

**Statement of Dr. John Plumb**  
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**before the**  
**House Armed Services Committee Strategic Forces Subcommittee (HASC-SF)**  
**on Fiscal Year 2023 Nuclear Forces**  
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**Introduction**

Chairman Cooper, Ranking Member Lamborn, members of the Strategic Forces Subcommittee: thank you for inviting me to testify before you on the Fiscal Year (FY) 2023 President's Budget request for U.S. nuclear weapon and warhead modernization and sustainment plans. I am honored to appear alongside Under Secretary Hruby, Assistant Secretary Rosenblum, Vice Admiral Wolfe, and Lieutenant General Dawkins.

Earlier this year the Department of Defense (DoD) completed its strategy reviews, including the 2022 Nuclear Posture Review (NPR), in close consultation with interagency partners, outside experts, allies, and partners. The 2022 NPR represents a comprehensive, balanced approach to U.S. nuclear strategy, policy, posture, and forces. Maintaining a safe, secure, and effective nuclear deterrent – and strong and credible extended deterrence commitments – remains the top priority for the Department. This top priority is further reinforced by Russia's invasion of and its nuclear weapons rhetoric regarding Ukraine, and by China's rapid nuclear weapons modernization and expansion.

Committed to that priority, the FY 2023 President's Budget includes \$34.4 billion dollars for the nuclear enterprise, including fully supporting the modernization of the nuclear Triad, modernization of our nuclear security infrastructure, and investment in our nuclear command, control, and communications (NC3) architecture. The United States is committed to that modernization, and committed to sustaining fielded systems through the transition to their replacements.

The request of \$34.4 billion is nearly \$7 billion more than the FY 2022 request. It includes funding the B-21 bomber and the Long-Range Standoff (LRSO) weapon for the air leg; the Ground-Based Strategic Deterrent (GBSD) for the ground leg, which is now called Sentinel; and the Columbia nuclear-powered ballistic missile submarine (SSBN) and the Trident II life-extension and life-extension 2 for the sea leg. At the same time, and after considering all viewpoints, DoD concluded in the NPR that the nuclear sea-launched cruise missile (SLCM-N) should be canceled and the B83-1 gravity bomb should be retired.

The NPR underscores the U.S. commitment to reducing the role of nuclear weapons and reestablishing U.S. leadership in arms control. The United States will continue to emphasize strategic stability, seek to avoid costly arms races, and facilitate risk reduction and arms control arrangements where possible. Our nuclear enterprise will continue to support U.S. nuclear nonproliferation, nuclear security, counter proliferation, and counterterrorism priorities.

U.S. nuclear forces remain the bedrock of our deterrence architecture. They are foundational to every defense priority established in the National Defense Strategy, and they remain indispensable to our national security. For the foreseeable future, nuclear weapons will continue to provide unique deterrence effects that no other element of U.S. military power can replace.

## **Nuclear Posture Review**

As directed by Secretary Austin, the NPR was conducted in parallel with the 2022 Missile Defense Review (MDR), both of which are nested under the 2022 National Defense Strategy (NDS). The NPR process was inclusive, involving a large group of stakeholders, and adopted a deliberate and rigorous approach to ensure that senior leader decisions would be fully informed. My colleagues appearing before you today and their staffs, as well as other representatives from across DoD and interagency partners, were deeply involved in preparing the NPR. A classified version of the NPR was delivered to Congress alongside classified versions of the NDS and the MDR in late March. We look forward to delivering an unclassified version of the NPR, and discussing it in detail, at a later date.

The NPR was structured in three phases: first, we examined the security environment; second, we considered how the security environment shaped our assessment of the roles of nuclear weapons and our nuclear strategy; third, we considered the requirements and capabilities needed to achieve our strategy. Within this framework, the review also considered the role of arms control in shaping deterrence requirements; risk-mitigation strategies given uncertainties in the environment; the stability implications of emerging technologies; approaches to integrated deterrence; and opportunities to leverage technology innovation. As directed by the President, the NPR also included an examination of steps to reduce the role of nuclear weapons.

Ultimately, the NPR provides a clear-eyed assessment of the environment for nuclear deterrence and the security challenges we and our allies and partners face. The NPR strikes the right balance between: 1) the steps necessary to ensure a safe, secure, and effective nuclear deterrent and strong and credible extended deterrence; and 2) other necessary approaches to reduce the risk of nuclear war and the global salience of nuclear weapons.

