



# NUCLEAR POSTURE REVIEW

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# EXECUTIVE SUMMARY

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## INTRODUCTION

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On January 27, 2017, President Donald Trump directed Secretary of Defense James Mattis to initiate a new Nuclear Posture Review (NPR). The President made clear that his first priority is to protect the United States, allies, and partners. He also emphasized both the long-term goal of eliminating nuclear weapons and the requirement that the United States have modern, flexible, and resilient nuclear capabilities that are safe and secure until such a time as nuclear weapons can prudently be eliminated from the world.

The United States remains committed to its efforts in support of the ultimate global elimination of nuclear, biological, and chemical weapons. It has reduced the nuclear stockpile by over 85 percent since the height of the Cold War and deployed no new nuclear capabilities for over two decades. Nevertheless, global threat conditions have worsened markedly since the most recent 2010 NPR, including increasingly explicit nuclear threats from potential adversaries. The United States now faces a more diverse and advanced nuclear-threat environment than ever before, with considerable dynamism in potential adversaries' development and deployment programs for nuclear weapons and delivery systems.

## AN EVOLVING AND UNCERTAIN INTERNATIONAL SECURITY ENVIRONMENT

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While the United States has continued to reduce the number and salience of nuclear weapons, others, including Russia and China, have moved in the opposite direction. They have added new types of nuclear capabilities to their arsenals, increased the salience of nuclear forces in their strategies and plans, and engaged in increasingly aggressive behavior, including in outer space and cyber space. North Korea continues its illicit pursuit of nuclear weapons and missile capabilities in direct violation of United Nations (U.N.) Security Council resolutions. Iran has agreed to constraints on its nuclear program in the Joint Comprehensive Plan of Action (JCPOA). Nevertheless, it retains the technological capability and much of the capacity necessary to develop a nuclear weapon within one year of a decision to do so.

There now exists an unprecedented range and mix of threats, including major conventional, chemical, biological, nuclear, space, and cyber threats, and violent non-state actors. These developments have produced increased uncertainty and risk.

This rapid deterioration of the threat environment since the 2010 NPR must now shape our thinking as we formulate policy and strategy, and initiate the sustainment and replacement of U.S. nuclear forces. This 2018 NPR assesses previous nuclear policies and requirements that were established amid a more benign nuclear environment and more amicable Great Power relations. It focuses on identifying the nuclear policies, strategy, and corresponding capabilities needed to protect America in the deteriorating threat environment that confronts the United States, allies, and partners. It is strategy driven and provides guidance for the nuclear force posture and policy requirements needed now and in the future.

The United States does not wish to regard either Russia or China as an adversary and seeks stable relations with both. We have long sought a dialogue with China to enhance our understanding of our respective nuclear policies, doctrine, and capabilities; to improve transparency; and to help manage the risks of miscalculation and misperception. We hope that China will share this interest and that meaningful dialogue can commence. The United States and Russia have in the past maintained strategic dialogues to manage nuclear competition and nuclear risks. Given Russian actions, including its occupation of Crimea, this constructive engagement has declined substantially. We look forward to conditions that would once again allow for transparent and constructive engagement with Russia.

Nevertheless, this review candidly addresses the challenges posed by Russian, Chinese, and other states' strategic policies, programs, and capabilities, particularly nuclear. It presents the flexible, adaptable, and resilient U.S. nuclear capabilities now required to protect the United States, allies, and partners, and promote strategic stability.

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## THE VALUE OF U.S. NUCLEAR CAPABILITIES

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The fundamental reasons why U.S. nuclear capabilities and deterrence strategies are necessary for U.S., allied, and partner security are readily apparent. U.S. nuclear capabilities make essential contributions to the deterrence of nuclear and non-nuclear aggression. The deterrence effects they provide are unique and essential to preventing adversary nuclear attacks, which is the highest priority of the United States.

