the Government being the anchor customer, to missions with commercial payloads accounting for the preponderance of launch manifest activities.

The USSF's finite monetary, real property, and infrastructure resources are not only critical to assuring space access for national security, but also benefit broader space access needs in ways that ultimately support national security and other Government objectives. Therefore, the USSF should consider the effect on the U.S. commercial space sector when making its investment and resource utilization decisions regarding space access, including, but not limited to, acquisition strategies, funds allocation, and property agreements. The USSF uses the following principles to inform those decisions.

Principle: Assure space access for national security.

> *"…ensure to the maximum extent practicable, that the United States has the capabilities necessary to launch and insert national security payloads into space…"*
>
> *10 U.S.C. § 2273*

> *"The Secretary of Defense may enter into an agreement with a covered entity to provide the covered entity with support and services related to the space transportation infrastructure of the Department of Defense…if the Secretary determines that the inclusion of such support and services in such requirements is*

in the best interest of the Federal Government; does not interfere with the requirements of the Department of Defense…"

10 U.S.C. § 2276

Assured space access requires strong Government-industry partnership for the launch and range services needed to put national security capabilities on orbit. Industry has the expertise to deliver those payloads on orbit and the Government provides the Space Transportation Infrastructure to enable those launches. While USSF resources and investments support launches of Government, commercial, and hybrid Government-commercial payloads, assuring space access for national security is the USSF's priority. The USSF is committed to supporting the space access industry to the maximum extent practicable, but when its needs exceed resources, the USSF prioritizes meeting national security space access requirements.

Principle: Foster a robust, innovative, and competitive commercial space access industry.

"…the United States should encourage private sector launches, reentries, and associated services…"

51 U.S.C. § 50901

"The Secretary of Defense may take such actions as the Secretary considers to be in the best interest of the Federal Government to…maximize the use of the capacity of the space transportation infrastructure of the Department of Defense by the private sector in the United States…"

10 U.S.C. § 2276

A strong space access industry supports the U.S. economy. A robust industrial base benefits national security through innovation, resilience, readiness, and competitive pricing. The USSF supports the space access industry through its acquisition strategies and its allocation of resources, with the intent of increasing the pool of launch service providers for national security missions. A healthy space access industry is beneficial to national security interests, including a strong industrial base, and is therefore an important factor in USSF launch-related decisions.

Principle: Drive resilience through diversity in launch vehicles, launch companies, launch site infrastructure, and supply and logistics chains.

"It is the Policy of the United States…to ensure to the maximum extent practicable, that the United States has the capabilities necessary to launch and insert national security payloads into space," including "the availability of at least two space launch vehicles (or families of vehicles) capable of delivering into space any payload designated by the Secretary of Defense or the Director of National Intelligence as a national security payload," and "a robust space launch infrastructure and industrial base."

10 U.S.C. § 2273

Resilient space access ensures the ability to continue operations or rapidly reconstitute following disruptive conditions, whether caused by an adversary, nature, technological failure, or economic

issues. The USSF maximizes diversity in its acquisitions and launch operations to bolster resilience through:

1. Having multiple options for certified launch vehicles to offer resilience in the event of a vehicle or infrastructure anomaly, production work stoppage, supply chain disruption, or other launch impediment.

2. A variety of launch companies promoting competition that mitigate the effects of instability or insolvency while also encouraging affordability.

3. Resilient Space Transportation Infrastructure to decrease the operational risk of a natural disaster, mishap, or malicious action preventing space access.

4. Diversity in supply chains and logistics nodes, modes, and routes to mitigate risk of disruption to space access upstream of launch site operations.

Principle: Balance risk with mission objectives.

> *"Policy regarding assured access to space: national security payloads… maintain risks of mission success at acceptable levels."*
>
> *10 U.S.C. § 2273*

Maximizing launch success, within resource constraints, is vital to assured space access for national security. The criticality of space vehicle payloads is the foundation for the USSF's determination of the acceptable level of risk. However, that risk posture can fluctuate with changes in factors such as world events, resourcing, and available technology. The USSF, in consultation with applicable mission partners, defines its mission assurance posture based on the acceptable level of risk.

Principle: Maximize the return on investment from Government resources

> *"The Secretary of Defense may take such actions as the Secretary considers to be in the best interest of the Federal Government to…maximize the effectiveness and efficiency of the space transportation infrastructure of the Department of Defense; reduce the cost of services provided by the Department of Defense related to space transportation infrastructure at launch support facilities and space recovery support facilities…"*
>
> *10 U.S.C. § 2276*

> *"A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive business."*
>
> *FAR 31.201-3*

As a steward of the Government's resources, the USSF defines the desired return on investment to maximize the benefit to national security. In investment and resource allocation decisions, considerations could include maximizing mass to orbit, responsiveness, mission flexibility, or

other performance capabilities. Maximizing the return on investment for resources is increasingly important as demand for launch complexes at Cape Canaveral Space Force Station and Vandenberg Space Force Base could exceed availability.

Principle: Be ready to launch payloads when needed.

