

Report on the Nuclear Employment Strategy of the United States – 2020

Specified in Section 491(a) of Title 10 U.S.C.

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Purpose

This report on the Nuclear Employment Strategy of the United States is submitted in accordance with section 491(a) of title 10, U.S. Code, which states:

By not later than 60 days before the date on which the President implements a nuclear employment strategy of the United States that differs from the nuclear employment strategy of the United States then in force, the President shall submit to Congress a report setting forth the following:

- (1) A description of the modifications to the nuclear employment strategy, plans, and options of the United States made by the strategy so issued.
- (2) An assessment of effects of such modification for the nuclear posture of the United States.
- (3) The implication of such changes on the flexibility and resilience of the strategic forces of the United States and the ability of such forces to support the goals of the United States with respect to nuclear deterrence, extended deterrence, assurance, and defense.
- (4) The extent to which such modifications include an increased reliance on conventional or non-nuclear strike capabilities or missile defenses of the United States.

In April 2019, the President issued nuclear weapons employment guidance. This report is provided pursuant to section 491 as the Department of Defense (DoD) implements this new employment strategy by updating DoD military guidance and plans, a process that has been ongoing since 2019, and is scheduled to be completed in 2022.

Introduction

The President's April 2019 nuclear weapons employment guidance, as implemented by the Secretary of Defense's Nuclear Weapons Employment Planning and Posture Guidance, guides the planning for employment of nuclear weapons consistent with national policy. The revised Presidential and Secretary of Defense guidance reflects continuity with previous guidance, as it accounts for contemporary nuclear threats and great power competition. The guidance is intended to strengthen the security of the United States and its allies and partners through the development of tailored nuclear deterrence strategies supported by flexible capabilities.

The requirements for effective nuclear deterrence vary given the need to address different potential adversaries under very different circumstances. Deterrence rests on a perceived ability to deny an adversary the objectives it seeks from an attack and the capability to inflict intolerable costs under any circumstances. However, the United States cannot rely on adversaries to perceive threats of large-scale nuclear responses as credible in all situations. Therefore, to strengthen the credibility of U.S. nuclear deterrence and extended deterrence, the United States will continue to field a range of nuclear and non-nuclear capabilities that provide U.S. leadership with options that can be tailored to deter potential adversaries, assure allies and partners, achieve U.S. objectives should deterrence fail, and hedge against an uncertain future.

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, and its allies, and partners. One of the means of achieving this is to respond in a manner intended to restore deterrence. To this end, elements of U.S. nuclear forces are intended to provide limited, flexible, and graduated response options. Such options demonstrate the resolve, and the restraint, necessary for changing an adversary's decision calculus regarding further escalation.

2018 Nuclear Posture Review

In 2017, President Trump directed the Secretary of Defense to initiate a new Nuclear Posture Review (NPR). DoD completed the NPR in 2018 and has since been implementing it. The purpose of the 2018 NPR was to reassess U.S. security requirements in the new strategic environment that had developed since the 2010 NPR was published.

The 2018 NPR identifies four key roles that nuclear weapons play in U.S. national security strategy:

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

In implementing the 2018 NPR, the DoD, the Department of Energy (DOE) and the Department of State (State) are focused on ensuring that U.S. nuclear forces can fulfill these roles, both today and in the future.

Deterrence Strategy

The 2018 NPR articulated a U.S. nuclear deterrence strategy consistent with previous deterrence strategies, adjusted to account for developments in the threat environment since the 2010 NPR. These developments include increased prominence of nuclear weapons in the military strategies of Russia, China, and rogue States to secure coercive and military advantage against the United States, and its allies, and partners.

The Strategic Environment

Changes in the strategic environment since the publication of the 2010 NPR demonstrate that nuclear-armed potential adversaries chose not to follow the U.S. lead in reducing the role of nuclear weapons in their national security strategies. They have instead chosen to emphasize the role of nuclear weapons and, for more than a decade, they have increased the size of their nuclear arsenals, modernized their existing capabilities, and created and fielded new capabilities.

