

## ISSUE BRIEF

# Nuclear Priorities for the Biden Administration

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## EXECUTIVE SUMMARY

As US President Joseph R. Biden, Jr.'s administration prepares to formulate its nuclear posture, it will face sharp challenges and competing influences. The United States' nuclear arsenal is aging, and, although much-needed replacements are under way, the modernization plan leaves little room for error. Russia, China, and North Korea are all expanding and modernizing their nuclear arsenals, posing a threat to the United States and its allies and partners. Conventional conflict with any of these states also remains a possibility, which could carry the risk of nuclear war. Furthermore, the president made campaign pledges and early commitments in the Interim National Security Strategic Guidance to "take steps to reduce the role of nuclear weapons in our national security strategy."<sup>1</sup>

On this last point, in a geopolitical threat environment that has degraded substantially since Biden served as vice president under then-US president Barack Obama, it is a question for debate whether it is prudent for the United States to seek to reduce the role of nuclear weapons in national security policy. Many will argue that the United States should instead be *increasing* emphasis on nuclear forces in light of increased nuclear threats. Notwithstanding that debate, this paper examines whether there might be a narrow but plausible path forward—one where the Biden administration could reduce, to a degree, the role of nuclear weapons and, at the same time, replace aging US nuclear forces and associated infrastructure, adapt to the evolving current international security environment, and maintain the longstanding bipartisan consensus on US nuclear posture and forces modernization.

1 Joseph R. Biden, Jr., "Interim National Security Strategic Guidance," White House, March 2021, 9, <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>.

To this end, this issue brief offers the following recommendations regarding US nuclear strategy and force posture:

- 1 Maintain a nuclear triad and modernize all three legs, associated nuclear command and control, and supporting nuclear infrastructure
- 2 Develop options to take into account China's rapid buildup of, and qualitative improvements in, its strategic nuclear forces
- 3 Continue with the development and acquisition of the nuclear sea-launched cruise missile (SLCM-N)
- 4 Adjust homeland missile defenses to keep pace with the North Korean nuclear threat
- 5 In considering changes to US declaratory policy, reject "sole purpose" and "no first use"
- 6 Adjust conventional weapons programs that could provide some modest capability to hold at risk targets that otherwise would require nuclear attack
- 7 Engage in serious arms control and strategic stability dialogues with Russia and China, each bilaterally, which may consider further limitations on all nuclear weapons

## INTRODUCTION

### The longstanding bipartisan consensus on US nuclear strategy

The Biden administration has already committed itself to the longstanding bipartisan consensus on US nuclear strategy. This consensus includes maintaining a safe and effective nuclear arsenal while pursuing robust strategic stability and arms control dialogues with other nuclear states. Under Republican and Democratic administrations, US nuclear strategy has recognized four goals of US nuclear weapons: deterrence, assurance of allies, achieving US objectives should deterrence fail, and hedging against an uncertain future. The principal purpose of US nuclear weapons is to deter nuclear attack on the US homeland and respond accordingly if deterrence fails. The US nuclear arsenal is unique, though, because the United States extends a nuclear umbrella to over thirty treaty allies, and, in extreme circumstances, the United States could use nuclear weapons to deter major nonnuclear attacks on itself and its allies. US nuclear assurance prevents some US allies from developing their own nuclear weapons, which is an important goal of nuclear strategy in and of itself.

To do this effectively, the United States must field forces and engage in consultations to assure allies of the credibility of the US extended deterrent pledge. In responding to attacks, including limited and large-scale attacks, US nuclear forces are designed to restore nuclear deterrence at the lowest level of violence consistent with US objectives. Finally, to give a high degree of confidence in US deterrence in a wide range of scenarios, the US arsenal as a whole is designed to hedge against uncertainty relating to potential geopolitical reversal, technical problems with a warhead or delivery system, or broader technological surprise.

To meet these goals, the US arsenal must be flexible enough to deter a range of contingencies, not just a massive attack on the US homeland. It must be visible enough to communicate deterrence effectively to adversaries and assure allies of US commitment. It needs accuracy, promptness, and defense penetration to hold important adversary targets at risk. In the event of an adversary buildup, or to further progress on arms control, it must be able to expand or contract accordingly. To minimize technical risk, it must avoid single points of failure in its warheads and delivery vehicles. And it must be able to operate even in the challenging environment likely to prevail in an extended nuclear exchange. For decades, past administrations have built and sustained arsenals to suit these desired characteristics.

Because of these characteristics, the United States depends on (1) a nuclear triad of intercontinental ballistic missiles (ICBMs), strategic bombers armed with gravity bombs or cruise missiles, submarine-launched ballistic missiles (SLBMs) carried on ballistic missile submarines (SSBNs), and shorter-range dual-capable aircraft, some of which are committed to NATO and deployed overseas; (2) a modern nuclear command, control, and communications (NC3) system that will function in all contingencies; and (3) the infrastructure necessary to develop and produce nuclear warheads. The United States has traditionally sought to deploy strategic nuclear weapons in numbers comparable to those of any of its potential adversaries. This, too, has been consistent among administrations for decades.