## **The Security Environment**

The United States faces heightened risk associated with strategic competition and military confrontation, resulting in a strong sense of urgency to sustain and strengthen nuclear deterrence and take steps to reduce the risks of nuclear war. The security environment is characterized by an increased reliance on nuclear weapons in the strategies and forces of our competitors. For the first time, the United States will need to deter two major nuclear powers—China and Russia—each possessing large, sophisticated global and theater nuclear forces. Adding to this heightened risk, North Korea continues to expand and diversify its own nuclear forces, increasing its ability to threaten the United States and our regional allies and partners.

Compounding these challenges is the uncertain prospect for new arms control agreements that traditionally have constrained the nuclear threats we face; the advance of non-nuclear capabilities

that can achieve strategic impact; and the possibility of new escalation risks in an increasingly complex operating environment.

**China.** The People’s Republic of China (PRC) has embarked on an ambitious expansion, modernization, and diversification of its nuclear forces and established a nascent nuclear triad. As recently as 2020, DoD assessed that China would at least double the size of its nuclear stockpile, then estimated in the low-200s, within the decade. Since then, China has accelerated its efforts and may possess up to 700 deliverable nuclear warheads by 2027, and will likely have about 1,000 deliverable warheads by 2030. China has commenced building at least three solid-fueled intercontinental ballistic missile (ICBM) silo fields, which will cumulatively contain hundreds of new ICBM silos. While the end state resulting from China’s nuclear expansion is uncertain, the current trajectory points to a large, diverse nuclear arsenal with a high degree of survivability, reliability, and effectiveness. China is also implementing a launch-on-warning posture for its nuclear forces for the first time. The combination of rapid growth in nuclear forces and the change in posture will provide China with new options to leverage nuclear weapons in peacetime, crisis, and war, and marks a departure from its traditional minimum deterrence posture.

To support its growth in nuclear capability, China is increasing its capacity to produce and separate plutonium by constructing fast reactors and reprocessing facilities. Although China has stated that this infrastructure is for civilian nuclear technology programs, the United States has strong concerns that this infrastructure will also support China’s expanding nuclear weapons program.

In the near term, we must continue to factor China’s nuclear expansion into our own strategy and forces, as well as any arms control and risk reduction approaches with Russia. We need to understand the dynamics of three party deterrence as part of both peacetime competition and crises where opportunistic aggression by either China or Russia is possible.

**Russia.** Russia continues to emphasize nuclear weapons in its military posture and strategy. It is modernizing and expanding its nuclear forces, and has irresponsibly brandished these capabilities in support of its revisionist security policy – most recently in its unjustified invasion of Ukraine. Russia’s modern nuclear arsenal, which is expected to grow further, presents an enduring existential threat to the United States and our allies and partners.

For twenty years Russia has pursued a wide-ranging modernization program, replacing legacy strategic nuclear systems within the constraints of the START and subsequent New START treaties, and steadily expanding and diversifying nonstrategic nuclear systems that pose a direct threat to NATO and its neighbors. Russia is pursuing several novel nuclear-capable systems designed to hold the U.S. homeland and our allies and partners at risk. In addition to the approximately 1,550 deployed warheads on strategic systems covered by the

New START Treaty, Russia probably has up to 2,000 nonstrategic nuclear warheads, which are largely not covered by any arms control treaty.

Russia's nuclear saber-rattling is irresponsible and dangerous, and heightens the risk of escalation. As President Biden recently stated, "No one should be making idle comments about the use of nuclear weapons or the possibility of the need to use them." Russia has more than once joined the United States and other nuclear powers in declaring that a nuclear war cannot be won and must never be fought. Yet its current rhetoric and actions make clear that Russia believes such irresponsible rhetoric is acceptable behavior.

In contrast, the United States believes all nuclear-armed states have an obligation to act responsibly. We have chosen to act with restraint with respect to our peacetime nuclear activities, in the interest of avoiding actions that could unintentionally add to nuclear tensions or be misinterpreted. But our acts of restraint should not be misconstrued. Russia's attempts at nuclear intimidation will not work: our commitment to Article 5 and to the security of our NATO Allies remains ironclad. We have full confidence in the ability of our nuclear forces to perform their mission. The readiness of these forces remains unchanged, and we will continue to undertake routine and scheduled operational activities to maintain that readiness. This includes future planned tests of our systems, including ballistic missile test launches, which will be properly notified as required by the New START Treaty. We will also continue to work with our Allies to strengthen NATO's nuclear deterrence posture.