The increasing prominence of nuclear weapons in the national security strategies of potential adversaries is taking place in a strategic environment that, since 2010, has become significantly more threatening and less stable. Russia, China, North Korea, and Iran all have undertaken aggressive actions to expand or reinforce their influence. Of particular concern are aggressive Russian and Chinese actions (e.g. Russian occupation of Crimea, military intervention in eastern Ukraine, and

violation of the Intermediate Range Nuclear Forces (INF) Treaty; Chinese militarization of the South China Sea, renewed assertiveness vis-à-vis Taiwan, and border conflict with India).

Rather than reducing the role of nuclear weapons, Russia and China are developing, testing, and procuring nuclear weapons and delivery systems to support their efforts to upset the international order, including claiming disputed territories and forcefully occupying neighboring lands. Russia, for instance, is expected to grow the size and increase the capabilities of its nuclear arsenal significantly over the next decade. This growth is driven primarily by Russia modernizing and expanding its non-strategic nuclear weapons – providing them greater accuracy, longer ranges, and lower yields to suit their role in coercive nuclear strategies and nuclear warfighting. In addition, Russia is pursuing a number of novel nuclear delivery systems of strategic range that are not covered under the New START Treaty and have no U.S. counterpart.

China, meanwhile, continues its policy of non-transparency regarding its nuclear arsenal and doctrine, and is likely to at least double the size of its nuclear stockpile by 2030. It may not stop there. Its activities in Asia have caused considerable alarm among U.S. allies and partners. Despite a global economic downturn, China continues to increase its defense spending and one of its top priorities is modernizing and significantly expanding its nuclear forces. China will soon field a full triad of delivery systems (land-, air-, and sea-based) that can range U.S. regional allies and partners, and the U.S. homeland. The United States has significant questions and concerns regarding the evolution of Chinese nuclear doctrine, especially regarding its “No First Use” policy, as well as the rapid expansion of its nuclear arsenal and its exploration of low-yield nuclear warheads. China’s policy of opacity and consistent refusal to engage in serious dialogue concerning nuclear matters, nuclear risk reduction, and arms control increases the dangers and potential consequences of misperception and miscalculation in crisis or conflict.

The rogue states of North Korea and Iran continue to pose a security threat to the United States and its allies and partners. Although the United States still aspires to a negotiated elimination of North Korea’s nuclear arsenal, North Korea continues to expand and advance its nuclear capabilities. The United States is carefully monitoring North Korea’s missile development, nuclear advances, and proliferation activities. In addition, Iran is gaining valuable knowledge with its space-launch program that could be applied towards developing an intercontinental ballistic missile (ICBM). Iran’s non-compliance with its nuclear non-proliferation obligations under the Joint Comprehensive Plan of Action (JCPOA) is especially troubling.

Although the United States aspires to a cooperative international order that allows for nuclear disarmament, these international security developments, when combined with the unpredictable nature of future threat developments and aging U.S. nuclear systems, demonstrate the prudence and necessity of the U.S. nuclear modernization program. Since international affairs can alter deterrence and assurance requirements faster than the U.S. defense industrial base can reasonably be expected to respond to shifting requirements, it is of paramount importance that U.S. nuclear forces; the nuclear command, control, and communication systems (NC3); and stockpile infrastructure be flexible, responsive, and resilient.

Until nuclear weapons can be prudently eliminated from the world, the United States will maintain safe, secure, and effective nuclear forces that deter potential adversaries, assure allies and partners, enable us to achieve our objectives if deterrence fails, and hedge against future uncertainties.

Nuclear weapons alone, no matter how capable, however, cannot have the necessary deterrence and assurance effects without a realistic and credible supporting strategy, tailored to potential adversaries.