In light of these policy choices, the United States, for years, has maintained a declaratory policy that rejects the idea that the sole purpose of nuclear weapons is to deter nuclear attack on the United States or that would adopt a pledge not to use nuclear weapons first in any conflict. The authors address the reasons for not adopting such policies later on in this paper.

The broad contours of this strategy have enjoyed enduring support in Democratic and Republican administrations, in

part because administrations have simultaneously engaged in negotiations with other nuclear powers to limit or reduce nuclear weapons. Arms control agreements can further US national security by reducing the nuclear risk to the United States, increasing transparency, and limiting the need for expensive arms expenditures. Furthermore, under the terms of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), US allies and the broader international community see the pursuit of disarmament—both nuclear and conventional as specified in Article VI of the NPT—as a commitment to be undertaken by all NPT signatories. Since US President Lyndon B. Johnson, the relationship between a strong nuclear deterrent and robust arms control has been a centerpiece of US nuclear policy.<sup>2</sup>

### Developments under the Obama and Trump administrations

Under the Obama and Trump administrations, US nuclear strategy was challenged by the realities of the aging US nuclear arsenal and the simultaneous growing military threat to the United States from global adversaries. These developments shaped the environment which President Biden faces today.

In 2010, the United States both ratified the New Strategic Arms Reduction Treaty (New START) and shortly thereafter initiated the latest round of nuclear modernization. President Obama sought to move closer to his vision of a “world free of nuclear weapons” through negotiating New START with Russia.<sup>3</sup> At the same time, his administration committed to a sweeping modernization of all three legs of the aging, decades-old US nuclear triad. Under the modernization plan, the United States set out to build new ICBMs, strategic bombers, nuclear cruise missiles, and SSBNs. The Ground Based Strategic Deterrent (GBSD) is set to replace the Minuteman III starting in the late 2020s. The Long-Range Standoff weapon (LRSO) will replace the Air-Launched Cruise Missile (ALCM) starting in 2030. The B-21 Raider strategic bomber will replace the B-2 and B-52 bombers throughout the 2030s. The *Columbia*-class SSBN will begin to replace existing *Ohio*-class boats starting



An unarmored Minuteman III intercontinental ballistic missile launches during an operational test September 5, 2016, at Vandenberg Air Force Base, CA. Source: US Air Force photo/ Michael Peterson.

in the early 2030s. Finally, a major initiative is underway to conceive of, develop, and field a next-generation NC3 and to recapitalize the nuclear warhead production infrastructure. In sum, this is a complex and risky modernization effort; it is projected to elevate the total cost to maintain and modernize the US nuclear arsenal to \$551 billion between now and 2030—about 7 percent of the Department of Defense’s (DoD’s) spending annually.<sup>4</sup>

The Obama administration succeeded in maintaining the bipartisan consensus through the dual approach of negotiating and modernizing, but its success was also due to actions that it considered but did not take. For instance, the Obama administration twice considered adopting a no-first-use policy. In both cases, the proposal was rejected after strong pushback from both senior cabinet officials and US allies, who saw that statement as antithetical to US security guarantees. Similarly, Obama rejected a move toward eliminating the ICBM

2 Brent Scowcroft, chairman, *Report of the President’s Commission on Strategic Forces*, April 6, 1983, <http://web.mit.edu/chemistry/deutch/policy/1983-ReportPresCommStrategic.pdf>.

3 White House, “Remarks by President Barack Obama In Prague As Delivered,” Office of the Press Secretary, April 5, 2009, <https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered>.

4 Congressional Budget Office, *Projected Costs of U.S. Nuclear Forces, 2021 to 2030*, May 2021, <https://www.cbo.gov/publication/57240>; for details on the modernization program and associated risks, see John R. Harvey, “Modernizing the U.S. Nuclear Arsenal—The Road to 2030 and Beyond” in *Fit for Purpose? The U.S. Strategic Posture in 2030 and Beyond*, ed. Brad Roberts (Livermore, CA: Center for Global Security Research, Lawrence Livermore National Laboratory, October 2020).



Russia's Kh-47M2 Kinzhal is a dual-capable hypersonic weapon shown here on a MiG-31 interceptor. It is featured here in the 2018 Moscow Victory Day Parade. Source: by courtesy Russian Presidential Press and Information Office.

leg of the US nuclear triad because of the important role that ICBMs play in achieving a robust deterrence posture.<sup>5</sup>

Toward the end of the Obama administration and the beginning of the Trump administration, it became clear that US nuclear strategy would have to respond to Russian and Chinese revisionism and nuclear expansion. Russia's 2014 invasion of Ukraine and illegal annexation of Crimea sent relations with Washington into a tailspin and caused NATO allies to express anxiety about possible Russian moves against the Baltic states in seeking to reestablish a semblance of the former Soviet

Union.<sup>6</sup> Western analysts worried that Moscow's significant arsenal of short-range, low-yield nuclear weapons could be exploited as part of an "escalate-to-de-escalate" strategy or otherwise leveraged for compelling advantage.<sup>7</sup> These fears increased in the Trump administration after Russian President Vladimir Putin's 2018 announcement of certain "exotic" nuclear weapons, some of which are not regulated by the New START, and could be used for coercive advantage in Europe.<sup>8</sup> To correct any Russian misperception of an "escalation gap" in US and NATO deterrence capabilities, then-US president Donald J. Trump's 2018 Nuclear Posture Review (NPR) called for two supplemental capabilities: a modified low-yield W76-2 warhead on Trident II D-5 SLBMs, which was fielded in 2020, and the nuclear sea-launched cruise missile (SLCM-N), which remains under study.<sup>9</sup>