U.S. nuclear capabilities cannot prevent all conflict, and should not be expected to do so. But, they contribute uniquely to the deterrence of both nuclear and non-nuclear aggression. They are essential for these purposes and will be so for the foreseeable future. Non-nuclear forces also play essential deterrence roles, but do not provide comparable deterrence effects--as is reflected by past, periodic, and catastrophic failures of conventional deterrence to prevent Great Power war before the advent of nuclear deterrence. In addition, conventional forces alone are inadequate to assure many allies

who rightly place enormous value on U.S. extended nuclear deterrence for their security, which correspondingly is also key to non-proliferation.

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## **U.S. NUCLEAR CAPABILITIES AND ENDURING NATIONAL OBJECTIVES**

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The highest U.S. nuclear policy and strategy priority is to deter potential adversaries from nuclear attack of any scale. However, deterring nuclear attack is not the sole purpose of nuclear weapons. Given the diverse threats and profound uncertainties of the current and future threat environment, U.S. nuclear forces play the following critical roles in U.S. national security strategy. They contribute to the:

- › Deterrence of nuclear and non-nuclear attack;
- › Assurance of allies and partners;
- › Achievement of U.S. objectives if deterrence fails; and
- › Capacity to hedge against an uncertain future.

These roles are complementary and interrelated, and the adequacy of U.S. nuclear forces must be assessed against each role and the strategy designed to fulfill it. Preventing proliferation and denying terrorists access to finished weapons, material, or expertise are also key considerations in the elaboration of U.S. nuclear policy and requirements. These multiple roles and objectives constitute the guiding pillars for U.S. nuclear policy and requirements.

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## **DETERRENCE OF NUCLEAR AND NON-NUCLEAR ATTACK**

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Effective U.S. deterrence of nuclear attack and non-nuclear strategic attack requires ensuring that potential adversaries do not miscalculate regarding the consequences of nuclear first use, either regionally or against the United States itself. They must understand that there are no possible benefits from non-nuclear aggression or limited nuclear escalation. Correcting any such misperceptions is now critical to maintaining strategic stability in Europe and Asia.

Potential adversaries must recognize that across the emerging range of threats and contexts: 1) the United States is able to identify them and hold them accountable for acts of aggression, including new forms of aggression; 2) we will defeat non-nuclear strategic attacks; and, 3) any nuclear escalation will fail to achieve their objectives, and will instead result in unacceptable consequences for them.

There is no “one size fits all” for deterrence. Consequently, the United States will apply a tailored and flexible approach to effectively deter across a spectrum of adversaries,

threats, and contexts. Tailored deterrence strategies communicate to different potential adversaries that their aggression would carry unacceptable risks and intolerable costs according to their particular calculations of risk and cost.

U.S. nuclear capabilities, and nuclear command, control, and communications (NC3), must be increasingly flexible to tailor deterrence strategies across a range of potential adversaries and threats, and enable adjustments over time. Accordingly, the United States will maintain the range of flexible nuclear capabilities needed to ensure that nuclear or non-nuclear aggression against the United States, allies, and partners will fail to achieve its objectives and carry with it the credible risk of intolerable consequences for potential adversaries now and in the future.

To do so, the United States will sustain and replace its nuclear capabilities, modernize NC3, and strengthen the integration of nuclear and non-nuclear military planning. Combatant Commands and Service components will be organized and resourced for this mission, and will plan, train, and exercise to integrate U.S. nuclear and non-nuclear forces to operate in the face of adversary nuclear threats and employment. The United States will coordinate integration activities with allies facing nuclear threats and examine opportunities for additional allied burden sharing of the nuclear deterrence mission.

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## **ASSURANCE OF ALLIES AND PARTNERS**

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The United States has formal extended deterrence commitments that assure European, Asian, and Pacific allies. Assurance is a common goal based on collaboration with allies and partners to deter or defeat the threats we face. No country should doubt the strength of our extended deterrence commitments or the strength of U.S. and allied capabilities to deter, and if necessary defeat, any potential adversary's nuclear or non-nuclear aggression. In many cases, effectively assuring allies and partners depends on their confidence in the credibility of U.S. extended nuclear deterrence, which enables most to eschew possession of nuclear weapons, thereby contributing to U.S. non-proliferation goals.

