Written Statement of Mr. John Hill PTDO Assistant Secretary of Defense for Space Policy before the House Armed Services Committee Subcommittee on Strategic Forces on Fiscal Year 2026 Strategic Posture April 9, 2025

Introduction

Chairman DesJarlais, Ranking Member Moulton, and distinguished members of the Committee: Thank you for inviting me to testify before you on the Department of Defense's (DoD) strategic posture. I am honored to appear alongside the commanders of the United States Strategic Command, United States Space Command, and United States Northern Command/North American Aerospace Defense Command.

The strategic threats to the nation continue to mount. China, Russia, and the Democratic People's Republic of Korea (DPRK), are fielding more advanced missiles with greater ranges and in greater numbers to provide the means for strategic-level attack against the homeland, including nuclear and non-nuclear options. They are rapidly modernizing, expanding, and diversifying their nuclear forces, incorporating advances in warheads, delivery systems of all types, and supporting command and control (C2) systems. Iran's continued pursuit of a space-launch capability and nuclear technology that could threaten the United States remain a concern. At the same time, China and Russia are rapidly fielding space and counterspace systems designed to hold U.S. space assets at risk and deny the space-based services the Joint Force and our society rely on. These developments pose an increasing and unacceptable threat to the United States and our allies and partners.

The nation's strategic posture is the foundation of deterrence and defense against these growing threats to the homeland and to our enduring interests abroad. Nuclear forces and our nuclear command, control, and communications (NC3) systems remain the centerpieces of strategic posture, but missile defenses make ever more crucial contributions, both as complements to nuclear forces and as indispensable denial elements of our conventional

defense posture. No less important, space systems and spectrum enable our nuclear forces, our NC3, our strategic warning, our missile defenses and, indeed, the entire Joint Force. This makes assured access to space and spectrum, the ability to establish superiority in space when needed in the domain, and the means to deny hostile uses of space crucial components of our strategic posture. Increasingly, the proliferation of chemical and biological weapons adds to this complexity, making our ability to counter such weapons of mass destruction (WMD) an additional element of strategic posture.

The Assistant Secretary of Defense (ASD) for Space Policy oversight responsibility for all these interconnected and mutually supporting elements of strategic posture is unique in the DoD. It has been my privilege and honor to oversee this office since August 2024.

Security Environment

The scale and scope of the challenges presented by the increasing number of nuclear, missile, and space threats pose a substantial and growing risk to the American people, U.S. national interests, and our allies and partners. Moreover, the growing cooperation and potential for increasing coordinated action among China, Russia, the DPRK, and Iran is a clear indicator that they share a common interest in undermining U.S. interests and alliances globally.

Missile Threats

China views the possession of advanced missile systems as a means to coerce neighbors and subvert efforts by the United States to defend its allies and partners in the region. China fields a variety of conventional mobile ground-launched, short-range, medium-range, and intermediate-range ballistic missiles and ground-launched cruise missiles (GLCMs), as well as

conventionally armed anti-ship ballistic missile variants, to give the People's Liberation Army (PLA) the capability to conduct long-range precision strikes against ships, including aircraft carriers, out to the Western Pacific from mainland China. China is developing and testing new variants of theater-range missiles and developing capabilities and methods to counter adversary ballistic missile defense (BMD) systems, including the DF-17, which has a Hypersonic Glide Vehicle (HGV) payload designed to evade early warning radars and associated defenses.

China is also likely exploring the development of conventionally armed intercontinental range missile systems. If developed and fielded, such capabilities would enable China to threaten conventional strikes against targets within all 50 states, the District of Columbia, and U.S. territories. China is also developing more survivable intercontinental ballistic missiles (ICBMs) to improve its nuclear-capable missile forces. Its ICBM arsenal consists of approximately 400 ICBMs, including fixed and mobile launchers capable of launching unitary and multiple independently targetable reentry vehicles (MIRVs). China is also developing advanced nuclear delivery systems, such as a strategic HGV and a fractional orbital bombardment (FOB) system.

Russia has relied extensively on ballistic, cruise, and hypersonic missiles and Unmanned Aircraft Systems (UAS) in Ukraine and has threatened the use of these systems against NATO and other U.S. partners in the region. It has employed air-launched, ground-launched, and sealaunched systems, some of which could also deliver a nuclear warhead.

The DPRK has been improving its ICBM force in recent years through frequent longrange tests, including the test of a new, more powerful solid-fueled missile last October capable of reaching most of the continental United States. The DPRK's short-range and medium-range

ballistic missiles, cruise missiles, multiple launch rocket systems, and artillery remain a substantial threat to DPRK's neighbors and U.S. forces in the region.