In the Indo-Pacific, relations with China have deteriorated as Chinese President Xi Jinping increasingly pursues an assertive foreign policy, including a campaign of island building in the South China Sea and proclamations to develop a "world-class" Chinese military by 2049.<sup>10</sup> China's ongoing nuclear buildup includes next-generation ICBMs and the addition of several hundred new ICBM silos, as well as efforts to develop the other two legs of a nuclear triad.<sup>11</sup>

At the end of Trump's term, his administration made a concerted push to engage in arms control with Russia and China, including in trilateral settings. Beijing refused to engage. Moscow seemed on the cusp of agreeing to an extension of New START that would begin to address Russia's large arsenal of nonstrategic nuclear weapons, but these negotiations were diverted when

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- 5 David E. Sanger and William J. Broad, "Obama Unlikely to Vow No First Use of Nuclear Weapons," *New York Times*, September 5, 2016, <https://www.nytimes.com/2016/09/06/science/obama-unlikely-to-vow-no-first-use-of-nuclear-weapons.html>; Paul Sonne, Gordon Lubold, and Carol E. Lee, "'No First Use' Nuclear Policy Proposal Assailed by U.S. Cabinet Officials, Allies," *Wall Street Journal*, August 12, 2016, <https://www.wsj.com/articles/no-first-use-nuclear-policy-proposal-assailed-by-u-s-cabinet-officials-allies-1471042014>.
  - 6 David A. Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*, RAND Corporation, 2016, [https://www.rand.org/pubs/research\\_reports/RR1253.html](https://www.rand.org/pubs/research_reports/RR1253.html).
  - 7 Matthew Kroenig, *A strategy for deterring Russian de-escalation strikes*, Atlantic Council, April 24, 2018, <https://www.atlanticcouncil.org/in-depth-research-reports/report/a-strategy-for-deterring-russian-de-escalation-strikes/>.
  - 8 Matthew Kroenig, Mark J. Massa, and Christian Trotti, *The downsides of downsizing: Why the United States needs four hundred ICBMs*, Atlantic Council, March 29, 2021, <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/the-downsides-of-downsizing-why-the-united-states-needs-four-hundred-icbms/>.
  - 9 Department of Defense, *2018 Nuclear Posture Review*, February 2018, <https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF>; John Rood, "Statement on the Fielding of the W76-2 Low-Yield Submarine Launched Ballistic Missile Warhead," Department of Defense, February 4, 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2073532/statement-on-the-fielding-of-the-w76-2-low-yield-submarine-launched-ballistic-m/source/GovDelivery/>.
  - 10 Office of the Secretary of Defense, Department of Defense, Annual Report to Congress, "Military and Security Developments Involving the People's Republic of China 2020," August 2020, 5, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF>.
  - 11 "DF-41 (Dong Feng-41 / CSS-X-20)," Missile Defense Project, Center for Strategic and International Studies, last updated July 31, 2021, <https://missilethreat.csis.org/missile/df-41/>; C. Todd Lopez, "China Pursues Own Nuclear Triad, Doubling of Nuclear Capability," DoD News, September 1, 2020, <https://www.defense.gov/Explore/News/Article/Article/2333018/china-pursues-own-nuclear-triad-doubling-of-nuclear-capability/>; Paul Bernstein and Dain Hancock, "China's Hypersonic Weapons," *Georgetown Journal of International Affairs*, January 27, 2021, <https://gija.georgetown.edu/2021/01/27/chinas-hypersonic-weapons/>.

Biden assumed office and opted for a “clean” extension of New START through 2026.<sup>12</sup> Meanwhile, open-source research shows that China’s largest nuclear buildup ever is underway.<sup>13</sup>

In this context, Biden faces a narrow path forward. He must satisfy his campaign rhetoric to reduce the role of nuclear weapons, maintain the longstanding bipartisan consensus on US nuclear strategy, answer the worsening international security environment, and continue with nuclear modernization.

This issue brief will continue by exploring the seven key questions regarding the future of US nuclear strategy that senior Biden administration officials will confront as they navigate this path:

- Should the United States maintain a nuclear triad, and should it modernize the ICBM fleet?
- How should the United States’ nuclear posture take into account China’s alarming nuclear buildup?
- Should the United States develop and field a low-yield SLCM-N?
- Should the United States expand homeland missile defense, including through the Next Generation Interceptor (NGI) and Standard Missile (SM-3 Block II A) systems?
- Should the United States change its declaratory policy about the purpose of nuclear weapons or the conditions in which the United States would employ them?
- To what extent can the United States integrate conventional and nuclear deterrence?
- What is the best route forward for strategic stability and arms control with Russia and China?

