

2022 Nuclear Posture Review

On October 27, 2022, the Biden administration released the unclassified version of its [2022 Nuclear Posture Review \(NPR\)](#). The document states that nuclear weapons provide a unique deterrent that no other element of U.S. military power can replace and that a safe, secure, and effective nuclear deterrent undergirds all U.S. national defense priorities. The NPR supports retention of a triad and continued investments in all existing major nuclear modernization programs including land-based, sea-based, air-based, command and control, and some supplemental capabilities; however, it also states that “deterrence alone will not reduce nuclear dangers.” Accordingly, the NPR puts a “renewed emphasis” on arms control, nuclear non-proliferation and risk reduction, policies that complement and mutually reinforce U.S. nuclear deterrence aims. The NPR identifies mutual, verifiable nuclear arms control as the most “effective, durable and responsible path” to reduce the role of nuclear weapons in U.S. strategy and prevent nuclear use.

- **Defining the Role and Purpose of Nuclear Weapons:** The NPR affirms three roles for U.S. nuclear weapons: 1) to deter aggression, 2) to assure allies and partners and 3) to achieve U.S. objectives if deterrence fails. Similar to the 2010 NPR, the 2022 NPR states that “the fundamental role” of U.S. nuclear weapons is to deter a nuclear attack on the United States or its allies and partners. “While the United States maintains a very high bar for the employment of nuclear weapons,” the NPR states that the U.S. nuclear posture “is intended to complicate an adversary’s entire decision calculus, including whether to instigate a crisis, initiate armed conflict, conduct strategic attacks using non-nuclear capabilities, or escalate to the use of nuclear weapons on any scale.”
- **Rejects No First Use and Sole Purpose:** After a “thorough review,” the NPR concluded that adopting a No First Use or Sole Purpose policy would result in an “unacceptable level of risk” in light of adversaries’ non-nuclear capabilities which could inflict “strategic level damage” to the United States and its allies and partners. The NPR expresses a goal of moving toward a sole purpose doctrine, however.
- **Circumstances for Nuclear Use:** The United States would consider using nuclear weapons only in “extreme circumstances” to defend the vital interests of the United States or its allies and partners. The NPR states that the United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to and in compliance with NPT, but for all other states, “there remains a narrow range of contingencies in which U.S. nuclear weapons may still play a role in deterring attacks that have strategic effect.”
- **Two Peer Nuclear Adversaries:** The NPR states that the United States is entering an unprecedented phase of facing two major nuclear powers as strategic competitors and potential adversaries, creating “new stresses on stability and new challenges for deterrence, assurance, arms control, and risk reduction.” While Russia remains the most capable and diverse nuclear rival, China’s increasing capability is identified as a threat to the United States and allies. The NPR allows room for a reduction in the role of nuclear weapons in U.S. strategy toward Russia and China but requires verifiable reductions or constraints from both rivals in return.
- **North Korea:** The NPR also acknowledges the “persistent and growing danger” posed by North Korea’s weapons of mass destruction and clearly states the dire consequences it would face in the event of nuclear weapons use: “There is no scenario in which the Kim regime could employ nuclear weapons and survive.” With the ultimate goal being the complete and verifiable denuclearization of the Korean Peninsula, the NPR states U.S. policy calls for a “calibrated diplomatic approach to secure practical progress” to increase U.S. and allied security.
- **Iran:** The NPR states that “Iran does not today possess a nuclear weapon and we currently believe it is not pursuing one,” but expressed concern over steps being taken by Iran that were previously constrained by the Iran nuclear deal. The NPR reiterates U.S. policy to work with allies to prevent Iran from obtaining nuclear weapons and push for limitations on Iran’s weapons-applicable nuclear activities.
- **Extended Deterrence Commitments:** The NPR continues a longstanding U.S. commitment to allies and partners to tailor extended deterrence and assurance policies in response to regional security environments. It supports keeping NATO a nuclear alliance and modernizing and maintaining forward-

deployed nuclear weapons and delivery systems in Europe, including the new F-35A Joint Strike Fighter and B61-12 gravity bomb. The administration also identifies the need to adapt the European extended deterrent to current and emerging security conditions including through enhanced exercises and strengthening the coherence of both nuclear and non-nuclear NATO capabilities. Separately, the NPR calls for strong and credible nuclear deterrence in the Indo-Pacific to address nuclear and missile developments by China, as well as ongoing threats from North Korea and Russia. The NPR stresses cooperation with allies, including Japan, South Korea and Australia, and continuation of extended deterrence dialogues, including the capability to forward-deploy strategic bombers, dual-capable aircraft, and other nuclear weapons to the region.