Iran maintains the largest missile program in the Middle East and in 2024 twice demonstrated its willingness and ability to conduct and deliver coordinated air and ballistic missile strikes of more than a thousand kilometers against Israel. Iran remains the world's foremost proliferator to state and non-state entities of ballistic and cruise missiles and UAS attack systems and related technologies. Proxy and terrorist group recipients of Iran's support include Hamas in Gaza, the Houthis in Yemen, and Hezbollah in Lebanon.

Nuclear Threats

Today, China maintains a diverse arsenal of intercontinental-range forces, theater-range road-mobile ballistic missile systems, strategic HGVs that can carry nuclear warheads, and sealaunched ballistic missile submarines to hold the United States and our allies and partners at risk. In addition to these capabilities, China is expanding its nuclear arsenal at extraordinary speed and opaqueness, developing a nuclear triad of land-based and sea-based missiles and a nuclear-capable strategic bomber. The U.S. Intelligence Community assesses that China will have more than 1,000 operational nuclear warheads by 2030, many of which will be deployed at higher readiness levels.

China's rationale for its rapid expansion and diversification of its arsenal remains unclear, yet the trajectory of its expansion points to a large, diverse nuclear arsenal with a high degree of survivability, reliability, and effectiveness. These developments could provide China with new options, both prior to and during a crisis or conflict, to leverage its nuclear capabilities for coercive purposes against U.S. allies and regional partners. Unfortunately, China's lack of

transparency, growing military assertiveness, and reluctance to engage in meaningful conversations on strategic risk reduction raise questions regarding China's intentions, nuclear strategy, and doctrine.

Russia's nuclear forces continue to pose an existential threat to the United States and U.S. allies, and Russia continues to modernize and diversify its growing arsenal of strategic and theater-range nuclear weapons. This arsenal features centrally in Russia's overall security strategy, as seen in Russia's nuclear saber-rattling throughout the war in Ukraine. In addition, Russia is pursuing novel and destabilizing nuclear systems that are additive to its existing capabilities, outside arms control treaty regimes, and designed to hold the U.S. homeland, allies, and partners at risk.

The DPRK's arsenal of unlawful nuclear weapons and ballistic missiles continues to expand, diversify, and improve, despite being smaller in size than either China's or Russia's. The DPRK's nuclear capabilities pose a clear and grave threat to the stability of the Korean Peninsula, the wider Indo-Pacific region, and the U.S. homeland. Conflict on the Korean Peninsula risks the involvement of multiple regional nuclear-armed actors and escalation to a much wider conflict.

Although Iran does not possess a nuclear weapon today, its concerning nuclear activities, including enrichment and missile development efforts, continue. Iran is in breach of its Nuclear Non-Proliferation Treaty (NPT) obligations by concealing undeclared nuclear sites and material as required by its Comprehensive Safeguards Agreement with the International Atomic Energy Agency (IAEA). Public reports indicating that Iran may now be engaged in computer modeling related to nuclear weapons development raise immediate concern.

Space Threats

China continues to develop counterspace capabilities to contest or deny other nations' access to and operations in the space domain. These include direct-ascent anti-satellite missiles, co-orbital satellites, electromagnetic warfare, and directed-energy systems. China seeks to enhance the PLA's space-enabled capabilities – including systems enabling the ability to track, target, and strike our Joint Force – and is increasing the number of space systems it has on orbit. More broadly, China's space enterprise continues to mature rapidly and China has devoted significant resources to growing all aspects of its space program, from military space applications to civil and commercial applications.

Like China, Russia seeks to exploit what it perceives as U.S. reliance on space for military operations and is investing in a similar range of offensive counterspace capabilities. Russia has also conducted cyber intrusions against commercial satellite communication networks and Russia has repeatedly threatened commercial satellites providing space-based services to Russia's adversaries, calling them potential targets. The Department also remains concerned that Russia is developing a new satellite meant to carry a nuclear weapon as an anti-satellite capability. Placing a nuclear weapon, or other weapon of mass destruction, in orbit around the Earth, installing such a weapon on celestial bodies, or stationing such a weapon in outer space in any other manner would violate international law and would be inherently destabilizing because of the potential for miscalculation, the risk of technical mishap, and the potential for Russia's loss of command and control. The United States will continue to engage with nations worldwide to reinforce the common view regarding the intolerability of a nuclear weapon in space. Placing a nuclear weapon on orbit is not merely a threat against any one nation, but a threat against all nations. A detonation of such a weapon would likewise be an attack on the United States and

harm all nations because it would damage or destroy space systems that all nations depend upon, including systems providing vital communications, scientific, meteorological, agricultural, commercial, public safety, and national security services.

The DPRK and Iran also continue to develop their nascent space programs. The DPRK has conducted several reconnaissance satellite launch attempts in recent years in violation of multiple UNSC resolutions related to the DPRK's use of ballistic missile technology. Iran's development of space launch vehicles (SLVs), such as the Simorgh, would shorten the timeline to produce an ICBM, if Iran decided to develop one, because the systems use similar technologies. Both the DPRK and Iran also maintain non-kinetic counterspace capabilities, including systems for jamming communications and GPS signals. The DPRK actively threatens peaceful maritime and air operations through intermittent GPS jamming, increasing the risk of mishaps, accidental border incursions, and inadvertent escalation.