> *"…It is the policy of the United States for the President to undertake actions appropriate to ensure, to the maximum extent practicable, that the United States has the capabilities necessary to launch and insert United States national security payloads into space whenever such payloads are needed in space…the appropriate actions…shall include, at a minimum, providing resources and policy guidance to sustain the availability of rapid, responsive, and reliable space launches for national security space programs to – (A) improve the responsiveness and flexibility of a national security space system."*
>
> *10 U.S.C. § 2273*

Responsive space access is increasingly important. The USSF requires deployment of space-based capabilities on tactically relevant timelines to enable effective warfighter kill chains. A strong space access industry improves military readiness by providing the launch vehicles and operational agility to meet national security requirements. Key considerations for the USSF include, but are not limited to, agile spacecraft integration and ready launch vehicles and facilities.

Principle: Preserve public safety and protect critical national and natural resources during hazardous activities.

> *"…the United States should encourage private sector launches, reentries, and associated services and, only to the extent necessary, regulate those launches, reentries, and services to ensure compliance with international obligations of the United States and to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States…"*
>
> *51 U.S.C. § 50901*

Space launch is an inherently high-risk operation and requires adherence to the highest standards of responsible conduct. The USSF enforces existing Federal regulatory regimes and, when warranted, advocates for regulatory changes.

Principle: Protect launch and range resources.

> *"It is the Sense of Congress that the United States should place greater priority on the protection of national security space systems."*
>
> *10 U.S.C. § 2271 note*
> *Sec. 911 National Defense Authorization Act for FY 2008, Pub. L. 110-181 (Jan. 28, 2008)*

USSF launch sites are not sanctuaries from adversary threats. Therefore, the USSF takes deliberate action to identify and mitigate threats across all domains that put responsive and

reliable space access at risk. Similarly, industry partners must ensure their systems that either provide launch services to the USSF or operate on USSF launch sites are appropriately protected.

Principle: Pursue equitable cost sharing arrangements with industry.

> *"…encourage commercial space activities by enabling investment by covered entities in the space transportation infrastructure of the Department of Defense…"*
>
> *10 U.S.C. § 2276*

Launch rates at Cape Canaveral Space Force Station and Vandenberg Space Force Base have increased to the point where commercial and hybrid launches comprise the vast majority of operations. The demand for operational support and infrastructure sustainment and modernization exceeds USSF resources. Therefore, the USSF transparently engages with stakeholders to arrange equitable cost-sharing of multi-use resources and balanced input on public/private infrastructure investment.

Conclusion

Assured space access underpins the USSF's ability to project spacepower for national security, and the robust and enduring partnership between the USSF and industry is critically important to assuring space access. In making resourcing decisions, the USSF prioritizes meeting national security requirements but is committed to continuing to foster and integrate the space launch industrial base's innovation and capacity to strengthen national security and increase the Nation's competitive advantage.

Terms and Definitions

Assured Access to Space is
(1) The USSF enterprise responsible for executing the USSF Space Mobility and Logistics core competency. It includes Program Executive Office (PEO) Assured Access to Space (AATS) and Space Launch Deltas 30 and 45 (SLD 30 and SLD 45).
(2) The policy, established in 10 USC § 2273, for the President to ensure, to the maximum extent practicable, that the United States has the capability to launch and insert national security payloads into space whenever such payloads are needed.

Commercial, as defined in 51 U.S.C. § 50501, means having private capital at risk and having the primary financial and management responsibility for the activity reside with the private sector.

Commercial Entity as defined in 10 USC § 2276a, a non-Federal entity organized under the laws of the United States or of any jurisdiction within the United States.

Commercial Launch is a launch by a Commercial Entity licensed by the Federal Aviation Administration (FAA). When launching from a federal launch site, FAA licensing allows the use of USSF safety processes as described in 14 CFR § 417.201 and the USAF/FAA Memorandum of Agreement. The launch service providers' processes will be acceptable to provide the Space Launch Delta Commander confidence that launch vehicle presents acceptable risk to safety and base infrastructure, security, and national security. Commercial launches that include government spacecraft as a primary payload or as a rideshare with other payloads are considered hybrid missions.

DoD Launch Range is a national asset that is sized, operated, and maintained primarily for DoD test and operational support missions. Such ranges shall be maintained to provide T&E information to DoD Component T&E users in support of the DoD Research, Development, Test and Evaluation and acquisition process set out in DoD Directive 5000.01.

Eastern Range and Western Range are DoD Launch Ranges and Major Range and Test Facility Base activities located at Cape Canaveral Space Force Station and Vandenberg Space Force Base respectively.

Launch, as defined in 51 U.S.C. § 50501 and 51 U.S.C. § 50902, means to place a launch vehicle and its payload, if any, in a suborbital trajectory, in Earth orbit, or otherwise in outer space.

Launch Property as defined in 51 U.S.C. § 50902, is an item built for, or used in, the launch preparation or launch of a launch vehicle. Launch Property includes launch vehicles and components, propellants, and other physical items such as launch facilities that are constructed for, or used in, preparation or launch of a launch vehicle.