## KEY ISSUES

### Modernize the Nuclear Triad, Including the GBSD

The Biden administration should continue with the modernization program undertaken by Obama and Trump, including fully investing in the nuclear triad and the GBSD program. As explained above, the nuclear triad is essential to support the United States’ nuclear strategy. Some former officials and analysts have argued that the United States should get rid of its land-based nuclear missiles because they are destabilizing, would be useless in a crisis, and cost far too much.<sup>14</sup> On the other hand, US presidents since the 1960s have recognized that ICBMs are crucial to deterrence because they raise the bar to a nuclear attack on the United States, are responsive and reliable to command and control, and, as single-warhead systems, do not offer a high-leverage target for adversaries—unlike with US ICBMs formerly equipped with multiple independently targetable reentry vehicles (MIRVs), it takes (at least) one Russian warhead to destroy one US warhead. Fears that current ICBMs are destabilizing rely on a reductive “use ’em or lose ’em” logic that ignores the variety of options available to a US president. Finally, while the cost of ICBMs is not insignificant, land-based weapons are the cheapest element of the triad to operate and sustain.<sup>15</sup>

Some have argued that, while ICBMs may have some merit, the GBSD program to replace them is too expensive and destabilizing. These arguments also do not hold up under scrutiny, particularly because the US Air Force assesses that the GBSD program will be tens of billions of dollars cheaper than (again) extending the life of the extant Minuteman III.<sup>16</sup> Furthermore, life-extending the Minuteman III is mechanically difficult and, for certain sub-systems, not possible.<sup>17</sup> The Biden administration should proceed with the planned modernization program across the board, including GBSD. A recent statement by US Rep. Adam Smith (D-WA), chair of the House Armed

12 John Hudson and Isabelle Khurshudyan, “Trump administration and Russia near deal to freeze nuclear warheads, extend New START pact,” *Washington Post*, October 20, 2020, [https://www.washingtonpost.com/world/russia-ready-to-freeze-total-number-of-warheads-for-one-year-to-extend-nuclear-pact-with-us/2020/10/20/2c0b06c0-12bc-11eb-a258-614acf2b906d\\_story.html](https://www.washingtonpost.com/world/russia-ready-to-freeze-total-number-of-warheads-for-one-year-to-extend-nuclear-pact-with-us/2020/10/20/2c0b06c0-12bc-11eb-a258-614acf2b906d_story.html).

13 Joby Warrick, “China is building more than 100 new missile silos in its western desert, analysts say,” *Washington Post*, June 30, 2021, [https://www.washingtonpost.com/national-security/china-nuclear-missile-silos/2021/06/30/0fa8debc-d9c2-11eb-bb9e-70fda8c37057\\_story.html](https://www.washingtonpost.com/national-security/china-nuclear-missile-silos/2021/06/30/0fa8debc-d9c2-11eb-bb9e-70fda8c37057_story.html); William J. Broad and David E. Sanger, “A 2nd New Nuclear Missile Base for China, and Many Questions About Strategy,” *New York Times*, July 26, 2021 (updated November 3, 2021), <https://www.nytimes.com/2021/07/26/us/politics/china-nuclear-weapons.html>; Charles A. Richard, “Forging 21st-Century Strategic Deterrence,” *Proceedings*, February 2021, <https://www.usni.org/magazines/proceedings/2021/february/forging-21st-century-strategic-deterrence>.

14 Tom Collina and William Perry, “Opinion: Whatever you think ails this nation, a new generation of ICBMs is not the answer,” *Washington Post*, November 17, 2020, <https://www.washingtonpost.com/opinions/2020/11/17/how-biden-administration-could-create-win-win-situation-nuclear-policy/>.

15 Kroenig, Massa, and Trotti, *Downsides of downsizing*.

16 Kaylin P. Hankerson, “AFGSC commander delivers Nuclear Triad and Deterrence Symposium Remarks,” US Air Force, December 14, 2020, <https://www.af.mil/News/Article-Display/Article/2445284/afgsc-commander-delivers-nuclear-triad-and-deterrence-symposium-remarks/>.

17 Sandra Erwin, “Head of U.S. Strategic Command blasts GBSD critics: ‘Minuteman 3 cannot be life-extended,’” *Space News*, January 5, 2021, <https://spacenews.com/head-of-u-s-strategic-command-blasts-gbsd-critics-minuteman-3-cannot-be-life-extended/>.



A MIRV from the LGM-118A Peacekeeper missile, retired in 2005. Current US ICBMs are not routinely MIRVed.

Services Committee, regarding his intent to preserve funding for the GBSD is a positive sign that the president will not face significant political pressure to eliminate the weapon.<sup>18</sup>

### Accounting for China in the Nuclear Posture Review

Recent revelations regarding the significant ramp-up of China's ICBM force presents a thorny challenge for the United States and raises several questions: What action should the United States take in response? Should it plan to adjust force size and/or missile defense activities to take into account China's rapid buildup of, and qualitative improvements in, strategic nuclear forces? Does this buildup warrant a broader look

into existing US nuclear doctrine, targeting, and employment policy, in addition to possible options to augment the size and composition of the force?

Because China's buildup will not be instantaneous, the United States has time to address these questions and develop answers. Moreover, the ongoing US modernization program, which involves the near-simultaneous replacement over the next fifteen years of the entire triad, its means for command and control, and the infrastructure that allows the United States to produce nuclear warheads, does not leave any "free energy" in the acquisition system—both for the DoD and the National Nuclear Security Administration—to respond with new nuclear programs in the near term.