Chemical and Biological Threats

While today's hearing focuses on the nuclear, missile defense, and space elements of the U.S. strategic posture, I would be remiss not to mention how advancements in science and technology are further complicating the security environment as it relates to chemical and biological weapons development. These threats are growing with state adversaries increasingly viewing these weapons as useful tools to attack the U.S. military asymmetrically and disrupt key operations. China is at the forefront of the development of dual-use technologies, which have raised concerns about China's compliance with the Biological Weapons Convention (BWC) and the Chemical Weapons Convention (CWC), especially concerning biotechnology research and research on toxins and pharmaceutical-based agents. We remain concerned about investments China is making in these WMD capabilities and its ability to manipulate the associated

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information space. Russia maintains an offensive biological weapons program in violation of its BWC obligations, and is certified non-compliant with the CWC due to violations that include the repeated use of the chemical weapon chloropicrin and riot control agents as a method of warfare across the frontlines of Ukraine. The DPRK also poses significant chemical and biological weapons threats to the United States, the Republic of Korea (ROK), and other allies in the Indo-Pacific region. Iran maintains an offensive chemical weapons program, weaponizing pharmaceutical-based agents in violation of its CWC obligations, and violent extremist organizations remain persistent chemical and biological threats to U.S. and allied forces.

Adversary Cooperation Among Themselves

We also see these countries working together to advance their respective interests. Russia has provided technical and economic assistance to the DPRK and Iran in return for thousands of munitions, attack drones, and ballistic missiles. DPRK missiles transferred to Russia have been tested and employed on the battlefield in Ukraine, resulting in improvements in their accuracy and destructive capability. The DPRK has also sent soldiers to the battlefield in Ukraine. The significant growth in the DPRK-Russia strategic partnership merits close attention because the two countries increasingly share resources, knowledge, and technology to bolster and expand their repertoire of air and missile inventories. The possibility of further collaboration between nuclear-armed competitors represents a serious threat to U.S. interests and must be monitored carefully. We are also aware of Russia's intention to share advanced space and satellite technology with the DPRK, which would likely speed up the development and fielding of the latter's space capabilities. Similarly, Iran has used Russian launch services to place communications and navigation satellites into orbit.

Nuclear Strategy and Posture

Foundations and Strategic Approach

Nuclear deterrence remains DoD's and the nation's top priority mission. U.S. nuclear weapons undergird all defense priorities, fulfilling three overarching roles: deterring nuclear and non-nuclear strategic attack, assuring our allies and partners, and enabling achievement of Presidential objectives if deterrence fails.

Deterrence is fundamentally about influencing adversary decision-making, and our nuclear posture shapes adversary decision-making in peacetime, crisis, and conflict in ways that no other military capability can. Not all adversaries can be deterred in the same way. As such, a capable, credible, and effective nuclear deterrent provides the President with flexible capabilities that can be tailored to deter, and if necessary, respond to, a spectrum of adversaries and contexts. For the foreseeable future, U.S. nuclear capabilities will continue to provide a necessary, unique, and irreplaceable contribution to deterrence.

We continue to support the full scope modernization of U.S. nuclear forces and NC3 capabilities, as well as modernization of the complementary defense industrial base and the Department of Energy's nuclear production enterprise, which are critical to our ability to sustain our fielded nuclear force and deliver a modernized emergent force in the coming decades.

But the United States faces a challenge in this respect. Deterring strategic attack is a 24/7/365 requirement that is unending in nature. Thus, we must be able to sustain our legacy nuclear forces throughout this transition period, many of which are over five decades old and, although ready, are showing their age. We face this challenge as

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strategic threats are growing. On top of legacy threats that we confront, China's strategic forces are growing and modernizing, and the DPRK's strategic capabilities are increasing in number and capability.

From a nuclear deterrence perspective this security environment is unprecedented. This "multiple nuclear challenger problem" places demands on our deterrence and defense posture that no U.S. presidential administration has had to face since the first nuclear weapon was developed. While each challenger has presented, and will continue to present, individualized risks to the United States, the simultaneity and growing collaboration between these challengers forces us to think in new ways about what it takes to maintain stable deterrence, provide extended deterrence to our allies, deter opportunistic aggression in the event deterrence fails against one challenger, and manage increasingly complex escalation dynamics.

Recognizing this challenge, the Department's current nuclear employment posture and planning guidance begins to address the risk presented by multiple nuclear challengers, both in planning approaches and in regard to how we will consider future possible force posture, composition, readiness, and size adjustments. In implementing this guidance, we recognize that the current nuclear modernization program was conceived at a time when the United States and its allies did not contemplate a world with multiple nuclear peers and a severe erosion of arms control. We must adapt to these modern realities.

