

SENATE COMMITTEE ON ARMED SERVICES

STATEMENT OF
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BEFORE THE
SENATE COMMITTEE ON ARMED SERVICES
9 MARCH 2023

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INTRODUCTION

United States Strategic Command (USSTRATCOM) is a global warfighting combatant command (CCMD). Our mission is to deter strategic attack and employ forces, as directed, to guarantee the security of our Nation and our Allies. Our people are the greatest enablers of this security, and it is my privilege to lead the Soldiers, Sailors, Marines, Airmen, Guardians, and Civilians who dedicate themselves to this mission 24 hours a day, 365 days a year. I want to thank the President, Secretary of Defense, and Chairman of the Joint Chiefs for their confidence in me to lead this command. I also thank Congress for your continued support to ensure that USSTRATCOM has the resources necessary to meet our critically important mission. We remain ready to face the complex deterrence challenges of today's global security environment while positioning the command for the future.

USSTRATCOM is responsible for strategic deterrence; nuclear operations; nuclear command, control, and communications (NC3) enterprise operations; joint electromagnetic spectrum (EMS) operations (JEMSO); global strike; missile defense; analysis and targeting; and missile threat assessment. These responsibilities will grow in prominence as we face the challenges identified in the National Defense Strategy (NDS): strategic competition with the People's Republic of China (PRC), Russia as an acute threat, threats to the U.S. homeland, and complex escalation dynamics.

To meet these rapidly evolving challenges, the United States must provide a combat ready force able to deter any adversary, and if necessary, fight and win. While the command stands ready to execute its mission today, we need consistent, stable, and on-time Congressional funding to sustain and modernize the nuclear enterprise. This will ensure our ability to pace current and future threats by providing capabilities to deter through the spectrum of conflict.

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Over the past decade, a cycle of continuing resolutions and late appropriations has hindered the Department's acquisitions, operations, and maintenance. As both the Chief of Staff of the Air Force and Chief of Naval Operations testified in 2022, continuing resolutions and late appropriations cost us time and money, causing potential delays in modernizing the nuclear enterprise and Joint Force.

The nuclear triad is the foundation of U.S. national security, and I thank Congress for fully funding our modernization programs: Sentinel intercontinental ballistic missile (ICBM), COLUMBIA-class submarine, D5 submarine launched ballistic missile (SLBM) second life extension and modernization (D5 LE2), B-21 Raider bomber, and Long Range Standoff (LRSO) cruise missile. In addition to these systems, the U.S. must continue investment in sustainment of current systems and critical capabilities that support and complement the nuclear triad. These include nuclear weapons infrastructure overseen by the National Nuclear Security Administration (NNSA), NC3, nuclear security, and long-range conventional strike capabilities such as hypersonic weapons (HSWs). Alongside capability is capacity. We must expand our critical munitions stockpiles while working with manufacturers to make the defense industrial base as responsive as possible.

OUR PEOPLE

The greatest strength of USSTRATCOM is its people. Like the rest of the Department, our workforce is aging out and we are in a fierce competition for talent. My goal is to help personnel currently assigned to the command maximize their potential while continuing to attract capable individuals. USSTRATCOM is committed to deliberate development opportunities and career broadening. These opportunities include strategic deterrence education programs, and a strategic leader fellowship program. Additionally, we are committed to maintaining an inclusive

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environment where people are valued as well as fostering quality of life improvements for the military and civilian workforce. Finally, the need to fully recapitalize our nuclear enterprise has an important people component—as our systems continue to age, their increasing maintenance requirements fall squarely on our dedicated team of Service Members and Civilians.

We have an amazing team serving both in and out of uniform to protect our country. Investing in people yields dividends for national security. There are serious challenges with the production capacity of the defense industrial base, and to help mitigate this I encourage Congress to look at ways to increase the number of STEM (science, technology, engineering, and mathematics) and skilled trade workers throughout the U.S. work force.

GLOBAL SECURITY ENVIRONMENT

For the first time in our country's history, the United States faces two major nuclear powers, the PRC and the Russian Federation, which have the capability to employ nuclear coercion as a way to achieve their national objectives. Russia presents a growing nuclear deterrence challenge centered on its potential perception that the threshold for regional nuclear employment is lower with low-yield systems. The PRC is also developing capabilities that would present a similar deterrence challenge, and it is unconstrained by any nuclear arms control treaty limitations. Additionally, the activities of the Democratic People's Republic of Korea (DPRK) are regionally destabilizing and have global implications.

In the longer term, emerging technologies—including HSWs, fractional orbital bombardment (FOB) capabilities, anti-satellite capabilities, artificial intelligence (AI), autonomous systems, advanced computing, quantum information sciences, biotechnology, and advanced materials and manufacturing—pose a growing challenge to our national defense.

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Meeting these near-term and longer-term threats requires a globally focused national strategy and commitment that spans decades.