**Non-Nuclear Strategic Capabilities.** China and Russia are also working to augment their growing nuclear forces with a broader set of kinetic and non-kinetic capabilities, including cyber, space, information, and advanced conventional strike. Each seeks to integrate these multi-domain capabilities to support coercive strategies and enable military campaigns intended to present the Joint Force with operational dilemmas. China and Russia also likely possess capabilities relevant to chemical and biological warfare that could pose a threat to U.S., allied, and partner forces, as well as civilian populations.

The introduction and growing role of non-nuclear strategic capabilities will raise new challenges for deterrence and managing escalation risk. These capabilities could create complex and unpredictable pathways for conflict escalation that may be unfamiliar to us, especially in domains such as cyber and space, where there is a lack of collective experience, common understanding, and established norms of behavior.

**Democratic People's Republic of Korea (DPRK).** North Korea remains a persistent threat, and has continued developing nuclear weapons and associated delivery systems that pose a growing threat to the United States and its allies and partners. Since January this year, and in violation of numerous United Nations Security Council resolutions, the DPRK has conducted a number of missile tests, including tests of ICBMs, an intermediate-range ballistic missile, purported hypersonic glide vehicles, cruise missiles, and multiple types of solid-propellant short range ballistic missiles. DPRK leadership likely views expanding its nuclear and

missile forces as essential to ensure regime security and to enable coercive military threats and actions. The DPRK also possesses non-nuclear capabilities that could inflict catastrophic harm. As a result, the DPRK poses an increasing risk to the U.S. homeland and U.S. forces in theater, as well as to our regional allies and partners.

**Iran.** The United States is committed to the principle that Iran should not acquire a nuclear weapon. A diplomatic solution, not a military one, is the Department’s preferred approach to achieving this goal. Although Iran does not today possess a nuclear weapon, its pursuit of nuclear activities that were previously constrained by the Joint Comprehensive Plan of Action (JCPOA) continues to be of deep concern. Under the JCPOA, Iran’s enrichment of uranium was limited and all pathways to a nuclear bomb were blocked. But that is no longer the case. Iran is much closer to having enough fissile material for a nuclear bomb right now than it ever was when the JCPOA was in operation.

Iran also maintains a large and growing regional missile capability. Its proliferation of missiles and unmanned aerial systems poses a threat to U.S. forces, allies, and partners in the Middle East and beyond. Although Iran does not currently field missiles that can reach the U.S. homeland, it continues to pursue a space launch vehicle program, which could shorten the pathway to a long-range missile capability.

### **Roles of Nuclear Weapons, Nuclear Strategy, and Declaratory Policy**

The roles of U.S. nuclear weapons are to deter strategic attack, assure allies and partners, and achieve U.S. objectives if deterrence fails. The United States reaffirms a nuclear strategy that relies on nuclear weapons to deter all forms of strategic attack. In implementing this strategy, we will continue to tailor our deterrence approach to specific adversaries by holding at risk those things that their leadership values most, and relying on nuclear weapons where they are most effective in influencing an adversary’s decision calculus.

As part of the NPR process, the President determined the U.S. nuclear declaratory policy: “As long as nuclear weapons exist, the fundamental role of U.S. nuclear weapons is to deter nuclear attack on the United States, our allies, and partners. The United States would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or our allies and partners.”

This declaratory policy maintains a very high bar for the employment of nuclear weapons while also retaining ambiguity regarding the specific circumstances of any such potential use. This policy also provides a strong signal of assurance to allies and partners, and complicates an adversary’s calculus. It does not in any way increase our reliance on nuclear weapons.

In arriving at this declaratory policy, a broad range of options were considered, including “No First Use” and “Sole Purpose” formulations. The President concluded that adopting a “No First Use” or “Sole Purpose” policy would result in an unacceptable level of risk in light of the range of non-nuclear capabilities being developed and fielded by competitors that could inflict strategic-level damage to the United States and its allies and partners. Some allies and partners

are particularly vulnerable to attacks with non-nuclear means that could produce devastating effects. We retain the goal of moving toward a sole purpose declaration in the future and will work with allies and partners to identify concrete steps that would allow us to do so.