We agree with the bipartisan Strategic Posture Commission that the nuclear program of record – which merely replaces existing capabilities on a like-for-like basis – is necessary but may not be sufficient to meet the new threats posed by China and Russia. From the Department's perspective, it is critically important that the President have sufficient

flexibility in his nuclear forces to ensure he has the tools he needs to continue deterring adversaries, to assure allies and, if deterrence fails, to achieve his objectives. All our nuclear sustainment and modernization efforts and, potentially, any nuclear force adjustments, have the goal of maintaining presidential decision space in the event deterrence fails.

We face a number of dilemmas in contemplating such possible changes. Our existing defense industrial base and nuclear production enterprise have aged, possess limited capacity and, in some respects, are reestablishing manufacturing capability that has long been dormant.

Today, they are simultaneously tackling multiple nuclear delivery modernization programs and nuclear warhead acquisition or life extension programs. Many of these programs are technologically complex, reliant on new technologies, and are attempting to scale at a level that has not been undertaken in decades. Several programs are delayed. On top of this, we recognize the difficult resourcing choices the Department faces as it tries to balance nuclear modernization needs and demands for modernization of capabilities in non-nuclear domains.

The U.S. ability to project power and protect vital U.S. interests depends on strategic deterrence holding in peacetime, crisis and conflict, 24/7/365. We need to face these challenges and make smart, informed decisions on force posture, composition, readiness, and size adjustments necessary both to carry us through the transition period from today's legacy systems to the fielding of their modem replacements, and to lay the groundwork for ensuring our capabilities are sufficient to maintain this deterrence mission after transition is complete in the 2040s.

Looming less than one year from today is the expiration of the New START Treaty in February 2026. In the absence of any breakthroughs on arms control, this will be the first time in

decades there is no international agreement to limit the size of U.S. and Russian strategic nuclear forces. We have laid the groundwork for responding to this potentially unconstrained nuclear environment by exploring options to increase future launcher capacity or additional deployed warheads on the land, sea, and air legs. We also remain open to risk reduction efforts and arms control agreements that enhance U.S. security by helping to manage competition among nuclear states. Any such agreements must be stabilizing, mutual, and verifiable. Moreover, a future arms control framework must take into account the rapid growth and projections of China's nuclear forces. If the circumstances for arms control negotiations can be made right, the Department stands ready to contribute to these efforts. Similarly, nuclear nonproliferation plays an indispensable role for preserving stability, deterring aggression and escalation, and avoiding nuclear war.

Capabilities

While we are confident that our nuclear deterrent remains safe, secure, and effective today, we face difficult and important decisions to make sure it remains safe, secure, and effective in the coming decades. In these respects, Congressional support will be critical to maintaining our deterrent.

There are two distinct facets to how U.S. nuclear weapons deliver deterrence on behalf of the nation. Certain capabilities are primarily suited to deterring strategic attack against the homeland – i.e., central deterrence. Other capabilities are better suited to deterring theater nuclear attack and managing escalation – i.e., regional deterrence. These concepts are not mutually exclusive of each other in that nuclear employment in a region is a plausible pathway that could uncontrollably escalate into a larger-scale exchange implicating the U.S. homeland.

Delivering modernized nuclear forces is essential for strengthening central and regional deterrence.

To support central deterrence, the Department is focused on the timely replacement of Cold War era systems across all three legs of the triad, all of which have exceeded their planned service lives. The new systems are mostly on a like-for-like basis intended to replace the full triad, with little to no margin between the end of effective life of existing systems and fielding their replacements. The continued sustainment of legacy systems is imperative to avoid a deterrence shortfall and to mitigate risk during the transition to modern systems.

- <u>Sea-leg:</u> The Department continues to develop the COLUMBIA-class-nuclear-powered ballistic missile submarine (SSBN), which will replace the aging OHIO-class submarine fleet as the most survivable leg of the nuclear triad. The COLUMBIA will safeguard the effectiveness and availability of the sea-leg through the 2080s. We are also taking steps to ensure the availability of the current generation of OHIOs, so they can operate longer during the transition to COLUMBIA. We are committed to fielding the W93 warhead and the Mk7 reentry body, and the Trident II (D5) Life Extension 2, which are critical to maintain the Trident system through the 2080s.
- <u>Air-leg:</u> The Long-Range Standoff cruise missile (LRSO) will contribute to the continued credibility of the air-leg of the triad, which provides the President flexible options to deter and respond. The LRSO, coupled with the upgraded B-52 and new B-21 bombers, will ensure the continued credibility and effectiveness of the air-leg of the Triad for the foreseeable future. In 2023, the Department announced the intent to field the B61-13 a modern variant of the B61 gravity bomb that takes

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advantage of an existing qualified production line for the B61-12. The B61-13 strengthens deterrence and assurance by providing the President with additional options against certain harder and large-area military targets while not increasing the overall numbers of weapons in the U.S. stockpile or stressing other weapon modernization efforts.