People's Republic of China

As the NDS states, the PRC is our most consequential strategic competitor and pacing challenge; its significant nuclear force expansion reflects an increasing assertiveness and the capability to employ nuclear coercion. The PRC's rapid qualitative and quantitative expansion of military capabilities enables a shift in its strategy and requires the Department of Defense (DoD) to make immediate and significant alterations to plans and capabilities. The PRC is aggressively pursuing their global ambitions through a national strategy of "Military-Civil Fusion"—a comprehensive focus on advancing civilian research to develop and then apply new technologies towards military and defense innovations. For example, the PRC's development and construction of fast breeder reactors and reprocessing facilities allows the swift expansion of its warhead manufacturing capacity. The PRC believes that its robust nuclear weapons program is essential to counter the U.S. in the near future in order to achieve what its leaders have deemed "great power status."

Correspondingly, the PRC seeks to match, or in some areas surpass, quantitative and qualitative parity with the United States in terms of nuclear weapons. The PRC's nuclear capabilities already exceed those needed for its long-professed policy of "minimum deterrence," but PRC capabilities continue to grow at an alarming rate. Additionally, the PRC is making substantial investments to expand its inventory of land-, sea-, and air-based nuclear delivery platforms and is constructing the infrastructure necessary to support the significant expansion of its nuclear forces. Notably, the PRC is developing capabilities inconsistent with its historical minimum deterrence posture.

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Within the past three years, the PRC has built hundreds of new ICBM silos, further indicating a move away from a minimum deterrence posture. The PRC's three new missile fields collectively provide it with more than 300 silos. Each of these silos can be equipped with the CSS-10 Mod 2 ICBM, which is capable of ranging the continental United States (CONUS) with multiple independently targetable reentry vehicles (MIRVs). Additionally, the PRC maintains other ICBMs, some of which are road-mobile. Unconstrained by arms control treaty limitations, the PRC is fielding a new generation of mobile missiles, with MIRV and penetration aid capabilities. The PRC's most modern road-mobile and MIRV-capable ICBM advanced from concept to deployed system in only a few years. The PRC is now projected to have over 1,000 warheads by the end of this decade. In accordance with statutory requirements, I recently reported to Congress that the number of land-based fixed and mobile ICBM launchers in the PRC now exceeds the number of ICBM launchers in the U.S.

Just like the ground leg, the air and sea legs of the PRC's nuclear triad are now armed with newly developed weapon systems. The air-refuelable H-6N bomber is armed with new nuclear-capable cruise missiles and air-launched ballistic missiles that may be nuclear capable, and the PRC is building a new stealth strategic bomber with global reach. The PRC's six JIN-class ballistic missile submarines (SSBNs) are now being equipped with the new third-generation JL-3 SLBM capable of ranging CONUS. PRC strategists also highlight their country's perceived need for lower-yield nuclear weapons. Significantly, the PRC's investment in lower-yield, precision systems with theater ranges points to investment in asymmetric capabilities that could be employed coercively during an escalation crisis, similar to Russia's irresponsible nuclear saber-rattling during its war against Ukraine. This presents the U.S. with a deterrence challenge that must be addressed with a range of U.S. capabilities, both conventional and nuclear. The

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PRC currently has an arsenal of approximately 1,000 medium- and intermediate-range ballistic missiles, many of which are dual capable (i.e., able to be armed by either conventional or nuclear warheads) and able to inflict significant damage to U.S., Allied, and partner forces in the Indo-Pacific.

The PRC's 2021 test of a hypersonic glide vehicle (HGV) with FOB capability exemplifies its pursuit of weapons systems with implications for strategic stability. FOB systems use a low earth orbit to deliver a warhead most of the way to its target destination, deorbiting just before reaching its target. These systems represent a more challenging threat because their non-ballistic trajectories complicate missile detection and tracking, and degrade the target country's ability to characterize the scale of an attack.

The trajectory of the PRC's nuclear advancements points to a large, diverse nuclear arsenal with a first-strike offensive capability and a high degree of survivability, reliability, and effectiveness. When considered in the context of its heavy investment in NC3, as well as increased readiness, the PRC's nuclear modernization highlights emergent capabilities that could provide it with a spectrum of first-strike offensive options before and during a crisis or conventional conflict. The PRC may believe that nuclear weapons represent a key component of its counter-intervention strategy and could use these weapons coercively against our Nation, Allies, or partners.

Russian Federation

Russia's brutal invasion of Ukraine is a violent attempt at territorial seizure that aims to undermine the rules-based international order with conventional force backed by nuclear coercion. Russia's nuclear rhetoric is underpinned by its nuclear arsenal, which is the largest and most diverse in the world. Russia continues to flight test its new heavy ICBM, the SS-X-29

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Sarmat, with plans to begin fielding it in 2023 and eventually replace the legacy SS-18 heavy ICBM. With Sarmat, Russia joins the PRC in developing ICBMs that use at least partial orbital trajectories. Russia also continues to field new DOLGORUKIY-class SSBNs, armed with the new SS-N-32 Bulava SLBM, and SEVERODVINSK-class nuclear-powered cruise missile submarines.