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## **ACHIEVE U.S. OBJECTIVES SHOULD DETERRENCE FAIL**

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The United States would only consider the employment of nuclear weapons in extreme circumstances to defend the vital interests of the United States, its allies, and partners. Nevertheless, if deterrence fails, the United States will strive to end any conflict at the lowest level of damage possible and on the best achievable terms for the United States, allies, and partners. U.S. nuclear policy for decades has consistently included this objective of limiting damage if deterrence fails.

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## HEDGE AGAINST AN UNCERTAIN FUTURE

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The United States will continue efforts to create a more cooperative and benign security environment, but must also hedge against prospective and unanticipated risks. Hedging strategies help reduce risk and avoid threats that otherwise may emerge over time, including geopolitical, technological, operational, and programmatic. They also contribute to deterrence and can help reduce potential adversaries' confidence that they can gain advantage through a "break out" or expansion of nuclear capabilities. Given the increasing prominence of nuclear weapons in potential adversaries' defense policies and strategies, and the uncertainties of the future threat environment, U.S. nuclear capabilities and the ability to quickly modify those capabilities can be essential to mitigate or overcome risk, including the unexpected.

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## U.S. NUCLEAR ENTERPRISE PERSONNEL

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Effective deterrence would be impossible without the thousands of members of the United States Armed Forces and civilian personnel who dedicate their professional lives to the deterrence of war and protecting the Nation. These exceptional men and women are held to the most rigorous standards and make the most vital contribution to U.S. nuclear capabilities and deterrence.

The Service members and civilians involved in the nuclear deterrence mission do so with little public recognition or fanfare. Theirs is an unsung duty of the utmost importance. They deserve the support of the American people for the safety, security, and stability they provide the Nation, and indeed the world. The Service reforms we have accordingly implemented were long overdue, and the Department of Defense remains fully committed to properly supporting the Service members who protect the United States against nuclear threats.

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## THE TRIAD: PRESENT AND FUTURE

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Today's strategic nuclear triad, largely deployed in the 1980s or earlier, consists of: submarines (SSBNs) armed with submarine-launched ballistic missiles (SLBM); land-based intercontinental ballistic missiles (ICBM); and strategic bombers carrying gravity bombs and air-launched cruise missiles (ALCMs). The triad and non-strategic nuclear forces, with supporting NC3, provides diversity and flexibility as needed to tailor U.S. strategies for deterrence, assurance, achieving objectives should deterrence fail, and hedging.



The increasing need for this diversity and flexibility, in turn, is one of the primary reasons why sustaining and replacing the nuclear triad and non-strategic nuclear capabilities, and modernizing NC3, is necessary now. The triad's synergy and overlapping attributes help ensure the enduring survivability of our deterrence capabilities against attack and our capacity to hold at risk a range of adversary targets throughout a crisis or conflict. Eliminating any leg of the triad would greatly ease adversary attack planning and allow an adversary to concentrate resources and attention on defeating the remaining two legs. Therefore, we will sustain our legacy triad systems until the planned replacement programs are deployed.

The United States currently operates 14 OHIO-class SSBNs and will continue to take the steps needed to ensure that OHIO SSBNs remain operationally effective and survivable until replaced by the COLUMBIA-class SSBN. The COLUMBIA program will deliver a minimum of 12 SSBNs to replace the current OHIO fleet and is designed to provide required deterrence capabilities for decades.

The ICBM force consists of 400 single-warhead Minuteman III missiles deployed in underground silos and dispersed across several states. The United States has initiated the Ground-Based Strategic Deterrent (GBSD) program to begin the replacement of Minuteman III in 2029. The GBSD program will also modernize the 450 ICBM launch facilities that will support the fielding of 400 ICBMs.