- Land-leg: Our ICBMs deter aggression day-to-day, in crisis, and in conflict as the most responsive leg of the nuclear triad. The ICBM is highly survivable against anything but a large-scale nuclear attack. To destroy the U.S. ICBMs on the ground, an adversary would need to launch a precisely coordinated attack with hundreds of high-yield and accurate warheads. Last July, the Department certified to Congress that a modified Sentinel ICBM program remains essential to national security and that there are no viable alternatives to the program that provide acceptable capability at less cost. This certification came after a comprehensive review of the costs of Sentinel and a review of a range of alternatives. We are developing the Mk21A reentry vehicle to support the future Sentinel system. While Sentinel is in development, it will be critical to sustain Minuteman III as a viable deterrent.
- <u>NC3:</u> The Department is also focused on modernizing NC3 so that the President can continue to credibly and effectively command and control U.S. nuclear forces under all conditions. NC3 modernization is focused on retaining survivability, endurability, and redundancy across all relevant Detect, Decide, and Direct mission threads. To support these three mission functions, the Department's NC3 modernization programs include, among other initiatives, the augmentation of the Evolved Strategic Satellite (ESS) communication system/constellation, which will

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eventually replace the Advanced Extremely High Frequency (AEHF) communications system/constellation; the recapitalization of the E-4B National Airborne Operations Center aircraft under the Survivable Airborne Operations Center (SAOC) program to directly support the President, the Secretary of Defense, and the Chairman of the Joint Chiefs of Staff; and the recapitalization of the E-6B Take Charge and Move Out (TACAMO) aircraft under the E-130J program.

In addition, the Department is committed to fielding flexible nuclear forces that enhance regional deterrence. We will continue to field the F-35A dual-capable fighter aircraft equipped with the B61-12 bomb. In 2024, Dutch F-35As completed operational certification for the Dual Capable Aircraft mission, making the Netherlands the second NATO member (after the United States) to achieve this milestone. We will also retain the W76-2 low-yield submarine launched ballistic missile warhead, and we are proceeding with the nuclear-armed sea-launched cruise missile (SLCM-N) program. We look forward to working closely with Congress to ensure we are meeting our shared goals of enhancing deterrence while minimizing risk to the modernization program, the nuclear weapons complex, and the Joint Force.

Allies and Partners

Our allies and partners understand the United States will continue to emphasize that strong and healthy alliances and partnerships cannot be one-sided, lest the foundation of mutual trust erodes. As the United States reevaluates how we are fostering healthy alliances and partnerships, we maintain our extended deterrence relationships, which reflect an ongoing and robust commitment from allies and partners to contribute to strong and credible deterrence.

As long as nuclear weapons exist, NATO will remain a nuclear alliance and U.S.

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forward deployed nuclear weapons in Europe will continue to play a critical role in U.S. security by underpinning extended deterrence as the supreme guarantor of Alliance security. The nuclear forces of the United Kingdom, which explicitly contribute to the defense of NATO, and the nuclear forces of France which are independent, but which have always had a European dimension, also contribute to deterrence. In this respect, the United States, the UK, and France (P3) have strengthened our commitment to the nuclear mission in NATO while also improving coordination on strategic activities, deterrence messaging, and threat assessments. We will continue to work closely with all relevant allies to ensure a strong nuclear deterrence posture in NATO commensurate with the growing threats this most crucial of alliances faces.

In the Indo-Pacific region, China is the most comprehensive and serious challenge to U.S. national security, and the DPRK poses a persistent threat to stability on the Korean Peninsula, in the region, and globally. In the face of this, we continue to partner with the Department of State and other interagency stakeholders to deepen our extended deterrence dialogues with Australia, Japan, and the ROK. The annual U.S.-Australia Strategic Policy Dialogue encompasses cooperation on a range of strategic challenges, including extended deterrence, arms control, and maintenance of regional stability in the Indo-Pacific region. The biannual Extended Deterrence Dialogue with Japan addresses enhancing bilateral cooperation, improving coordination, and strengthening the Alliance's capabilities. The Nuclear Consultative Group with the ROK also meets biannually and focuses on bolstering extended deterrence cooperation, including through in-depth discussions on the Alliance's approach to conventional-nuclear integration. The U.S.-ROK Extended Deterrence Strategy and Consultation Group (EDSCG) serves as a key annual forum for the Alliance to discuss and

coordinate on security and policy issues affecting the Korean Peninsula and broader Indo-Pacific. These bilateral dialogues provide us with venues to discuss our deterrence policies, strategic messaging, and activities to reinforce regional security.

We continue to strengthen these dialogues through discussions of escalation dynamics, strategic messaging, potential impact of other adversary strategic capabilities, and enhancement of alliance consultations. We are also exploring ways, across all our extended deterrence relationships, in which allied non-nuclear capabilities can support U.S. deterrence operations so that our allies can bolster their deterrence contributions in a concrete manner.