Russia's significant investment in launch platforms and systems not subject to the New START Treaty (NST) provides it with increasingly diverse and flexible nuclear deterrence options. Russia now fields nuclear-capable hypersonic systems such as the Avangard HGV, the Tsirkon land-attack cruise missile, and the Kinzhal air-launched ballistic missile, the last of which Russia has employed in Ukraine with conventional warheads. Russia also has a stockpile of approximately 2,000 theater nuclear weapons that does not fall under the limits established by the NST.

The continued degradation of Russian conventional capability in Ukraine will likely increase Russia's reliance on its nuclear arsenal. This phenomenon, along with the PRC's rapid breakout and development of capabilities that present a similar deterrence challenge, underscores the increased perceived utility of nuclear weapons in the contemporary environment. The U.S. faces a complex, multipolar nuclear world that requires concerted U.S. effort to address these deterrence challenges, strengthen assurance to our Allies and partners, and prevent proliferation.

Democratic People's Republic of Korea

The DPRK, an increasing security challenge to the U.S. and our Allies, is capable of striking regional Allies with nuclear weapons and is an emerging threat to CONUS. The DPRK's advancing missile and nuclear programs are destabilizing and highlight the critical role of USSTRATCOM's deterrence and assurance mission.

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The DPRK's nuclear-capable ballistic missile research and development has continued with an unprecedented number of missile launches in 2022. The DPRK's continued development of ICBMs, SLBMs, and Intermediate Range Ballistic Missiles demonstrates its intention to bolster its nuclear delivery capability. The DPRK is also developing new capabilities such as HSWs and MIRVs, and its new Hwasong-17 ICBM has the potential to reach CONUS. The DPRK is also diversifying launch platforms, and has tested rail, submarine, and ground-mobile missiles. These advancing nuclear capabilities place pressure on Allied faith in our extended deterrence commitments. The DPRK illustrates that nuclear and weapons of mass destruction threats to the U.S. and our Allies are not limited to the PRC and Russia.

INTEGRATED DETERRENCE

We are addressing these threats through integrated deterrence. As the NDS articulates, integrated deterrence spans all domains and capabilities and is backstopped by a safe, secure, and effective nuclear deterrent. USSTRATCOM's role, however, is not limited to nuclear plans and operations. USSTRATCOM's mission, to deter strategic attack—not just nuclear attack—against our Nation and Allies, includes many components. Correspondingly, our new concepts and plans must account for nuclear, long-range conventional, space, electromagnetic spectrum, and cyberspace capabilities. Crucially, DoD's plans must integrate all capabilities across the spectrum of conflict.

USSTRATCOM also plays a vital role in assuring Allies and partners. The North Atlantic Treaty Organization (NATO) calls the strategic forces of the Alliance, particularly those provided by the U.S., “the supreme guarantee of the Alliance's security.” In the Indo-Pacific, our Allies similarly acknowledge the importance of our strategic deterrent. Examples of

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operations and activities include U.S. bomber operations with Allies, SSBN port visits, and exercises such as Steadfast Noon, NATO's annual nuclear exercise.

The war in Ukraine, combined with the PRC's rapid nuclear arsenal expansion and the DPRK's growing nuclear capabilities, will likely make longstanding U.S. nonproliferation goals more challenging. For 70 years, U.S. extended deterrence commitments have functioned as one of the most important factors limiting the proliferation of nuclear weapons. In the current environment, the credibility of U.S. extended deterrence commitments is even more vital to nuclear nonproliferation goals. Critically, there must be no perception of a threshold below which an adversary may believe it could employ nuclear weapons, such as non-treaty accountable, lower-yield, theater weapons, to obtain a benefit.

WHAT USSTRATCOM NEEDS TO ACCOMPLISH ITS MISSION

I urge Congress, the Department, and the Services to sustain their decades-long support for critical national security capabilities, including the infrastructure needed to support these programs. The recapitalization of our triad is a once in every-other-generation event that will ensure we have capable forces into the 2080s to defend the U.S. homeland and deter strategic attack globally. I am closely monitoring the transition of our major programs: OHIO to COLUMBIA, D5 LE to D5 LE2, Minuteman III to Sentinel, B-2 to B-21, Air Launched Cruise Missile (ALCM) to LRSO, and modernization of NC3 capabilities. It is essential to sustain our current platforms until new systems are at full operational capability. Correspondingly, we are coordinating with the Services on efforts to mitigate operational impacts should delays occur in the delivery timeline for new capabilities.

NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS (NC3)

The NC3 enterprise is essential to the President's ability to command and control the Nation's nuclear forces. Acknowledgement of this vital mission and the unique challenges facing NC3 modernization were the impetus behind the Secretary of Defense's establishment of my role as the DoD NC3 Enterprise Lead in 2018. With these responsibilities and authorities, we are taking a holistic enterprise approach to develop and deliver the next generation of NC3—a flexible, resilient, and assured architecture spanning all domains and enhancing strategic deterrence.