Tailored Strategies and Flexible Capabilities

Through the Cold War and the years immediately thereafter, the United States was able to focus its nuclear weapons policy, strategy, and force development on the Union of Soviet Socialist Republics (USSR) and later the Russian Federation. However, the post-Cold War strategic environment became more complex as Russia began modernizing and expanding its nuclear capabilities; China declared their aspirations to “basically” complete military modernization by 2035 and become a “world class” military by 2049 – armed with a nuclear triad and a global fighting force; and North Korea pursued and acquired a nuclear capability. As a result, tailored deterrence strategies – unique to each potential adversary – are now necessary to reduce the chance of misperception while clearly and credibly communicating U.S. intentions and capabilities.

The 2018 NPR states: “The requirements for effective deterrence vary given the need to address the unique perceptions, goals, interests, strengths, strategies, and vulnerabilities of different potential adversaries. The deterrence strategy effective against one potential adversary may not deter another. Consequently, the United States will apply a tailored approach to effectively deter across a spectrum of adversaries, threats, and contexts.” In short, U.S. strategies and capabilities need to convey the costs of aggression to the right officials, at the right time, through the right communication channels, and in a credible and convincing manner.

The nuclear forces of the United States must be sufficiently flexible to deter a large spectrum of nuclear scenarios credibly, including an adversary’s limited employment of nuclear weapons to secure advantage in a crisis or conflict. To meet these requirements, the United States will field nuclear and non-nuclear capabilities that provide U.S. leadership a range of tailored response options to deter escalation and accomplish U.S. objectives if deterrence fails. U.S. nuclear forces are designed, sized, and postured in such a way that no adversary should ever contemplate a successful disarming first strike or limited nuclear employment.

Elements of U.S. nuclear forces, currently in the field or under development, provide flexible, credible, limited, and graduated response options so U.S. leadership has choices beyond inaction or large-scale responses. Such options reduce the risk of a potential adversary’s misperception of an exploitable gap between stated U.S. objectives and its perceived capabilities.

Limited and graduated U.S. response options provide a more credible deterrent to limited attack against the United States and our allies and partners than relying primarily on the threat of large-scale nuclear responses. Flexible and graduated options that raise an adversary’s nuclear threshold have been a continuous part of U.S. deterrence strategy for decades. Such options do not increase risk and do not lower the U.S. nuclear threshold. Rather, such options, regarded as credible responses by potential adversaries, make their resort to nuclear weapons less likely, not more likely.

Capabilities designed to provide tailored, limited, and graduated response options do not work in isolation. Preserving large-scale response options further enhances deterrence by raising doubt in an adversary's mind of its ability to predict or control the consequences of a U.S. response to a nuclear or a non-nuclear strategic attack. A flexible nuclear force therefore strengthens deterrence and reinforces the U.S. commitment to its allies and partners by demonstrating to adversaries there is no scenario for nuclear use to which the United States cannot respond effectively, and there exists no advantage an adversary could secure that would outweigh the costs of a U.S. nuclear response.

Declaratory Policy and Posture Guidance

Declaratory Policy

The 2018 NPR did not fundamentally alter the declaratory policy articulated in the 2010 NPR, but rather clarified it. The 2018 NPR states:

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. Extreme circumstances could include significant non-nuclear strategic attacks. Significant non-nuclear strategic attacks include, but are not limited to, attacks on the U.S., allied, or partner civilian population or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities.

The United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear non-proliferation obligations.

Given the potential of significant non-nuclear strategic attacks, the United States reserves the right to make any adjustment in the assurance that may be warranted by the evolution and proliferation of non-nuclear strategic attack technologies and U.S. capabilities to counter that threat.

The President of the United States is the sole authority who can authorize the employment of nuclear weapons. DoD takes numerous steps to ensure U.S. nuclear forces are always under positive control and responsive to Presidential direction. DoD has established a number of means to provide senior leadership with the necessary information to support an informed decision regarding the employment of nuclear weapons. Any U.S. decision to employ nuclear weapons would follow a deliberative process.

Alert Levels

The day-to-day posture and alert levels of U.S. nuclear forces must ensure, and must be seen to ensure, that the United States has credible and effective response options available even in the wake of a large-scale nuclear attack on the United States. Retaining portions of U.S. nuclear forces on alert helps to deter a potential adversary from attempting a disarming nuclear first strike against the United States.