- **New START Follow-On:** The NPR states that the United States is ready to negotiate expeditiously with Russia a new arms control framework to replace the New Strategic Arms Reduction Treaty (New START), which expires in February 2026. While both countries support this effort, the NPR says each country's "priorities are not identical, underscoring the importance of dialogue, when conditions permit, to address each side's differing goals and perceptions of military systems that affect strategic stability."
- **Strategic Stability Dialogue with China:** The NPR also emphasizes the need to engage China on a full range of strategic issues, despite its reluctance to engage, "with a focus on military de-confliction, crisis communications, information sharing, mutual restraint, risk reduction, emerging technologies, and approaches to nuclear arms control" including on fissile material production.
- **Non-Proliferation Regime and Multilateral Arms Control:** The NPR reaffirms U.S. commitment to the Nuclear Non-Proliferation Treaty, support for the International Atomic Energy Agency's safeguards system, including the Additional Protocol, support for strengthened strategic trade control and the adoption of nuclear weapon-free zones, commitment to bring the Comprehensive Nuclear-Test-Ban Treaty into force, and support for commencing Fissile Material Cutoff Treaty negotiations.
- **Managing Escalation Risks:** The NPR stresses the value of peacetime dialogue to decrease the likelihood of misperception and escalation in a crisis. Messaging, posturing of nuclear forces and crisis communication and management mechanisms are highlighted as strategies to manage escalation and possible misperception. Similarly, the NPR seeks to limit the possibility of U.S. misinterpretation of adversary intentions through effective intelligence analysis, wargaming and other strategies that offer "actionable insights."
- **Support for the Sentinel ICBM:** The NPR highlights full support for funding for the Sentinel intercontinental ballistic missile (ICBM) program and the W87-1 warhead as a one-for-one replacement of the Minuteman III ICBM to maintain 400 ICBMs on alert. The NPR concludes that any alternative to the Sentinel program of record, including an additional Minuteman life extension, "would increase risk and cost."
- **Retaining the W76-2 SLBM Warhead:** The W76-2 "low-yield" submarine-launched ballistic missile (SLBM) warhead was introduced as a new requirement in the 2018 Trump NPR and quickly developed and deployed in 2019. The 2022 Biden NPR concluded that the W76-2 currently provides an "important means to deter limited nuclear use" and retains the system, which will be periodically reassessed on its deterrent value as other systems come online and in light of the security environment and plausible deterrence scenarios.
- **Cancellation of the Sea-Launched Cruise Missile:** The NPR cancels the "low-yield" nuclear-armed sea-launched cruise missile (SLCM-N) after determining that it would be a redundant capability in light of the W76-2 (plus the B61-12 and LRSO), has uncertain utility in providing leverage to negotiate arms control limits on Russia's own non-strategic nuclear weapons, and would be too costly (estimated at \$30+ billion) in light of other nuclear modernization programs and defense priorities.
- **Retirement of the B83 Gravity Bomb & HDBTs:** The NPR states that the B83-1 gravity bomb will be retired (no specific timeline for dismantlement provided) due to its increasingly limited capabilities and rising maintenance costs. To address hard and deeply buried targets (HDBTs), the United States will leverage existing capabilities in the near term and, "informed by existing concepts," will develop an enduring capability for improved defeat of such HDBTs, hinting at the future development of a new weapon.
- **Plutonium Pit Modernization:** The NPR identifies restoring the ability to produce plutonium pits as a high priority for the next 10 years, endorsing a two-site strategy at the Los Alamos National Laboratory and Savannah River Site to eliminate single point failure. The NPR specifically argues that increased pit production will both guard against aging plutonium and allow new pit design to be manufactured.