### **Nuclear Force Posture and the President's Budget**

The Department is committed to ensuring that our nuclear deterrent is safe, secure, and effective and that our extended nuclear deterrence commitments remain strong and credible. Our nuclear forces are foundational to our national security, our defense strategy, and the interests of our allies and partners.

Secretary Austin has testified that current U.S. nuclear forces have been extended far beyond their original service lives, and the tipping point, where we must simultaneously overhaul these forces, is now here. It is vital to DoD that modernization of the ground-, sea-, and air-based legs of the Triad continue on schedule, and the FY 2023 President's Budget is faithful to this objective.

The FY 2023 President's Budget, which reflects and supports the 2022 NPR, invests \$34.4 billion in Nuclear Enterprise Modernization. This request reflects full funding for recapitalization of all three legs of the nuclear Triad, as well as modernization of U.S. nuclear command, control, and communications (NC3) systems.

**Ground Leg.** The request for LGM-35A Sentinel, formerly known as the Ground-Based Strategic Deterrent, is \$3.6 billion. Sentinel, currently in the Engineering and Manufacturing Development phase, features increased capability, enhanced security, improved reliability, and lowered lifecycle sustainment costs over the Minuteman III ICBM system it will replace. The first Sentinel flight test is expected in FY 2024.

**Sea Leg.** The request is \$6.3 billion for procurement and research, development, technology, and evaluation (RDT&E) for the COLUMBIA-class SSBN, which will replace OHIO-class SSBNs beginning in October 2030. COLUMBIA class SSBNs will provide continuous sea-based strategic deterrence into the 2080s, forming the most survivable leg of the Triad. An additional \$1.7 billion is requested for the Trident II (D5) submarine-launched ballistic missile (SLBM) D5LE and D5LE2 life-extension programs. D5LE, currently in production, will be deployed on both OHIO and COLUMBIA platforms. D5LE2, which will leverage the highly reliable solid rocket motor design and couple it with modern avionics electronics, guidance and structures, will replace D5LE starting in FY 2039.

**Air Leg.** The request is \$5.0 billion to fund the procurement and development of the B-21 Raider bomber, a penetrating aircraft incorporating proven, mature technologies that represents a key component to the joint portfolio of conventional and nuclear deep-strike capabilities. The request is \$1.0 billion for development of the LRSO weapon, which will replace the 1980s-era AGM-86B Air Launched Cruise Missile (ALCM). LRSO weapons will be capable of penetrating and surviving advanced Integrated Air Defense Systems from significant stand-off ranges to hold strategic targets at risk in support of the

Air Force's nuclear deterrence operations core mission. The Department will also continue with F-35A Dual-Capable Aircraft certification, which is scheduled to take place in FY 2024.

The FY23 President's Budget reflects the President's decision to cancel the SLCM-N program. In the NPR, DoD concluded that current capabilities and others that will be fielded in the near- to mid-future provide sufficient means to deter the threat of adversary limited nuclear use in a regional conflict. These capabilities include the W76-2 low-yield SLBM warhead, currently available ALCMs, the future LRSO weapon, and upgraded fifth-generation F-35A dual-capable aircraft armed with U.S. nuclear gravity bombs. Additional factors include the estimated cost of the SLCM-N program in light of other modernization priorities, the time to develop and field the system, the operational and readiness constraints such a system would place on our attack submarines and their crews, and the limited arms control leverage that SLCM-N likely would have provided in future negotiations. For these reasons, and after evaluating recommendations from civilian and military leaders, the President, with the recommendation of Secretary Austin, directed the cancellation of the SLCM-N program.

The budget also reflects the President's decision to retire the B83-1 nuclear gravity bomb. In the near term, DoD will rely on other existing capabilities to hold at risk adversary hard and deeply buried targets. The Department, in collaboration with its interagency partners, will identify and assess options for an enduring capability to address this class of targets.

### **Allies and Partners**

Our alliances and partnerships are vital to our national security, serving as force multipliers for our military. These relationships and the security architecture they underpin are one of our nation's greatest strengths, and constitute a strategic advantage our adversaries can never hope to match. Effective assurance of allies and partners is built on a shared view of the security environment and regional deterrence challenges; a commitment to risk- and burden-sharing; modern and effective nuclear forces; robust consultation processes; and allies' confidence that the United States has the will and capability to meet its mutual defense commitments. As long as allies and partners face strategic threats, extended nuclear deterrence will remain a pillar of our regional security architectures.