To strengthen deterrence, the United States maintains the capability to launch nuclear forces under conditions of an ongoing nuclear attack. However, owing to the mutually-supporting elements of the nuclear Triad, U.S. nuclear forces do not rely on launch-under-attack to ensure a credible response. Rather, U.S. nuclear forces are postured to withstand an initial attack and provide maximum decision-making time for a President to gather information and respond in a time, place, and manner of our choosing.

It is simply incorrect to say U.S. nuclear weapons are on “hair-trigger” alert; they are not. The U.S. alert system prioritizes surety over speed. The United States rejects launch-on-warning and has set up a system of survivable and redundant sensors to detect and characterize potential attacks confidently. These capabilities enable policies and procedures that ensure the President has sufficient time and can properly characterize, understand, and if desired, respond to an attack.

The United States has spent decades refining and practicing launch procedures to minimize ambiguity and maximize positive control, and will continue the practice of not targeting any country on a day-to-day basis. The United States will continue to rely on open-ocean targeting so that in the highly unlikely event of any accidental or unauthorized launch of a U.S. nuclear weapon, the weapon would land in the open ocean.

Further moves to reduce alert levels (e.g., “de-alerting” ICBMs) are ill-advised, in part because reciprocation of such moves by nuclear-armed potential adversaries cannot be readily verified. More importantly, de-alerting proposals, if implemented, would make U.S. ICBMs a tempting target for preemption as well as create dangerous instabilities in a crisis, such as a race to re-alert.

Targeting

U.S. nuclear planning and targeting adhere to the laws of armed conflict. The United States has for decades rejected a deterrence strategy based on purposely threatening civilian populations, and the United States will not intentionally target civilian populations. The U.S. nuclear posture and alert status are tailored to enhance stability by ensuring that the United States retains sufficient survivable nuclear forces to ensure credible response options, no matter the nature of the adversary’s attack.

Principles of U.S. Nuclear Employment

Responsive to U.S. Goals in Multiple Scenarios

The United States develops and implements its strategy for nuclear employment, and the resulting force posture decisions, based on the different types and severity of threat scenarios it faces. The U.S. leadership’s deterrence goals and response options will necessarily differ depending on the scenario. In short, U.S. nuclear forces must be responsive to a number of needs and requirements across the range of scenarios that could create extreme circumstances that threaten the vital interests of the United States, and its allies, and partners.

U.S. strategy for nuclear employment informs its force sizing and posture decisions. The size and posture of the U.S. nuclear arsenal ensures the United States will retain flexible response options and

can still hold at risk what potential adversaries value most – providing significant incentive for a potential adversary to refrain from attack or escalation.

After Nuclear Employment

Should deterrence fail, 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 weapons employment guidance directs minimizing civilian damage to the extent possible consistent with achieving U.S. objectives and restoring deterrence. U.S. actions will seek to discourage adversary escalation by ensuring the adversary always concludes that the prospective costs of its aggression are much greater than any possible gain. If an adversary chooses to escalate the confrontation with the United States, it is imperative we maintain a range of flexible capabilities and options to present to the President that allow the United States to achieve its objectives.

Limited Nuclear Strikes: The United States believes currently that the most likely scenario for adversary nuclear employment is a limited nuclear strike in the context of an escalating conventional conflict. In the face of a limited nuclear attack against the United States, its allies, or its partners, U.S. nuclear forces provide a range of response options in scope and scale. A tailored and graduated nuclear response does not mean an adversary can confidently predict only a symmetrical response or that the adversary can define escalation thresholds by the manner of its initial nuclear use. What an adversary can confidently anticipate is the certainty of an effective U.S. response to nuclear attack, at any level and in any context, in ways that will impose greater costs than any expected or hoped-for gain.

The U.S. set of graduated response options is particularly valuable in situations where the adversary's threat calculus is not clear, or the level and type of threat the adversary finds credible are uncertain. As noted, the United States will not limit itself to considering purely symmetrical responses, as these could spur open-ended, tit-for-tat exchanges. The U.S. flexible and graduated response strategy ensures there are a variety of credible options available, critical to demonstrating both U.S. resolve and restraint, and thereby deterring an adversary's attack or escalation.