Space Strategy and Posture

Foundations and Strategic Approach

Space is foundational to our overall strategic posture. Space-based capabilities provide strategic indications and warnings, missile warning and missile tracking, and resilient NC3. They enable our nuclear posture and conventional posture. Assured access to space and space superiority are thus integral to deterrence and defense in peacetime and in all stages of armed conflict. Our on-orbit architecture also enables the Joint Force to establish and maintain military superiority across all domains, while satellites owned and operated by the U.S. government and private industry alike provide services that are integral to our economy and modern way of life. Looking forward, space will continue to present economic opportunities and the promise of scientific advancement.

China and Russia recognize the importance of space to the United States and to their own interests. China and Russia are both developing and fielding ground-based and space-based

counterspace capabilities designed to deny our freedom of action in space and potentially establish their own conception of space superiority. Despite their coordinated efforts in international venues to promote a proposed treaty to prevent the placement of weapons in outer space, both countries are accelerating their development and deployment of space-based counterspace weapon systems.

The Department is charting a course in its space policy that supports our overall strategic posture in the face of these threats and, indeed, seeks to take advantage of opportunities posed by this dynamic security environment. Just as the Department would in any other operational domain, we are pursuing a robust, combat credible force and accompanying operational plans to ensure U.S. superiority in space that leverages our competitive advantages, including our commercial space sector and allies and partners, who are increasing investments in space security and are looking to work with the United States to strengthen deterrence and defense. The Department is pressing on several lines of effort to achieve these ends.

Investments

The Department is re-looking our Fiscal Year 2026 budget request to ensure it aligns to the Administration's priorities regarding our investments in space. Our continued development and fielding of more resilient architectures will directly support robust missile warning and missile tracking capability that provides timely warning of threats to the homeland and our forward-deployed forces. Satellite communications and data transport investments across multiple orbital regimes will enable command and control across the globe, from mission critical NC3 to tactical communications. The Department is continuing to invest in space control capabilities to counter hostile uses of space and protect and defend U.S. and, as directed, allied, partner, and commercial space capabilities that support our critical missions. We continue to

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invest in space domain awareness systems to provide space operators with timely information and prevent operational surprise. Underlying this all, National Security Space Launch provides assured access to space so we can put these important capabilities into orbit.

Mission Assurance

The Department's investment in these capabilities reflects the strategic imperative to assure the ability to accomplish critical national security missions – foremost of which are our strategic deterrence missions – in the face of counterspace capabilities. Through a combination of resilient architectures, supported by defensive capabilities and reconstitution, we are posturing to deny adversaries the benefits of an attack in space.

The U.S. Space Force's Space Development Agency (SDA)'s Proliferated Warfighter Space Architecture (PWSA) has been one prominent example of the commitment to mission assurance through resilience. Using proliferation, diversified orbits, laser communications, and spiral development, the U.S. Space Force has been deploying a resilient constellation of small satellites that supports important missions and enhances our strategic posture in areas like missile warning, missile tracking, missile defense, and data transport. Our relationships with industry and allies and partners worldwide are also important sources of resilience across space mission areas. With access to more commercial data and contributions from allies and partners, we diversify – and thus make more resilient – the elements of our space architecture and strategic posture.

Space Control

However, resilience alone does not mitigate every threat. An adversary's uncontested use of space in a conflict could be used to deny the freedom of operation to all Joint military

operations on Earth and in space. Commensurate with this risk, the Department is implementing a balanced space deterrence force structure that includes capabilities for offensive and defensive space control missions. We must be able to provide the President and the Secretary of Defense with options to deliver operational and strategic effects to achieve national objectives, as the complexity of operations in the space domain grows. Joint Force space operations could deny an adversary's hostile space and counterspace capabilities and services using a variety of reversible and irreversible means. Operations to deny adversary hostile use of space could originate in any domain and target on-orbit, ground, cyber, or link segments to reduce the scope and scale of an adversary's ability to exploit the space domain in support of aggression, whether in space or on Earth. In providing options to national leadership, we will balance the development, testing, and employment of these capabilities with our need to maintain a space environment that is stable, secure, safe, and sustainable for continued operations. To that end, the Department is also making progress on complementary process improvements to normalize space as an operational domain. These updates are enabling more efficient review and approval of sensitive activities, including for more regular incorporation of space capabilities into the operational planning, training, and exercise processes.