The bomber leg of the triad consists of 46 nuclear-capable B-52H and 20 nuclear-capable B-2A "stealth" strategic bombers. The United States has initiated a program to develop and deploy the next-generation bomber, the B-21 Raider. It will first supplement, and eventually replace elements of the conventional and nuclear-capable bomber force beginning in the mid-2020s.

The B83-1 and B61-11 gravity bombs can hold at risk a variety of protected targets. As a result, both will be retained in the stockpile, at least until there is sufficient confidence in the B61-12 gravity bomb that will be available in 2020.

Beginning in 1982, B-52H bombers were equipped with ALCMs. Armed with ALCMs, the B-52H can stay outside adversary air defenses and remain effective. The ALCM, however, is now more than 25 years past its design life and faces continuously improving adversary air defense systems. The Long-Range Stand-Off (LRSO) cruise missile replacement program will maintain into the future the bomber force capability to deliver stand-off weapons that can penetrate and survive advanced integrated air defense systems, thus supporting the long-term effectiveness of the bomber leg.

The current non-strategic nuclear force consists exclusively of a relatively small number of B61 gravity bombs carried by F-15E and allied dual capable aircraft (DCA). The United States is incorporating nuclear capability onto the forward-deployable, nuclear-capable F-35 as a replacement for the current aging DCA. In conjunction with the

ongoing life extension program for the B61 bomb, it will be a key contributor to continued regional deterrence stability and the assurance of allies.

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### **FLEXIBLE AND SECURE NUCLEAR CAPABILITIES: AN AFFORDABLE PRIORITY**

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Throughout past decades, senior U.S. officials have emphasized that the highest priority of the Department of Defense is deterring nuclear attack and maintaining the nuclear capabilities necessary to do so. While cost estimates for the program to sustain and replace U.S. nuclear capabilities vary, even the highest of these projections place the highpoint of the future cost at approximately 6.4 percent of the current DoD budget. Maintaining and operating our current aging nuclear forces now requires between two and three percent of the DoD budget. The replacement program to rebuild the triad for decades of service will peak for several years at only approximately four percent beyond the ongoing two to three percent needed for maintenance and operations. This 6.4 percent of the current DoD budget required for the long-term replacement program represents less than one percent of the overall federal budget. This level of spending to replace U.S. nuclear capabilities compares favorably to the 10.6 percent of the DoD budget required during the last such investment period in the 1980s, which at the time was almost 3.7 percent of the federal budget, and the 17.1 percent of the DoD budget required in the early 1960s.

Given the criticality of effective U.S. nuclear deterrence to the safety of the American people, allies and partners there is no doubt that the sustainment and replacement program should be regarded as both necessary and affordable.

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### **ENHANCING DETERRENCE WITH NON-STRATEGIC NUCLEAR CAPABILITIES**

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Existing elements of the nuclear force replacement program predate the dramatic deterioration of the strategic environment. To meet the emerging requirements of U.S. strategy, the United States will now pursue select supplements to the replacement program to enhance the flexibility and responsiveness of U.S. nuclear forces. It is a reflection of the versatility and flexibility of the U.S. triad that only modest supplements are now required in this much more challenging threat environment.

These supplements will enhance deterrence by denying potential adversaries any mistaken confidence that limited nuclear employment can provide a useful advantage over the United States and its allies. Russia's belief that limited nuclear first use, potentially including low-yield weapons, can provide such an advantage is based, in part, on Moscow's perception that its greater number and variety of non-strategic nuclear

systems provide a coercive advantage in crises and at lower levels of conflict. Recent Russian statements on this evolving nuclear weapons doctrine appear to lower the threshold for Moscow’s first-use of nuclear weapons. Russia demonstrates its perception of the advantage these systems provide through numerous exercises and statements. Correcting this mistaken Russian perception is a strategic imperative.

To address these types of challenges and preserve deterrence stability, the United States will enhance the flexibility and range of its tailored deterrence options. To be clear, this is not intended to, nor does it enable, “nuclear war-fighting.” Expanding flexible U.S. nuclear options now, to include low-yield options, is important for the preservation of credible deterrence against regional aggression. It will raise the nuclear threshold and help ensure that potential adversaries perceive no possible advantage in limited nuclear escalation, making nuclear employment less likely.