Nuclear deterrence has been at the core of the NATO Alliance since its inception, and the allies have repeatedly reaffirmed that as long as nuclear weapons exist, NATO will remain a nuclear Alliance. A strong, cohesive NATO Alliance with a clear nuclear mission remains essential to deter aggression and promote peace and stability in the Euro-Atlantic Region – a stance that is even more important given Russia's aggression against Ukraine and Russian nuclear weapons rhetoric directed toward NATO member nations. We greatly value our relationships on strategic matters with both the United Kingdom (UK) and France. As separate centers of decision-making, the contributions of the UK and France to NATO's nuclear posture remain critical to the Alliance's overall deterrence and defense posture.

Our extended deterrence relationships with both Japan and the Republic of Korea are instrumental to deterring threats in East Asia, including those emanating from the DPRK. We

will continue to hold extended deterrence dialogues with the Republic of Korea, Japan, and Australia, and invigorate these vital alliances in support of U.S. national security. We look forward to taking steps to enhance and strengthen these extended deterrence relationships as we confront growing regional threats.

### **Arms Control**

The United States does not rely on deterrence alone to reduce the risks of nuclear war. Arms control and other forms of risk reduction are essential complements to deterrence. The Department recognizes the need for a comprehensive and balanced approach that places renewed value on arms control and non-proliferation, in order to strengthen stability, head off costly arms races, and reduce the salience of nuclear weapons globally.

Although current conditions for arms control are challenging given China's nuclear expansion and Russia's aggression in Ukraine, we will continue to prepare for engagement and pursue arms control where it is in our national security interest. As conditions permit, the United States will continue to prioritize realistic, pragmatic arms control and risk-reduction measures with Russia and China, as one step towards reducing the role of nuclear weapons globally and in our national security strategy. The U.S. objective is to define practical, agreed steps to advance the goals of greater transparency and predictability, enhanced stability, reduced risk of war or escalation during war, reduced global salience of nuclear weapons and, ultimately, a world without nuclear weapons.

Russia will remain a focus of U.S. efforts given the size, diversity, and continuing modernization of its nuclear arsenal. Although the U.S.-Russia Strategic Stability Dialogue is currently suspended due to Russia's continued aggression in Ukraine, we will be prepared to re-engage if and when conditions allow. Any future discussions will need to account for China's nuclear expansion in order to ensure our ability to manage the challenges posed by two major nuclear powers. Our goals in engaging with China are to ensure "guardrails" in addressing strategic risks and to lay the foundation for long-term arms control discussions.

### **Nuclear Security Enterprise**

Fielding a safe, secure, and effective nuclear deterrent well into the future requires a weapon production enterprise that is resilient, responsive, and capable of responding in a timely way to new geopolitical, technical, operational, or programmatic risks. We will achieve this goal through the ongoing partnership of DoD and the Department of Energy/National Nuclear Security Administration (DOE/NNSA), including through the Nuclear Weapons Council, improved coordination, a strengthened approach to managing risk in the nuclear enterprise, production-based resilience, more robust exploitation of science and technology advances, and workforce initiatives. DoD will continue to advocate for investments in DOE/NNSA that will sustain a safe, secure, reliable, and effective nuclear stockpile that can be certified without nuclear explosive testing and will be responsive to the threats we face.

## **Conclusion**

The National Defense Strategy sets as our core challenge the need to sustain robust deterrence across the board. Our nuclear forces, NC3, and our nuclear production infrastructure are essential to meet this challenge. In the current security environment, and given the dangers we face, we will remain focused on sustaining and modernizing these capabilities. Managing such a complex set of programs will require a disciplined approach.

The security environment also demands that we consider other, complementary steps to reduce the risks of nuclear war, to include: adopting a pragmatic approach to arms control; developing integrated approaches to tailored deterrence; managing escalation risk and increasingly complex cross-domain deterrence dynamics; and reducing our reliance on nuclear weapons in ways that enhance our security.

Our nuclear forces remain the bedrock of U.S. deterrence architecture. They are foundational to every priority established in the National Defense Strategy, and they remain indispensable to U.S. national security – as well as the security of our allies and partners. It is my honor to work with my colleagues on this panel and with the Congress on these critical issues.

Thank you, and I look forward to your questions.