It bears repeating that deterring a potentially hostile Russia and China, possibly at the same time, has been a feature of US nuclear policy for decades. During the Cold War, even in the event of a major nuclear exchange with Russia, the United States maintained sufficient survivable warheads in reserve to deter any incentive by the Chinese to take advantage by "piling on." But this was during a time when both Russia and the United States maintained many thousands of strategic warheads, while China possessed just a few tens of ICBMs that could reach the United States. There was a lot of flexibility then in US forces to deter both. Today, with an operationally deployed force capped at 1,550 warheads, mostly devoted to the Russia threat, and with a Chinese ramp-up to potentially several thousand ICBM warheads, the situation would change dramatically.

Thus, the Biden administration's nuclear posture will need to begin the dialogue for how to respond to China's challenge if and when it fully materializes. This response will have implications, among other things, for overall nuclear doctrine and hedge policy, including steps to augment the force by uploading available non-deployed hedge warheads onto existing delivery platforms and leaving open the option that the "warm" production lines for GBSD, the B-21 bomber, LRSO, nuclear warhead pits, and other systems may need to be kept going once the originally intended build is completed. The NPR should also examine approaches to advance a bilateral arms control dialogue with China to manage, or possibly mitigate, this competition.

<sup>18</sup> Meredith Roaten, "JUST IN: HASC Chairman Says Congress Won't 'Kill' GBSD Program," *National Defense*, June 29, 2021, <https://www.nationaldefensemagazine.org/articles/2021/6/29/hasc-chairman-says-congress-wont-kill-gbsd-program>.

## Develop and Field the SLCM-N

One of Biden's NPR decisions will be the future of the SLCM-N. So far, his administration is continuing with initial efforts on system development.<sup>19</sup> Arguments in favor of continuing this effort include the role of lower-yield nuclear weapons in deterring nonstrategic nuclear weapon aggression by correcting any potential misperception of an escalation gap that could be exploited. The large theater nuclear weapons imbalance that the United States faces vis-à-vis Russia and China is of concern. The W76-2 is a good first step, but the SLCM-N would go further in addressing the growing disparity in non-strategic nuclear weapons and to reassure increasingly nervous allies.

Some have objected that the SLCM-N lowers the threshold of nuclear use or that nuclear cruise missiles could cause inadvertent nuclear escalation. Some policy makers have argued that, because the SLCM-N will have less explosive yield than other US nuclear weapons, US policy makers will be tempted to use nuclear weapons for less grave circumstances than truly merit nuclear use.<sup>20</sup> On the other hand, the United States has long deployed low-yield gravity bombs on dual-capable aircraft, and the ALCM carries the same variable-yield W-80 warhead as the last iteration of the SLCM-N. US low-yield nuclear weapons can raise the threshold of nuclear use, and thereby deter such use, by convincing the adversary that it has nothing to gain by such limited use because the United States has an appropriate response.

Some analysts have argued that the US deployment of nuclear-armed cruise missiles could cause an accidental nuclear war, as US adversaries confronting any US cruise missiles would be forced to assume that the incoming missile was nuclear armed and, therefore, "retaliate" with nuclear weapons before being

disarmed—even if the missile ended up being conventionally armed.<sup>21</sup> This argument has been deployed against the LRSO in addition to the SLCM-N.<sup>22</sup> This logic of inadvertent nuclear escalation rests on shaky foundations.<sup>23</sup> The United States for decades has deployed nuclear and conventional ALCMs that appear quite similar and did not raise concerns when these systems were initially deployed. So why now? Conventional variants of dual-capable weapons have routinely been used in conflict by nuclear powers, and accidental nuclear war has yet to occur.<sup>24</sup> On balance, the Biden administration should continue to develop and eventually field the SLCM-N.

## Scope Homeland Missile Defense to Stay Ahead of the North Korean Threat

In the missile defense arena, the Biden administration should continue the post-Cold War missile defense policy of staying ahead of rogue nation ICBM threats while relying on nuclear deterrence to address the larger, more capable threats posed by China and Russia. Maintaining the ability to defend against North Korean and potentially other rogue nation ICBM threats is essential for a US grand strategy that relies on allies to maintain a favorable balance of power in key regions. By threatening the US homeland, regional adversary long-range missiles are meant to coerce the United States, to limit US freedom of action, and split alliances. By reducing US vulnerability to North Korean missile attacks, the United States is better prepared to run risks on behalf of allies. US homeland missile defense thereby reassures allies, strengthens alliances, and reduces the need for allies to acquire their own nuclear weapons.

In addition to robust counter-missile capabilities, the NGI program can help Washington stay ahead of North Korea's growing arsenal and potential ability to use decoys or MIRVs

19 Aaron Mehta and Joe Gould, "Find out where Trump and Biden stand on defense and security issues," Defense News, October 9, 2020, <https://www.defensenews.com/global/the-americas/2020/10/09/find-out-where-trump-and-biden-stand-on-defense-and-security-issues/>; Kingston Reif and Shannon Bugos, "Biden's Disappointing First Nuclear Weapons Budget," Arms Control Association 13 (4), July 9, 2021, <https://www.armscontrol.org/issue-briefs/2021-07/bidens-disappointing-first-nuclear-weapons-budget>.