Consequently, the United States will maintain, and enhance as necessary, the capability to forward deploy nuclear bombers and DCA around the world. We are committed to upgrading DCA with the nuclear-capable F-35 aircraft. We will work with NATO to best ensure—and improve where needed—the readiness, survivability, and operational effectiveness of DCA based in Europe.

Additionally, in the near-term, the United States will modify a small number of existing SLBM warheads to provide a low-yield option, and in the longer term, pursue a modern nuclear-armed sea-launched cruise missile (SLCM). Unlike DCA, a low-yield SLBM warhead and SLCM will not require or rely on host nation support to provide deterrent effect. They will provide additional diversity in platforms, range, and survivability, and a valuable hedge against future nuclear “break out” scenarios.

DoD and National Nuclear Security Administration (NNSA) will develop for deployment a low-yield SLBM warhead to ensure a prompt response option that is able to penetrate adversary defenses. This is a comparatively low-cost and near term modification to an existing capability that will help counter any mistaken perception of an exploitable “gap” in U.S. regional deterrence capabilities.

In addition to this near-term step, for the longer term the United States will pursue a nuclear-armed SLCM, leveraging existing technologies to help ensure its cost effectiveness. SLCM will provide a needed non-strategic regional presence, an assured response capability. It also will provide an arms control compliant response to Russia’s non-compliance with the Intermediate-range Nuclear Forces Treaty, its non-strategic nuclear arsenal, and its other destabilizing behaviors.

In the 2010 NPR, the United States announced the retirement of its previous nuclear-armed SLCM, which for decades had contributed to deterrence and the assurance of allies, particularly in Asia. We will immediately begin efforts to restore this capability

by initiating a capability study leading to an Analysis of Alternatives (AoA) for the rapid development of a modern SLCM.

These supplements to the planned nuclear force replacement program are prudent options for enhancing the flexibility and diversity of U.S. nuclear capabilities. They are compliant with all treaties and agreements, and together, they will: provide a diverse set of characteristics enhancing our ability to tailor deterrence and assurance; expand the range of credible U.S. options for responding to nuclear or non-nuclear strategic attack; and, enhance deterrence by signaling to potential adversaries that their limited nuclear escalation offers no exploitable advantage.

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## **NUCLEAR COMMAND, CONTROL, AND COMMUNICATIONS MODERNIZATION**

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The United States must have an NC3 system that provides control of U.S. nuclear forces at all times, even under the enormous stress of a nuclear attack. NC3 capabilities must assure the integrity of transmitted information and possess the resiliency and survivability necessary to reliably overcome the effects of nuclear attack. During peacetime and crisis, the NC3 system performs five crucial functions: detection, warning, and attack characterization; adaptive nuclear planning; decision-making conferencing; receiving Presidential orders; and enabling the management and direction of forces.

Today's NC3 system is a legacy of the Cold War, last comprehensively updated almost three decades ago. It includes interconnected elements composed of warning satellites and radars; communications satellites, aircraft, and ground stations; fixed and mobile command posts; and the control centers for nuclear systems.

While once state-of-the-art, the NC3 system is now subject to challenges from both aging system components and new, growing 21st century threats. Of particular concern are expanding threats in space and cyber space, adversary strategies of limited nuclear escalation, and the broad diffusion within DoD of authority and responsibility for governance of the NC3 system, a function which, by its nature, must be integrated.

In light of the critical need to ensure our NC3 system remains survivable and effective, the United States will pursue a series of initiatives. This includes: strengthening protection against cyber threats, strengthening protection against space-based threats, enhancing integrated tactical warning and attack assessment, improving command post and communication links, advancing decision support technology, integrating planning and operations, and reforming governance of the overall NC3 system.