Norms of Behavior in Space

Our strategic posture is supported by the Department's ongoing efforts to shape the space strategic environment, set conditions for operational success during competition, and reduce the potential for unintended conflict. To maintain a space environment that is stable, secure, safe, and sustainable for continued operations, the Department believes development of responsible norms of behavior in space are a "force multiplier" that help provide predictability in space. As in the air or at sea, creating shared understanding among countries of what constitutes

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"responsible" operational rules for safety and stability in space is key to reducing misperceptions and miscommunications. Other spacefaring nations' adherence – or nonadherence – to widelyshared norms of behavior for military space activities can reduce misperceptions and miscommunications, provide indications and warnings, and help clarify hostile or ambiguous actions, and may deter actors from engaging in malign behavior.

For example, the creation of space debris by missile tests against space objects poses a risk to the sustainability of the use of space and constrains the Joint Force's freedom of operation in space and the U.S. commercial space sector's activities. China and Russia each created thousands of pieces of long-lasting space debris through destructive direct-ascent anti-satellite missile tests, complicating the operating environment, impinging on DoD's freedom of maneuver, and endangering U.S. scientific and commercial space operations.

The Department competes vigorously in the norms arena and in support of our overall strategic posture. For example, the Department works closely with the Department of State to refute China's and Russia's proposed "Prevention of the Placement of Weapons in Outer Space" treaty that seeks to restrain our freedom of action even as China and Russia continue to develop, test, deploy, and employ counterspace weapons. In coming years, thousands more satellites are set to join the thousands already on orbit. Without strong and active U.S. leadership, our adversaries will fill the vacuum and exploit the opportunity to create rules of the road for this increasingly congested domain by proposing unworkable and disingenuous treaties to constrain our freedom of action.

Commercial

The innovative capabilities, scalable production capacity, and rapid technology refresh rates of the U.S. commercial space sector are competitive advantages the Department is also leveraging to enhance our overall strategic posture. The Department released its first Commercial Space Integration Strategy last year, outlining how we will integrate commercial space solutions, including ensuring access across the spectrum of conflict and establishing necessary security conditions. The strategy also states clearly that we will integrate commercial space solutions to enhance resilience and add capability without imposing unacceptable risk for all of the national security space mission areas.

There is tremendous potential to build on the success of commercial providers to expand our capabilities in support of our overall strategic posture and to increase the lethality of the Joint Force writ large. There are opportunities to be found in each mission area, including command and control; cyberspace operations; electromagnetic warfare; environmental monitoring; intelligence, surveillance, and reconnaissance; missile warning; nuclear detonation detection; positioning, navigation, and timing; space access, mobility, and logistics; satellite communications; space domain awareness; and spacecraft operations.

True integration will require a cultural shift within the Department. To that end, the Department will prioritize eliminating the structural, procedural, and cultural barriers to overcoming legacy practices and preconceived notions of how the commercial sector can support national security.

Allies and Partners

Space is an "astrographic" domain that supports missions across all domains. Combined with our efforts to integrate commercial space sector innovations within our national security space architecture, expanded cooperation with allies and partners is integral to our global strategic posture. Allies and partners help ensure the Department is effectively postured to address the growing magnitude and vectors of threats in, from, and to space. The aspiration of other countries to invest in space security has given rise to new opportunities to cooperate across the spectrum of conflict and strengthen deterrence.

Nowhere is this more evident than the Combined Space Operations (CSpO) initiative, a multinational partnership to prevent conflict in space. Since its inception in 2014 with four members, the CSpO initiative has grown to ten nations including Australia, Canada, France, Germany, Italy, Japan, New Zealand, Norway, the United Kingdom, and the United States. Together, we have improved cooperation to extend options for diplomatic and military responses in crisis situations, including by broadening the number of systems available for space operations, principally through U.S. Space Command's Multi-National Force Operation OLYMPIC DEFENDER (MNF-OOD).

But the Department's efforts to integrate with our allies and partners to be combat multipliers are not limited to CSpO and MNF-OOD. The U.S. Space Force increasingly augments U.S. warfighting systems with allied contributions. This includes expanding essential wideband global communications services that enable combatant commanders to exercise command and control of their tactical forces, leveraging allied systems such as Norway's Arctic Satellite Broadband Mission (ASBM) and Japan's Quasi-Zenith Satellite System (QZSS) to place U.S. military payloads in space, and fielding the Deep Space Advanced Radar Capability

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(DARC) with Australia and the U.K. to protect critical U.S. and allied satellite services. In this resource constrained environment, the Space Force is attempting to drive this model of cooperation harder with a strategy of Allied by Design that aims to field a military space architecture that includes allies and partners from inception, not merely as an afterthought. By including allies and partners early in our force design processes, we can coalesce our requirements and increasingly share the resource burden to field warfighting systems with our closest allies and partners.

We have also made important progress reducing outdated space classification barriers that have hindered collaboration with allies and partners. Among other changes that have unlocked opportunities for closer cooperation, the Department's new classification policy for space capabilities permits conceptual discussions on space control capabilities that were previously restricted. In several instances, we have been able to share insights from our experiences and support allies in making informed investment decisions for protecting and defending their sovereign systems that support coalition operations. Even this seemingly minor change has removed a major obstacle and unlocked new avenues of collaborative discussion with key allies, including opportunities for allies to contribute their capabilities or capacity to our overall strategic posture.