20 Office of US Senator Chris Van Hollen, "Van Hollen, Courtney introduce bicameral bill to halt costly and redundant Trump-era nuclear program," press release, March 4, 2021, <https://www.vanhollen.senate.gov/news/press-releases/van-hollen-courtney-introduce-bicameral-bill-to-halt-costly-and-redundant-trump-era-nuclear-program>.

21 Vipin Narang, "The Discrimination Problem: Why Putting Low-Yield Nuclear Weapons on Submarines is so Dangerous," *War on the Rocks*, February 8, 2018, <https://warontherocks.com/2018/02/discrimination-problem-putting-low-yield-nuclear-weapons-submarines-dangerous/>.

22 Office of US Senator Edward J. Markey, "Markey, senators introduce legislation to limit spending on nuclear war-fighting missiles," press release, March 8, 2017, <https://www.markey.senate.gov/news/press-releases/markey-senators-introduce-legislation-to-limit-spending-on-nuclear-war-fighting-missiles>.

23 Matthew Kroenig and Mark J. Massa, *Are dual-capable weapon systems destabilizing? Questioning nuclear-conventional entanglement and inadvertent escalation*, Atlantic Council, June 16, 2021, <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/are-dual-capable-weapon-systems-destabilizing/>.

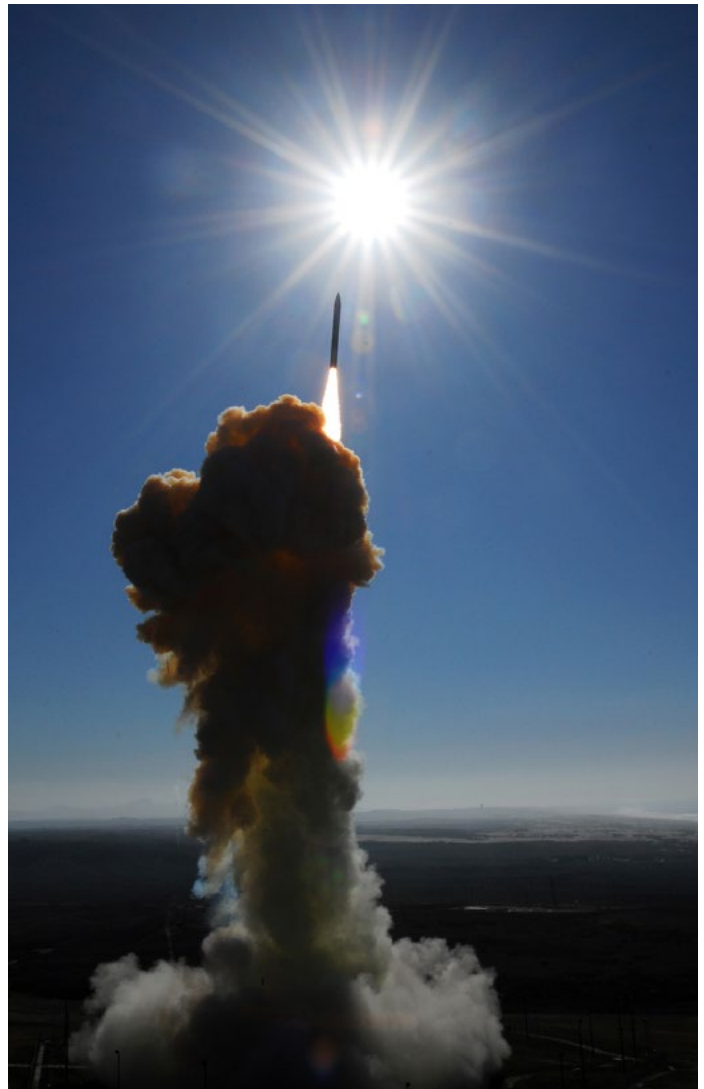
24 Ibid.

atop its missiles.<sup>25</sup> The Pentagon should study the projected growth in the North Korean arsenal (including MIRVs or decoys) compared to the slated availability of the NGI, which will help determine if the US Navy's Standard Missile (SM-3 Block IIA) should be deployed during a crisis to complement homeland defense after its successful late-2020 test against an ICBM-class target.<sup>26</sup>

China and Russia have long decried US homeland defense efforts, yet this belies their own impressive efforts in this area. Russia deploys sixty-eight nuclear-armed anti-missile interceptors for the defense of Moscow and deploys (and sells to other nations) hundreds of regional air and missile defense systems. China possesses regional missile defense systems and is developing defenses against intermediate-range ballistic missiles. Despite Russia's claims that US missile defenses will upset strategic stability, that country has joined the United States in reducing strategic nuclear forces even after the United States withdrew from the Anti-Ballistic Missile (ABM) Treaty in 2002. If Russia was genuinely alarmed by the additional twenty ground-based interceptors proposed by the Trump administration (bringing the US total to sixty-four GBIs) then it likely would not have been so anxious to extend New START. Nevertheless, as mentioned later in this paper, the Biden administration should engage with Russia and China on transparency and predictability measures to remove missile defense as an irritant in the overall strategic relationship.