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## NUCLEAR WEAPONS INFRASTRUCTURE

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An effective, responsive, and resilient nuclear weapons infrastructure is essential to the U.S. capacity to adapt flexibly to shifting requirements. Such an infrastructure offers tangible evidence to both allies and potential adversaries of U.S. nuclear weapons capabilities and thus contributes to deterrence, assurance, and hedging against adverse developments. It also discourages adversary interest in arms competition.

DoD generates military requirements for the nuclear warheads to be carried on delivery platforms. NNSA oversees the research, development, test, assessment, and production programs that respond to DoD warhead requirements.

Over the past several decades, the U.S. nuclear weapons infrastructure has suffered the effects of age and underfunding. Over half of NNSA's infrastructure is over 40 years old, and a quarter dates back to the Manhattan Project era. All previous NPRs highlighted the need to maintain a modern nuclear weapons infrastructure, but the United States has fallen short in sustaining a modern infrastructure that is resilient and has the capacity to respond to unforeseen developments. There now is no margin for further delay in recapitalizing the physical infrastructure needed to produce strategic materials and components for U.S. nuclear weapons. Just as our nuclear forces are an affordable priority, so is a resilient and effective nuclear weapons infrastructure, without which our nuclear deterrent cannot exist.

The U.S. must have the ability to maintain and certify a safe, secure, and effective nuclear arsenal. Synchronized with DoD replacement programs, the United States will sustain and deliver on-time the warheads needed to support both strategic and non-strategic nuclear capabilities by:

- › Completing the W76-1 Life Extension Program (LEP) by Fiscal Year (FY) 2019;
- › Completing the B61-12 LEP by FY2024;
- › Completing the W88 alterations by FY2024;
- › Synchronizing NNSA's W80-4 life extension, with DoD's LRSO program and completing the W80-4 LEP by FY2031;
- › Advancing the W78 warhead replacement one year to FY19 to support fielding on GBSD by 2030 and investigate the feasibility of fielding the nuclear explosive package in a Navy flight vehicle;
- › Sustaining the B83-1 past its currently planned retirement date until a suitable replacement is identified; and,

- › Exploring future ballistic missile warhead requirements based on the threats and vulnerabilities of potential adversaries, including the possibility of common reentry systems between Air Force and Navy systems.

The United States will pursue initiatives to ensure the necessary capability, capacity, and responsiveness of the nuclear weapons infrastructure and the needed skills of the workforce, including the following:

- › Pursue a joint DoD and Department of Energy advanced technology development capability to ensure that efforts are appropriately integrated to meet DoD needs.
- › Provide the enduring capability and capacity to produce plutonium pits at a rate of no fewer than 80 pits per year by 2030. A delay in this would result in the need for a higher rate of pit production at higher cost.
- › Ensure that current plans to reconstitute the U.S. capability to produce lithium compounds are sufficient to meet military requirements.
- › Fully fund the Uranium Processing Facility and ensure availability of sufficient low enriched uranium to meet military requirements.
- › Ensure the necessary reactor capacity to produce an adequate supply of tritium to meet military requirements.
- › Ensure continuity in the U.S. capability to develop and manufacture secure, trusted strategic radiation-hardened microelectronic systems beyond 2025 to support stockpile modernization.
- › Rapidly pursue the Stockpile Responsiveness Program established by Congress to expand opportunities for young scientists and engineers to advance warhead design, development, and production skills.
- › Develop an NNSA roadmap that sizes production capacity to modernization and hedging requirements.
- › Retain confidence in nuclear gravity bombs needed to meet deterrence needs.
- › Maintain and enhance the computational, experimental, and testing capabilities needed to annually assess nuclear weapons.

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## COUNTERING NUCLEAR TERRORISM

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The U.S. strategy to combat nuclear terrorism encompasses a wide range of activities that comprise a defense-in-depth against current and emerging dangers. Under this multilayered approach, the United States strives to prevent terrorists from obtaining nuclear weapons or weapons-usable materials, technology, and expertise; counter their efforts to acquire, transfer, or employ these assets; and respond to nuclear incidents, by

locating and disabling a nuclear device or managing the consequences of a nuclear detonation.