NC3 Next Generation / Modernization

The modernization of the NC3 enterprise underpins the nuclear triad and sustains assured command and control capabilities in the evolving threat environment. We are partnering with NC3 stakeholders in the Office of the Secretary of Defense and levying requirements on the Services to modernize all NC3 capability areas, integrating global nuclear forces with the means to provide strategic deterrence.

In the next five years, we will transition from Milstar to the Advanced Extremely High Frequency satellite constellation, gaining greater capacity, survivable worldwide NC3 reach, and the ability to provide direction to our forces in degraded environments. Our national leadership conferencing, currently using a voice-only legacy technology, will transition to voice and video displays. In our warning layer, we are moving away from the Defense Support Program and towards the Space Based Infrared System to maximize warning time. Efforts are already underway on our submarines, E-6B aircraft, and bombers to replace previous generation radios with improved systems that are more resilient to jamming and other electromagnetic effects.

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In the next ten years, the launch and use of Next Generation Overhead Persistent Infrared geosynchronous and polar satellites will replace legacy systems with a space-based missile warning constellation to detect and track threats around the globe. The Space Development Agency's Proliferated Warfighting Space Architecture is aimed at building a constellation of satellites in low and medium earth orbit that can monitor maneuvering hypersonic missiles flying below the range of today's ballistic missile detection satellites and above the radar of terminal-phase targeting systems. These satellites will complement other efforts to detect and track maneuvering hypersonic missiles that are difficult targets for current missile warning capabilities. Finally, we will use polar satellite communications capability with the Enhanced Polar System Recapitalization program to provide message relay. Our submarines, E-6B aircraft, bombers, and missile fields will receive communication systems that increase survivability of weapon systems in a crisis situation. We are focused on achieving our vision—a modernized NC3 enterprise that remains resilient, reliable, and available at all times and under the worst conditions.

NC3 Cybersecurity and Technological Improvements

We have confidence in our ability to protect, defend, and execute the nuclear deterrent mission. The resilience and redundancies of the systems comprising the Nuclear Command and Control System, combined with ongoing cybersecurity enhancements, ensure our ability to respond under adverse cyber conditions.

E-4B Nightwatch

The E-4B Nightwatch aircraft serves as the National Airborne Operations Center and is a key component of the National Military Command System for the President, Secretary of Defense, and Joint Chiefs of Staff. The E-4B recapitalization program—the Survivable Airborne

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Operations Center—will serve as the next generation airborne command center platform. In case of national emergency or destruction of ground command and control centers, the aircraft provides a highly survivable command, control and communications center to direct U.S. forces, execute emergency war orders and coordinate actions by civil authorities. For these reasons, we must continue to develop and deliver this platform on time to prevent any capability gaps associated with this important national asset.

E-6B Mercury

The E-6B Mercury accomplishes two missions: Emergency Action Message (EAM) relay to all legs of the nuclear triad (Take Charge and Move Out/TACAMO) and an alternate USSTRATCOM command center providing EAM origination and ICBM secondary launch capability (Looking Glass). E-XX is the follow-on platform to the E-6B airframe and will execute the TACAMO mission only. In coordination with the Office of the Undersecretary of Defense for Acquisition and Sustainment and the Joint Staff, USSTRATCOM and the NC3 Enterprise Center are conducting an evaluation of alternatives (EoA) to consider all missions and platforms to deliver the Looking Glass capabilities currently performed by the E-6B. Recommendations from the EoA should be available by mid-summer. We must complete recapitalization by the E-6B's projected end of service life in FY38.

LAND-BASED TRIAD COMPONENT

The ICBM remains our country's most responsive option for strategic deterrence. The Minuteman III (MMIII) force provides a responsive, highly reliable deterrent capability, supported by a secure command and control system. Geographically dispersed ICBMs deny potential adversaries the possibility of a successful first strike.

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MMIII's weapon system replacement, the LGM-35A Sentinel ICBM, will deliver MMIII's key attributes while enhancing platform security, streamlining maintenance processes, and delivering greater operational capability needed for the evolving threat environment. Sentinel's program scope and scale cannot be overstated—our first fully integrated ICBM platform includes the flight system, weapon system, C2, ground launch systems, and facilities. The Sentinel program is pursuing mature, low-risk technologies, design modularity, and an open system architecture using state-of-the-art model-based systems engineering. Sentinel will meet our current needs, while allowing affordable future technology insertion to address emerging threats. USSTRATCOM is actively supporting the Sentinel engineering and manufacturing development process and looks forward to the first Sentinel developmental flight test. Sentinel will deploy with numerous advantages over MMIII and will provide a credible deterrent late into this century. Sentinel fielding is a whole of government endeavor. We appreciate continued Congressional support, both for Sentinel and sustainment of MMIII.