### Changes to Declaratory Policy

Biden, as presidents before him, has sought a laudable goal of reducing the role of nuclear weapons in US national security. There has been discussion about precisely what that means. At the 2021 Carnegie International Nuclear Policy Conference, Under Secretary of Defense for Policy Colin Kahl explained that reducing the role of nuclear weapons means that the Biden administration plans "to narrow the scope of the role of



Ground-Based Interceptor test FTG-05 from Vandenberg Air Force Base intercepts a long-range target launched from Kodiak, Alaska. Source: Photo by Jose Davila, US Navy.

25 "Next Generation Interceptor," Lockheed Martin Corporation, accessed September 15, 2021, <https://www.lockheedmartin.com/en-us/capabilities/space/space-missile-defense.html>; Markus V. Garlauskas, "We Must Prevent North Korea from Testing Multiple Reentry Vehicles," *Beyond Parallel*, November 5, 2020, <https://beyondparallel.csis.org/we-must-prevent-north-korea-from-testing-multiple-re-entry-vehicles/>.

26 US Department of Defense, U.S. Successfully Conducts SM-3 Block IIA Intercept Test Against an Intercontinental Ballistic Missile Target, press release, November 17, 2020, <https://www.defense.gov/Newsroom/Releases/Release/Article/2417334/us-successfully-conducts-sm-3-block-ii-a-intercept-test-against-an-intercontinent/>.





US Marines and Soldiers from Japan Ground Self-Defense Force (JGSDF) participate in a joint exercise in Japan on January 26, 2020. Japan is among the US allies which have expressed concern about changes in US declaratory policy. Source: US Marine Corps/Cpl. Cameron E. Parks).

nuclear weapons around those threats that nuclear weapons actually address. Because there are a huge number of threats that nuclear weapons do not address.”<sup>27</sup>

A reduced role can be achieved with a military-technical approach, advanced in the 2001 NPR under then-US president George W. Bush or by making changes in declaratory policy, which is the focus here.<sup>28</sup>

Over decades, the United States has weighed the risks and benefits to both its nuclear deterrence posture and

nonproliferation policy goals of renouncing first use of nuclear weapons in conflict (or nearly, but not quite equivalently, advancing a “sole purpose” statement).<sup>29</sup> Well-meaning supporters are taken with the simplicity of the idea and its potential for bolstering US moral leadership in the world. After all, they argue, the United States has no intention of starting a nuclear war—why not just say so?

On the other hand, in Obama’s 2010 NPR (and later, near the end of his second term as part of a mini nuclear review), a no-first-use pledge was considered. Both times, Obama rejected

27 Carnegie Endowment for International Peace, “2021 Carnegie International Nuclear Policy Conference, Keynote Address: Colin Kahl,” June 23, 2021, YouTube, <https://www.youtube.com/watch?v=2NSELijDFNk>.

28 See Secretary of Defense Donald Rumsfeld’s cover letter to the 2001 Nuclear Posture Review. Reducing the nuclear role could be achieved by providing a capability for precision global conventional strike—the ability to deliver ordnance to any point on the surface of the Earth in 20 to 30 minutes and which now can be achieved only with nuclear weapons—and strengthened regional and national ballistic missile defenses—which not only help to deter limited nuclear strikes but provide additional time for a president to decide perhaps that a nuclear response to such attacks is unnecessary. Donald H. Rumsfeld, *Nuclear Posture Review Report, 2001*, <https://sgp.fas.org/news/2002/01/npr-foreword.pdf>.

29 This section has been adapted from John R. Harvey, “A Considered ‘No’ on ‘No First Use,’” in Galen Jackson, chair, “Policy Roundtable: Nuclear First-Use and Presidential Authority,” *Texas National Security Review*, July 2, 2019, <https://tnsr.org/roundtable/policy-roundtable-nuclear-first-use-and-presidential-authority/#essay4> with the generous permission of *Texas National Security Review*. For a fulsome discussion of the pros and cons of adopting a no-first-use policy see also John R. Harvey, “Assessing the Risks of a Nuclear ‘No First Use’ Policy,” *War on the Rocks*, July 5, 2019, <https://warontherocks.com/2019/07/assessing-the-risks-of-a-nuclear-no-first-use-policy/>.

this policy, as did the three presidents before him. The 2018 NPR carried out by the Trump team again reviewed this policy and reaffirmed the earlier decisions.

So why not no first use? There are three main risks to adopting such a declaratory policy. First, this could risk jeopardizing deterrence. Adversaries, absent a fear of reprisal, could be emboldened to act against US interests by pursuing a catastrophic nonnuclear strategic attack. Second, if the United States adopts no first use, allies could lose confidence in US extended deterrence commitments.<sup>30</sup> Substantial dialogue over the past decade and more with allied governments, both in Europe and Asia, confirms this view. Third, such lost confidence presents a risk to nonproliferation. Allies could be spurred to develop their own nuclear weapons.

What are the purported benefits of a US no-first-use policy that could offset these risks?