Missile Defense Strategy and Posture

Like U.S. nuclear and space-based capabilities, our missile defenses are a vital element of our strategic force posture, both as a means of restoring deterrence as well as defending the U.S. homeland and security interests abroad.

As we see nearly every day in conflicts across the world, offensive missile capabilities are now a central feature of modern warfare. Advanced missile systems are routinely deployed on global battlefields in Europe, the Middle East and elsewhere to coerce and intimidate opponents, inflict tactical damage, terrorize civilian populations, carry-out strategic campaigns, and simply send political messages.

Today, DoD must contend with adversaries possessing a range of sophisticated technologies, including advanced cruise and ballistic missiles, maneuverable HGVs and other lower-tier threats, like UAS from both state and non-state actors. These capabilities continue to evolve and include a wide range of platforms, speeds, distances, and attack vectors that are easily concealed and evasive.

This is where the value of missile defense – a core deterrence-by-denial component – comes in. Robust missile defense capabilities undermine adversary confidence by raising the threshold for conflict and introducing uncertainty and complexity into attack planning. The greater the cumulative challenges for an adversary, the greater the likelihood of avoiding attack in the first place. And if an attack does occur the damage limitation provided by missile defenses helps assure the means of effective responses. The financial outlays of missile defense today more than offset the exponentially greater cost caused by the lack of defenses in a potential conflict tomorrow.

Missile defense systems also contribute to deterrence by reinforcing our diplomatic and security posture while reassuring allies and partners that the United States stands behind its global security commitments. When deterrence fails, however, the United States and our allies and partners also need robust missile defense options not only to defend and protect our interests, but also to manage escalation.

Last year, we witnessed this precise scenario unfold on multiple occasions. Iran's largescale ballistic, cruise missile, and UAS attack against Israel in April and follow-on massive ballistic missile attack in October 2024 were among the largest concentrated barrages ever conducted by any nation. The successful coalition missile defense responses against both Iranian salvos created opportunities for strategic pause, allowing Israel to calibrate its next moves rather than reactively rush into a counterattack with potentially unintended escalation consequences.

Even with these benefits, missile defense represents only one piece of the puzzle, not the entire solution. One area of posture where missile defense is intrinsically linked to another is the space domain. Proliferated space-based sensors offer an optimal perspective for missile warning and tracking, and space is an area offering a significant runway for the future technological growth of missile defense.

More broadly, the deterrence by denial strengths of missile defense serve as a complement to the cost imposition strategies offered by our conventional and nuclear forces. Together they give our decision-makers time and credible options to deter aggression, assure lethality, and protect the American people from harm and respond to attacks if deterrence fails.

Space-based capabilities and assurance of nuclear second-strike capabilities are also chief features of creating a Golden Dome for America, under Executive Order 14186, issued on January 27, 2025, calling for the ground-breaking development and deployment of a next generation missile defense shield capable of protecting the American people against a catastrophic missile attack. Golden Dome is a top priority for the Department and will include the development of cutting-edge domain awareness systems, kinetic and non-kinetic missile defeat capabilities in the space and cyberspace domains, and advanced command, control, and battle management systems to integrate and augment traditional U.S. missile defense capabilities.

Synchronizing the Elements of Strategic Posture

The nuclear, missile defense, space, and countering other WMD missions and capabilities remain central to our ability to deter dynamic threats and are inherently interconnected elements of our strategic posture.

As the nuclear and WMD arsenals of Russia, China, and the DPRK grow, U.S. nuclear weapons will continue to provide a necessary, unique, and irreplaceable contribution to deterrence. The United States must deliver the nuclear modernization program while continuing to sustain legacy systems to avoid a deterrence shortfall and mitigate risk. The United States is also committed to investing in extended deterrence and assurance by fielding flexible nuclear forces suited for regional deterrence and working with allies to provide concrete, non-nuclear capabilities to support U.S. deterrence operations.

Missile defense and space capabilities are similarly integral pieces in the overall strategic posture puzzle. Missile defense strengthens deterrence by presenting adversaries with the prospect of failure and provides decision-makers time and options to impose costs. Our space architecture, in turn, enables both our nuclear and missile defense enterprises and the Joint Force's ability to establish and maintain superiority in every domain. In support of our overall strategic posture, the Department will continue to pursue the necessary policies to advance our goal of denying a potential adversary the benefit of an attack in space as well as the uncontested use of space in a conflict.

The Department remains committed to making the necessary investments in our strategic posture to deter our adversaries and, if deterrence fails, prevail in conflict. This mission requires

sufficient and consistent funding and support. Thank you for your dedication to our mission and our servicemembers, and for the opportunity to testify to you today alongside my distinguished colleagues. I look forward to answering your questions.