SEA-BASED TRIAD COMPONENT

The Navy's OHIO-class SSBN fleet, equipped with the Trident II D5 SLBM, patrols the world's oceans undetected, providing an assured second strike capability in any scenario. Our SSBN fleet continues to provide a resilient, reliable, and survivable deterrent. However, the life of the OHIO-class SSBN fleet has been extended from a planned 30 years to an unprecedented 42 years. The average age of the SSBN fleet is now 32 years. As the hulls continue to age, the OHIO-class will face sustainment and readiness challenges until it is replaced by the COLUMBIA-class. Similar to Minuteman III, we must maintain OHIO-class hulls until the COLUMBIA is available. The Navy has already invested in the Integrated Enterprise Plan to shorten construction timelines for COLUMBIA hulls two through twelve to meet

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USSTRATCOM at-sea requirements. Continued investment in revitalizing our shipbuilding industry is a national security imperative.

The first COLUMBIA-class submarine must achieve its initial strategic deterrent patrol in FY31 with an initial loadout of D5 LE missiles and a steady transition to the D5 LE2. The program of record delivers at least twelve SSBNs—the absolute minimum required to meet sustainment requirements. A life-of-hull reactor and shorter planned major maintenance periods are intended to deliver greater operational availability. COLUMBIA will deliver improved tactical and sonar systems, electric propulsion drive, and advanced hull coating to maintain U.S. undersea dominance.

The Trident II D5 LE2 program will field a modern, reliable, flexible, and effective missile capable of adapting to emerging threats and is required to meet COLUMBIA-class SLBM loadout requirements. Stable funding for D5LE2 is vital to maintaining program benchmarks and ensuring a viable SSBN deterrent through the 2080s. COLUMBIA's ultimate success depends on a missile that is both capable and flexible.

Additionally, shore infrastructure readiness is fundamental to supporting current OHIO-class SSBN and future COLUMBIA-class SSBN operations. Provision of military construction and operation & maintenance funding facilitates the Navy's modernization of shore infrastructure supporting the nuclear deterrence mission. One immediate example is the modernization and expansion of the SSBN training and maintenance facilities in Kings Bay. These facilities are critical for maximizing the combat readiness of SSBNs and their crews daily, requiring a commitment to multiple years of funding.

Anti-Submarine Warfare

Anti-submarine warfare threats continue to evolve. The Navy's Integrated Undersea Surveillance System (IUSS) provides vital information concerning adversary submarine and surface ship operations, enabling U.S. forces to maintain favorable tactical and strategic positions while supporting deterrent patrol operations. Surveillance performed by IUSS also provides the theater undersea warfare commander situational awareness required for maritime defense of the homeland. Advances in adversary submarine stealth underscore the importance of IUSS recapitalization.

Our submarines are formidable weapon systems; however, we must address potential adversaries' anti-submarine warfare advances to maintain an effective and viable SSBN fleet well into the future. Adversary investments in submarine quieting, acoustic arrays, and processing capabilities may challenge our acoustic superiority in the future and consequently, SSBN survivability. Development and employment of advanced sonar sensors, advanced materials science and coatings, and other efforts within the Navy's Acoustic Superiority Program are vital to maintain our undersea advantage.

AIR-BASED TRIAD COMPONENT

The bomber fleet is our most flexible and visible leg of the triad. We are the only country with the capability to provide long-range bombers in support of our Allies and partners, enabling the U.S. to signal resolve while providing a flexible option to de-escalate a conflict or crisis. In a force employment model known as the Bomber Task Force (BTF), USSTRATCOM supports global deterrence and assurance objectives. BTFs allow dynamic employment of the Joint Force and clear messaging as potential adversaries watch these missions closely. As bombers conduct missions throughout the globe, they enhance national objectives by demonstrating unity with

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Allies and partners, and testing interoperability. As a complement to the Air Force's Agile Combat Employment (ACE) concept, we must consider increasing forward-based maintenance capability to support persistent, episodic global presence while retaining the ability to increase nuclear readiness posture as needed. As we sustain legacy systems and field new capabilities, it will be important to invest in bomber support forces and infrastructure to adequately sustain flexibility and effective nuclear deterrence posture.

B-52H Sustainment

The B-52H continues on as the workhorse of our bomber fleet. The B-52's longevity is a testament to its engineers and maintenance professionals, but it must be modernized to remain in service into the 2050s. Essential B-52 upgrades include the Commercial Engine Replacement Program (CERP), Radar Modernization Plan, global positioning system military code signal integration, and survivable NC3 communications equipment. These improvements will keep the B-52 flying and able to pace the evolving threat. CERP will replace the B-52's 1960s-era TF-33 engines, which will enable longer unrefueled range, reduce emissions, and address supply chain issues afflicting the legacy engines. The B-52's very low frequency and advanced extremely high frequency modernization programs will provide mission critical, beyond-line-of-sight connectivity.