For effective deterrence, the United States will hold fully accountable any state, terrorist group, or other non-state actor that supports or enables terrorist efforts to obtain or employ nuclear devices. Although the role of U.S. nuclear weapons in countering nuclear terrorism is limited, our adversaries must understand that a terrorist nuclear attack against the United States or its allies and partners would qualify as an “extreme circumstance” under which the United States could consider the ultimate form of retaliation.

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## NON-PROLIFERATION AND ARMS CONTROL

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Effective nuclear non-proliferation and arms control measures can support U.S., allied, and partner security by controlling the spread of nuclear materials and technology; placing limits on the production, stockpiling and deployment of nuclear weapons; decreasing misperception and miscalculation; and avoiding destabilizing nuclear arms competition. The United States will continue its efforts to: 1) minimize the number of nuclear weapons states, including by maintaining credible U.S. extended nuclear deterrence and assurance; 2) deny terrorist organizations access to nuclear weapons and materials; 3) strictly control weapons-usable material, related technology, and expertise; and 4) seek arms control agreements that enhance security, and are verifiable and enforceable.

The Nuclear Non-Proliferation Treaty (NPT) is a cornerstone of the nuclear non-proliferation regime. It plays a positive role in building consensus for non-proliferation and enhances international efforts to impose costs on those that would pursue nuclear weapons outside the Treaty.

However, nuclear non-proliferation today faces acute challenges. Most significantly, North Korea is pursuing a nuclear path in direct contravention of the NPT and in direct opposition to numerous U.N. Security Council resolutions. Beyond North Korea looms the challenge of Iran. Although the JCPOA may constrain Tehran’s nuclear weapons program, there is little doubt Iran could achieve a nuclear weapon capability rapidly if it decides to do so.

In continuing support of nuclear non-proliferation, the United States will work to increase transparency and predictability, where appropriate, to avoid potential miscalculation among nuclear weapons states and other possessor states through strategic dialogues, risk-reduction communications channels, and the sharing of best practices related to nuclear weapons safety and security.

Although the United States will not seek ratification of the Comprehensive Nuclear Test Ban Treaty, it will continue to support the Comprehensive Nuclear Test Ban Treaty Organization Preparatory Committee as well as the International Monitoring System and the International Data Center. The United States will not resume nuclear explosive testing unless necessary to ensure the safety and effectiveness of the U.S. nuclear arsenal, and calls on all states possessing nuclear weapons to declare or maintain a moratorium on nuclear testing.

Arms control can contribute to U.S. security by helping to manage strategic competition among states. It can foster transparency, understanding, and predictability in adversary relations, thereby reducing the risk of misunderstanding and miscalculation.

The United States is committed to arms control efforts that advance U.S., allied, and partner security; are verifiable and enforceable; and include partners that comply responsibly with their obligations. Such arms control efforts can contribute to the U.S. capability to sustain strategic stability. Further progress is difficult to envision, however, in an environment that is characterized by continuing significant non-compliance with existing arms control obligations and commitments, and by potential adversaries who seek to change borders and overturn existing norms.

In this regard, Russia continues to violate a series of arms control treaties and commitments. In the nuclear context, the most significant Russian violation involves a system banned by the Intermediate-range Nuclear Forces Treaty. In a broader context, Russia is either rejecting or avoiding its obligations and commitments under numerous agreements, and has rebuffed U.S. efforts to follow the New Strategic Arms Reduction Treaty (START) with another round of negotiated reductions and to pursue reductions in non-strategic nuclear forces.

Nevertheless, New START is in effect through February 2021, and with mutual agreement may be extended for up to five years, to 2026. The United States already has met the Treaty's central limits which go into force on February 5, 2018, and will continue to implement the New START Treaty.

The United States remains willing to engage in a prudent arms control agenda. We are prepared to consider arms control opportunities that return parties to compliance, predictability, and transparency, and remain receptive to future arms control negotiations if conditions permit and the potential outcome improves the security of the United States, its allies, and partners.