As U.S. deterrence strategy makes clear, the United States maintains forces capable of delivering large-scale nuclear responses as well as limited and graduated response options that may be critical for deterrence credibility, particularly in scenarios that involve limited nuclear employment against the United States or an ally or partner. The United States continues to strengthen the credibility of its deterrent options against a limited nuclear attack on the United States and its allies, and partners.

Large-Scale Attack: No State should employ a nuclear weapon confident in its ability to control escalation. Similarly, although it is important that the United States tries to deter escalation, it cannot be certain its efforts to deter escalation will succeed. Should a crisis escalate into a large-scale nuclear attack on the United States or its allies or partners, the United States retains the option to pursue multiple objectives, from preventing further nuclear employment to inflicting intolerable costs on the adversary. The United States will sustain the diverse capabilities needed to deter large-scale attacks by ensuring that the adversary cannot anticipate significant political or military gain from its attack, and that the adversary will understand that the United States will impose intolerable costs exceeding any

possible benefit gained from the adversary's decision to strike the United States, its allies, or its partners.

Planning Considerations

All nuclear plans must include the flexibility to tailor a response to the unique circumstances that would surround any nuclear crisis. To that end, the United States will also maintain a responsive and adaptive planning capability to support a flexible and tailored nuclear strategy and the ability to employ nuclear weapons in a conflict. Adaptive planning is regularly exercised, contributing to the credibility of U.S. deterrence strategies.

No First Use and Sole Purpose

To deter adversary aggression and assure allies and partners, the United States has never adopted a "no first use" policy and, given the contemporary and anticipated future threat environments, such a policy would be imprudent. Rather, the policy of the United States and the desire of its allies and partners is for the United States to retain calculated ambiguity regarding the precise extreme circumstances that might lead to a U.S. nuclear response. Those who argue that a U.S. "no first use" policy would be stabilizing should consider that the United States and its allies and partners always remained skeptical of the veracity of the Soviet Union's public "no first use" policy during the Cold War (correctly, as it turned out), and today we harbor significant doubts concerning China's current "no first use" policy. The United States does not consider it prudent to assume states will adhere to their "no first use" pledges, even under the most stressful conditions of major conflict.

Similarly, the United States sees no benefit and significant risk in adopting a "sole purpose" policy in which the United States declares the sole purpose of nuclear weapons to be for deterring and responding to an adversary's nuclear use. A U.S. "sole purpose" policy, if potential adversaries believed it, would greatly simplify their decision calculus, remove doubt about the type of U.S. response to non-nuclear strategic attack, and potentially incentivize adversary employment of large-scale conventional aggression, chemical and biological weapons, or employment of other means of delivering highly destructive non-nuclear strategic attacks. In addition, a U.S. "sole purpose" declaration would dispirit allies and partners – raising doubts about U.S. defense commitments to them and increasing the chances of nuclear proliferation – while not affecting Russia or China, who would not believe such a declaration.

As stated in the 2018 NPR, the United States will "hedge against the potential rapid growth or emergence of nuclear and non-nuclear strategic threats, including chemical, biological, cyber, and large-scale conventional aggression. The capacity to hedge helps ensure our ability to sustain effective deterrence and assurance amid unexpected change."

Implications for the U.S. Nuclear Posture and Nuclear Stockpile

The United States will maintain the nuclear capabilities needed to deter adversaries, assure allies and partners, achieve objectives if deterrence fails, and hedge against unexpected challenges. DoD believes that these four missions are best accomplished with a strategic nuclear Triad and forward-based non-strategic nuclear weapons in Europe – a position consistent with updated guidance, the 2018

Nuclear Posture Review, and reflecting continuity with numerous internal reviews over multiple administrations.