B-2 Sustainment

The B-2 fleet remains the world's only low-observable bomber, able to penetrate denied environments while employing a wide variety of munitions against high-value strategic targets. The DoD must protect this unique operational advantage as the Air Force transitions from the B-2 to the B-21 fleet. Successful transition requires full funding for B-2 sustainment and modernization programs until the B-21 completes development and certification for both

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conventional and nuclear missions, and is fielded in sufficient numbers to preclude any capability gap.

B-21

The B-21 Raider will provide both a conventional and nuclear-capable bomber supporting the triad with strategic and operational flexibility across a wide range of military objectives. The program is on track to meet USSTRATCOM operational requirements, and continues to successfully execute within cost, schedule, and performance goals. The B-21 will be the backbone of our future bomber force, providing a penetrating platform with the range, access, and payload to go anywhere needed in the world. Consistent funding of the Air Force's B-21 program is required to prevent operational shortfalls in the bomber force and ensure delivery of this critical combat capability.

Air-Delivered Weapons

The air-delivered weapons portfolio consists of the ALCM, the B83-1 gravity bomb, and the B61 family of weapons, providing a mix of standoff and direct attack munitions to meet near-term operational requirements. The ALCM provides current stand-off capability to the strategic bomber force, but is reaching its end-of-life. LRSO will replace the ALCM as our country's sole air-delivered standoff nuclear capability. It will provide the President with flexible and scalable options, and is capable of penetrating and surviving against advanced air defenses—a key attribute and important component in USSTRATCOM operational plans. The LRSO is complementary to the ICBM and SSBN recapitalization programs and an important contribution to strategic stability. The B61-12 will soon replace most previous versions of the B61, providing a modernized weapon with greater accuracy and increased flexibility. Finally, USSTRATCOM

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is actively supporting the National Defense Authorization Act requirement to conduct a study on options to hold at risk hard and deeply buried targets.

Tanker Support

A robust tanker fleet is essential to sustaining global reach for all USSTRATCOM missions. The 65 year-old KC-135 is the backbone of the Air Force's air refueling force but is facing increasing maintenance and sustainment issues. Limited air-refueling aircraft increases bomber response timing and constrains bomber deterrence posture agility. Concurrent mission demands between strategic, theater, and homeland defense require continued tanker modernization and expansion efforts. USSTRATCOM fully endorses and supports the Air Force's effort to modernize and sustain the tanker fleet, including certification of the KC-46 to support the nuclear mission. A conflict with a peer adversary would put previously unseen demands on the tanker force.

WEAPONS INFRASTRUCTURE AND NUCLEAR SECURITY ENTERPRISE (NSE)

Today's nuclear weapon stockpile remains safe, secure, and effective. However, our country has not conducted a large-scale weapons modernization in over two decades. Stockpile and infrastructure modernization must ensure our systems are capable of pacing and negating adversary threats to our Nation, Allies, and partners. Over the past five years we have made significant investments in the NSE, but most programs take a decade or longer to field a meaningful capability.

The NNSA, as part of and informed by the Nuclear Weapons Council (NWC), has developed a comprehensive plan to put these identified capacities and capabilities in-place. When realized, it will enable our country to sustain and modernize the nuclear weapons stockpile to meet strategic deterrence needs. In the interim, I look forward to working with NNSA and

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other NWC partners to find the best solutions to mitigate operational risks. I commend Congress for its support of the NNSA's budget for weapons activities for FY23. Stockpile and NSE programs can take a decade or more to deliver and will require consistent, uninterrupted funding to provide the needed capacities and capabilities on time to sustain and modernize the strategic deterrent force. We must continue to look for ways to accelerate our stockpile and NSE modernization and recapitalization programs.

As we shift focus beyond life extension to modernizing existing weapons and fielding new systems, we must overcome challenges that delay program execution. There are many NSE programs with just-in-time schedules or that are late-to-need, including pit production, uranium processing, and radiation case manufacturing. Failure to execute and deliver timely NSE modernization programs results in accumulation of operational risk by requiring the retention of aging weapons and components in the stockpile decades longer than intended. In FY22, the NSE took action on a number of issues impacting the readiness and modernization of the nuclear deterrent force. Some areas—for example, the W93, B61-12, and W88 Alt 370—saw progress, while others such as the W80-4 and W87-1 stockpile modernization programs are experiencing milestone delays and increased schedule risk. I look forward to working with NNSA and other NWC partners to improve our rates of success in these latter areas.

Production of essential components is a critical issue. NNSA has identified critical capability gaps affecting components essential for stockpile modernization. It is also vital that the NSE re-establishes a plutonium pit manufacturing capability of no less than 80 pits per year as close to 2030 as possible. Weapon production is a multi-decade task that must address current enterprise limitations as we simultaneously modernize the stockpile, infrastructure, and platforms while sustaining the current force until it can be replaced.