Launch Property Lease is an exclusive grant for the possession and use of Launch Property from the Department of the Air Force to a commercial entity pursuant to 10 U.S.C. § 2667.

Launch Services, as defined in 51 U.S.C. § 50501, are activities involved in the preparation of a launch vehicle and its associated payload(s) for launch and the conduct of a launch.

Launch Service Provider is a company that conducts the launch of spacecraft into orbit or deep space. It provides the launch vehicle, infrastructure, equipment, and facilities needed to launch payloads, such as satellites or crewed spacecraft. For National Security Space Launch, a launch service provider is considered a "New Entrant" until meeting certification criteria to be awarded National Security Space Launch missions.

Launch Site, as defined in 51 U.S.C. § 50902, means the location on Earth from which a launch takes place and the necessary facilities at that location.

License grants a privilege to occupy and use real property for a specific purpose and can be withdrawn at will by the grantor. Licenses are issued for temporary, non-exclusive use of Department of the Air Force property.

Major Range and Test Facility Base is part of the designated core set of DoD Test and Evaluation infrastructure and associated workforce that must be preserved as a national asset to provide Test and Evaluation capabilities to support the DoD acquisition system.

National Security Space Launch is a USSF program to acquire launch services to provide critical space support required to satisfy DoD warfighter, national security, and other Government spacelift missions while fostering interagency and commercial cooperation. This mission includes the execution of flight worthiness certification processes and booster-to-satellite mission integration to maintain assured access to space.

New Entrant Certification is a systems engineering process to certify the capability of launch service providers and launch systems to fulfill the requirements of the National Security Space Launch program.

Procured Launch Service is a space launch capability provided by a contractor to place a satellite into a specified orbit. The contractor retains ownership of flight and ground hardware, engineering analyses, processes, and readiness decisions except as provided under contract.

Range is a designated land or water area that is set aside, managed, and used for DoD activities including firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, electronic scoring sites, buffer zones with restricted access, and exclusionary areas, and airspace area designated for military use in accordance with regulations and procedures prescribed by the Federal Aviation Administration. A "range" includes all associated range assets and services required for the operation of the range.

Range User is the responsible and accountable organization for range activity. In the case of Government launch activity, it is the launch agency; for Federal Aviation Administration-licensed launch activity, it is the launch service provider; and for Test and Evaluation activity, it is the test agency.

Space Access is the movement and sustainment of equipment in, from, and to the space domain.

Spaceport is
(1) As defined by the Federal Aviation Administration, a launch and/or reentry site that plays a critical role in the growing global commercial space transportation industry.
-- FAA-licensed spaceports are spaceports that have received either a Launch Site Operator License (14 CFR Part 420), or a Reentry Site Operator License (14 CFR Part 433)
-- "Exclusive use sites" are sites exclusive to the launch or reentry operator's own use, as determined by the Federal Aviation Administration; no site license is required because 14 CFR Part 450 addresses all necessary requirements
(2) As defined by various studies, the Eastern Range and Western Range. However, there are no legal or authoritative reference documents that define them as such.

Space Transportation Infrastructure, as defined in 51 USC 50501, means the facilities, associated equipment, and real property (including launch sites and launch support facilities) required to perform launch activities.

Key References

10 USC § 2273 Policy Regarding Assured Access to Space: National Security Payloads, 7 January 2011

10 USC § 2276 *Commercial Space Launch Cooperation*, 3 January 2016

10 USC § 2276a, *Special Authority for Provision of Space Launch Support Services to Increase Space Launch Capacity,* 22 December 2023

10 USC § 4175 *Use of Test and Evaluation Installations by Commercial Entities*, 3 January 2007

14 CFR Chapter III*, Commercial Space Transportation*

51 USC § 50131: *Requirement to procure commercial space transportation services*

51 USC § 50132: *Acquisition of commercial space transportation services*

51 USC § 50901 Chapter 509, *Commercial Space Launch Activities*

51 USC § 50504, *Use of Government Facilities*

National Space Policy, 9 December 2020

National Space Transportation Policy, 21 November 2013

United States Government Orbital Debris Mitigation Standard Practices, 10 November 2019

ASD(HD&GS) Memorandum, DoD Guidance on Implementing ODMSP, 20 July 2020

Webb-McNamara, *Agreement Between the DoD and NASA Regarding Management of The Atlantic Missile Range of DoD and The Merritt Island Launch Area of NASA*, 17 January 1963

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SECAF Policy Memorandum, *Implementation of FY24 NDAA Section 1603 (10 U.S.C.* § 2276a, 07 June 2024)

DoDD 3100.10, *Space Policy*, 30 August 2022

DoDI 3100.12, *Space Support*, 14 September 2014

DoDD 3200.11, *Major Range and Test Facility Base*, 27 December 2007

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FAR 31.201-3, Determining Reasonableness

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SSCMAN 91-710V1-V7*, Range Safety User Requirements Manual*, 27 December 2022

SSCI 91-701, *The Space Systems Command Launch and Range Safety Program,* 27 December 2022