The overall strength and adaptability of the U.S. nuclear Triad is evident in the fact that the 2018 Nuclear Posture Review recommended only supplemental modifications to the U.S. nuclear force, despite significant changes in the security environment. The first supplemental capability, the W76-2 warhead, modifies a small number of submarine-launched ballistic missile warheads to provide a low-yield option that is both prompt and can penetrate adversary air defenses in the near term. The W76-2 is meant to counter an adversary's perception of a gap in U.S. capabilities that can be exploited in a regional scenario. The other supplemental capability, the nuclear sea-launched cruise missile (SLCM-N), will provide a highly mobile and assured response option for added deterrence value against adversaries, while also assuring allies and partners. Together, the W76-2 warhead and SLCM-N, which do not require or rely on host nation support, will provide additional diversity in platforms, range, and survivability, and a valuable hedge against future nuclear "break out" scenarios.

Given the range of possible adversary nuclear employment scenarios, it would be imprudent for the United States to reduce its nuclear forces unilaterally at this time or in the near future. Unilateral U.S. nuclear reductions would likely degrade the deterrence of attacks on the United States, its allies, and partners; undermine the assurance of allies and partners; and do nothing to halt the continuing modernization and projected substantial increases in Russian and Chinese nuclear arsenals. Instead, U.S. unilateral reductions could encourage Russian and Chinese expansion of their capabilities. In addition, unilateral U.S. nuclear reductions would undermine U.S. leverage in a future arms control negotiation.

In the face of an increasingly challenging and unpredictable threat environment, including diverse nuclear threats, the United States will continue to rely on the proven force posture of a Triad of nuclear delivery systems to deter strategic attack. To meet these ends, the United States will continue updating the Triad and stockpile to meet current and future threats.

Additional Implications

Increased Reliance on Conventional or Non-Nuclear Strike Capabilities or Missile Defenses

DoD provides U.S. senior leaders with a range of graduated response options, from conventional to nuclear, to deter aggression and intra-war escalation and accomplish U.S. objectives if deterrence fails. Although not a comparable substitute for the deterrent effects of nuclear weapons, U.S. conventional weapons contribute to U.S. deterrence and assurance efforts. To defeat an adversary strategy that includes coercive nuclear escalation and ensure the United States is prepared to respond at any point in the spectrum of conflict, DoD is pursuing the integration of conventional and nuclear planning when appropriate.

The modifications to U.S. employment strategy, plans, and options described in this report have not increased reliance on the missile defenses of the United States. The United States continues to rely on its nuclear forces to deter a Russian or Chinese nuclear and non-nuclear strategic attack on the U.S. homeland. U.S. missile defenses are not designed to, nor can they, negate Russia's or China's nuclear deterrent. Instead, U.S. policy is to develop and deploy missile defenses that stay ahead of the rogue

State threat. U.S. missile defenses also will provide a measured level of protection against an unauthorized or accidental launch by any potential adversary.

Flexibility and Resilience of U.S. Strategic Forces

Our nuclear strategy requires maintaining a mix of flexible and resilient nuclear forces, NC3, and supporting infrastructure. The loss of any one leg of the Triad increases the risk of deterrence failure. For example, a U.S. nuclear arsenal without ICBMs would raise the relative value of each remaining U.S. nuclear asset, such as U.S. bombers and ballistic missile submarines, and thus incentivize additional adversary investments in air and missile defense and anti-submarine warfare capabilities – resulting in reduced U.S. and allied and partner security. Because deterrence and assurance requirements can change much more rapidly than the U.S. nuclear industrial base can respond, it is incumbent upon U.S. political and military leaders to preserve the inherent flexibility and resilience in the current nuclear Triad while ensuring future systems incorporate the highest levels of adaptability.

The United States cannot fully predict the development of future threats to the Nation, its allies and partners, nor can it predict the precise circumstances in which U.S. leaders may be compelled by events to contemplate nuclear employment. The ongoing U.S. nuclear modernization programs, effective intelligence, surveillance, and reconnaissance, and an adaptive planning process help to ensure that U.S. leaders will have the information and capabilities necessary to deter attacks and protect U.S. national interests.