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For over a decade, our adversaries have dedicated significant resources to modernizing and expanding their nuclear capabilities. As our systems continue to age, funding a modern stockpile, supporting infrastructure, and a robust science, technology, and engineering base is essential.

NUCLEAR SECURITY

Nuclear security continues to be one of my top priorities; we will commit the resources required to protect our fielded weapons, weapon platforms, and personnel. Adhering to the Nuclear Weapon Security Standard ensures denial of unauthorized access to nuclear weapons and prevents loss of custody. A defense-in-depth strategy starts at every nuclear weapon and builds outward with a cohesive design to deter, detect, delay, deny, and defeat security threats.

MH-139A Grey Wolf Replacement Helicopter

The Joint Force achieved a significant ICBM security milestone with the Air Force's award of a contract to replace the UH-1N helicopter fleet with the new MH-139A "Grey Wolf." The MH-139A offers enhanced speed, range, endurance, payload, and survivability versus the UH-1N. We will continue to work with the Services to deliver this capability.

Countering Small Unmanned Systems

The rapid proliferation and growing technological sophistication of small unmanned systems is an increasing threat to the nuclear enterprise. To counter the threat, the Department continues to field Counter-small Unmanned Aircraft Systems (C-sUAS) capabilities and is refining tactics, techniques, and procedures. Similarly, the advancement of unmanned surface and underwater vehicles may soon emerge as a threat to our SSBNs and supporting infrastructure, requiring a comprehensive force protection system to defend both pier-side and in-transit SSBNs.

Weapon Generation Facility (WGF)

As we modernize nuclear weapons and platforms, the Air Force will replace aging weapon storage areas with new WGFs which are vital to security, sustainment, and fielding of the Sentinel, B-21, and LRSO triad modernization programs, and their associated weapons. The Air Force will conduct weapon maintenance, storage operations, and (as required) weapons generation activities in a single reinforced WGF facility at each strategic base. This will further increase security, recapitalize aging infrastructure, and enhance efficiency throughout the mission. The WGFs are a critical part of the larger nuclear modernization effort and must be fully funded to deliver on time in support of each program of record delivery schedule.

JOINT ELECTROMAGNETIC SPECTRUM OPERATIONS (JEMSO)

Per the Unified Command Plan (UCP), CDRUSSTRATCOM is responsible for advocating for JEMSO and electromagnetic warfare capabilities, providing contingency electronic warfare support to other CCMDs, and supporting CCMD joint training and planning related to controlling the EMS. Potential adversaries understand our dependency upon the EMS and have developed technology to effectively contest our use of it. Additionally, increased civil and commercial use of spectrum bandwidth significantly congests the EMS and constrains DoD use. Multiple USSTRATCOM assessments have identified JEMSO readiness shortfalls, which are growing. Our adversaries have dramatically increased their offensive and defensive capabilities in recent years; the DoD must similarly improve our ability to operate in a degraded electromagnetic warfare environment.

We must continue to pursue a DoD-wide effort to achieve EMS superiority and mission success. To support the goals of the DoD EMS Superiority Strategy, USSTRATCOM is executing twelve assigned tasks, including establishing an organization, led by a 2-star, called

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the Joint Electromagnetic Spectrum Operations Center (JEC). The JEC will lead execution of the eleven other USSTRATCOM assigned DoD EMS Superiority Strategy tasks. Additionally, USSTRATCOM has led development of JEMSO cells at other CCMDs to enable these functions. We are also working with the DoD Chief Information Officer to develop a software system for use by CCMD JEMSO cells in planning, coordinating, and controlling the EMS. Following multiple assessments from Northern Edge—USINDOPACOM’s tier 1 exercise—USSTRATCOM is pursuing accreditation authorities for Joint Force EMSO readiness that will help close capability gaps. USSTRATCOM is also establishing an EMSO training and education capability to coordinate DoD EMS joint training, streamline training processes, and promote standardization.

MISSILE DEFENSE

Missile defense capabilities are a key part of integrated deterrence to deny our potential adversaries coercive abilities or the benefit of attacks against the homeland, Allies, and partners. The proliferation of missile technology and employment techniques designed to circumvent missile defenses demands a Department-wide missile defeat approach with continued investment in systems integration and collaboration with Allies and partners. This comprehensive approach uses the entire range of available activities to counter the development, acquisition, proliferation, and use of adversary offensive missiles of all types, as well as limiting damage from such use. An important element of this approach is integration of space- and terrestrial-based sensors for warning, attribution, and tracking of ballistic, maneuvering, hypersonic, cruise missile, and UAS threats to optimize the effectiveness of our limited inventory of kinetic interceptors. A comprehensive sensor architecture that gives commanders and civilian leaders situational awareness over all threats and incursions to our air and space domains is imperative.

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Cruise missiles continue to offer adversaries ways to generate strategic effects. USSTRATCOM is working closely with NORAD/USNORTHCOM, USINDOPACOM, and USSPACECOM to explore capabilities to enhance homeland defense and deter attack. Additionally, the Missile Defense Agency, Services, and CCMDs continue to develop and field defenses that protect the homeland and deployed forces while reassuring and defending our Allies and partners. We are committed to improving the Ground-based Midcourse Defense system and developing the Next-Generation Interceptor to augment and potentially replace the Ground Based Interceptor.

HYPERSONIC WEAPONS

Long-range conventional hypersonic weapons will provide senior leadership additional strike options to hold distant and/or defended high-value, time-sensitive targets at risk without crossing the nuclear threshold. Conventional HSWs ensure long-range power projection in contested environments and enables more efficient and effective application of the nuclear force. While HSWs are not a replacement for nuclear weapons, these systems show promise as the conventional complement that the nuclear force needs to expand integrated deterrence options.

The ability to quickly strike defended targets at long range is an important capability that the Joint Force and multiple CCMDs require. Rapid development and fielding of conventional HSWs is a top USSTRATCOM priority. The goal of fielding the first offensive hypersonic strike system is on the horizon with the Army scheduled to field a Long-Range Hypersonic Weapon battery in late 2023, followed by the Navy Conventional Prompt Strike program beginning in the mid-2020s. The Air Force has demonstrated successes in the Air-launched Rapid Response Weapon program and hypersonic cruise missile technology pathfinder efforts. A robust scientific and industrial base is vital to ensure that HSWs are fielded in sufficient

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quantities. Additionally, a program for continuous technological improvement is important to meet the evolving security environment over the coming decades.

USSTRATCOM is committed to ensuring HSWs are ready to employ on day one of fielding as these weapons directly contribute to USSTRATCOM's UCP-assigned strategic deterrence and global strike responsibilities. To operationalize these new capabilities in the near term, we are working across the Department to develop a concept of operation for HSW support to integrated deterrence. USSTRATCOM is working through policy, planning, and C2 processes, and—in conjunction with the Services and other CCMDs—is testing HSWs through a rigorous exercise program. Hypersonic weapons will have an immediate impact to operational plans by deterring and holding adversaries at risk while providing the nation with credible, strategic, non-nuclear response options when faced with armed conflict. Additionally, HSW-related agreements with Allies will further reinforce collective security, promote interoperability, and facilitate optimal deployment of these capabilities.

WARGAMES AND EXERCISES

Wargames, exercises, and rehearsals of concept continue to refine how we demonstrate joint capacity, capability, interoperability, and integrated deterrence across the globe. Last year, USSTRATCOM conducted over 380 NC3-focused exercises and wargame events focused on coordination with national-level civilian and military leadership, other CCMDs, Allies, components, and the interagency. These events integrated advanced weapons, tested new capabilities, and improved interoperability while providing the opportunity to assess application of future force concepts.

DEFENSE INDUSTRIAL BASE

Across America, industries—including but not limited to the defense industry—are grappling with capacity issues stemming from shortages of skilled labor, global supply chain delays, inflation, and a shortage of manufacturing facilities. This, combined with a smaller specialized workforce, transition to offshore supply chains, the need to produce quickly in volume, and costs associated with modern technologies, creates additional program vulnerabilities. These program risks are simple: cost and schedule.

I applaud Congress for its work in attempting to mitigate these challenges with the defense industrial base, both in the near term and longer term. Congress, DoD, and industry must find ways to achieve requirements despite current challenges. As Undersecretary of Defense for Acquisition and Sustainment William LaPlante has said, “production is deterrence.” Congress’s efforts to on-shore critical components with national security implications, its attention to revitalization of the shipbuilding industry, and investment in infrastructure are all welcome developments. DoD and industry should deepen an already strong partnership. For example, the Department, through its Industrial Base Analysis and Sustainment program, established the National Imperative for Industrial Skills to invest in industrial workforce development needs. We should also design contracts, especially with large programs, to ensure industry accountability for performance, schedule, and cost, with shared risk for both DoD and industry. The B-21 program is an example of effective contract structuring which incentivizes industry to partner with government to identify, incentivize, and mitigate risks early to achieve mutually beneficial outcomes. For items such as critical munitions, we can speed production by taking advantage of new authorities such as multiyear procurement contracts. As Dr. LaPlante has noted, co-production agreements with Allies and partners are part of integrated deterrence.

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In the longer term, I encourage further work with the Services to continue to expand industry's capability, capacity, flexibility, and responsiveness.

CONCLUSION

The cornerstone of our national defense remains deterrence, and we will continue USSTRATCOM's vital work during turbulent times. The post-Cold War era is over and a competition is underway among major powers to shape the next chapter. In this environment, USSTRATCOM stands ready to face complex challenges in today's global strategic environment while positioning for the future. I am proud to lead an elite team that stands ready for a new era of strategic competition. Together with our people, capabilities, Allies, and partners, there is nothing that we cannot accomplish.