When Smith, the Democratic congressman from Washington state, and US Sen. Elizabeth Warren (D-MA) introduced their bill endorsing no first use, they claimed that such a policy would “[reduce] the risk of a nuclear miscalculation by an adversary in a crisis.”<sup>31</sup> If an adversary launches a nuclear weapon because it has misinterpreted US actions or intentions, or even if it launches one by accident, the consequences would, of course, be tragic. Such actions must be assiduously avoided with clear crisis communications, transparency, and strong negative control of nuclear weapons. But would a US no-first-use pledge in and of itself help prevent such a launch? Are we to believe, after a spurious detection of a launch in the midst of a crisis, that an adversary will pause and say: “Wait, it can’t be an attack from the United States since it promised not to use nukes first?” Not likely.

Would adoption of no first use cause other countries to be more inclined to cooperate with the United States in working toward a strengthened nonproliferation regime and less likely to acquire their own nuclear weapons? No evidence exists to support this contention and, as noted above, allied perceptions of weakened extended deterrence could actually

spur proliferation. Along these lines, in Scott Sagan’s 2009 paper supporting a US no-first-use policy, the only concrete example provided regarding the benefits of the United States’ adopting no first use was a negative one.<sup>32</sup> Specifically, in 1999, India rejected such a policy, in part arguing that the United States had not done so, so why should India. Sagan claimed, arguably, that this increased the likelihood of nuclear use in a South Asian conflict. But was it the United States not setting an example? Or was it that India was not inclined to implement no first use in any case, and simply used the US position as an excuse? It is likely the latter.

Will adopting no first use silence criticism from Non-Aligned Movement (NAM) officials who arrive in New York every five years for the NPT Review Conference and berate the United States for not having disarmed unilaterally? Not likely. The enormous progress made in the decades leading up to the end of the Cold War and beyond in ending the nuclear arms race, reducing nuclear stockpiles, and eliminating other global nuclear threats has done little to mute such rhetoric. Moreover, a US no-first-use policy could have the opposite effect, further inciting those in the NAM who support the Treaty on the Prohibition of Nuclear Weapons. Many see no first use as an element of nuclear deterrence, that is, as supporting a continuing role for nuclear weapons in the world, and contrary to what they seek, which is nuclear elimination.<sup>33</sup>

To those who see no first use as a way to signal to the world a reduced role for nuclear weapons in US national security, leading potentially to a lower likelihood of any nuclear use either by accident or intent, the authors must pose the following question: Would no first use actually reduce that risk, or is it simply a means to make some of us feel good about ourselves that, in some abstract but not demonstrable way, the United States is making the world a safer place? To date, the concrete security benefits that could offset the risks of no first use are not understood, and thus not quantifiable, and, so far, have not tipped the scales to adoption. Before it can, proponents of no first use must at minimum address the following questions:

30 “Allies lobby Biden to prevent shift to ‘no first use’ of nuclear arms,” *Financial Times*, October 29, 2021, <https://www.ft.com/content/8b96a60a-759b-4972-ae89-c8ffb36878e?sharetype=blocked>.

31 Office of Sen. Elizabeth Warren, “Senator Warren, Chairman Smith Unveil Legislation to Establish “No-First-Use” Nuclear Weapons Policy,” press release, January 30, 2019, <https://www.warren.senate.gov/newsroom/press-releases/senator-warren-chairman-smith-unveil-legislation-to-establish-no-first-use-nuclear-weapons-policy>.

32 Scott D. Sagan, “The Case for No First Use,” *Survival* 51 (3) (2009): 163–182, <https://doi.org/10.1080/00396330903011545>.

33 Dr. Heather Williams, visiting fellow, Harvard Kennedy School, Project on Managing the Atom, private communication, July 8, 2021.

*Has the United States adjusted its nuclear posture in regard to China by one iota in light of China's existing no-first-use pledge? If not, why not?*

*What has changed for the better in the international security environment since 2010 that would cause this president, or this Congress, to change course on no first use?*

In summary, US adoption of a no-first-use policy would risk compromising deterrence, regional security, and nonproliferation goals. On the other hand, the purported benefits of no first use are, at best, highly suspect and, at worst, simply wrong. The Biden administration should, therefore, reject no first use, just as each previous presidential administration of the nuclear age has done.

All this said, in responding to the president's expressed interests regarding declaratory policy, the Biden team should of course examine alternatives other than no first use or "sole purpose" that could offer possible prudent adjustments to current US policy. In this regard, in a recent paper, George Perkovich and Pranay Vaddi, while also rejecting no first use and sole purpose as undesirable, advance an alternative they call "existential threat policy."<sup>34</sup> Their approach, while offering some fresh, new thinking on the subject, itself has shortcomings and raises several questions that must be addressed before its potential advantages and disadvantages can be fully evaluated.<sup>35</sup> Their approach, and associated critiques of it, however, certainly warrant assessment and evaluation by the Biden team.

Finally, some have called for an adjustment to current declaratory policy characterized as "no prompt use" of nuclear weapons as a means to reduce the potential for an accidental launch based on false warning of attack. At this point, the authors do not recommend such an approach because it could weaken deterrence of a disarming first strike or attempt at decapitation. At the same time, the Biden team should renew Obama's direction to the DoD to continue to examine innovative approaches to increase the decision time for a president, in a conflict, to receive information and direct the specific use of nuclear forces in response to an attack. Such an approach, if successful, would do more than any changes in declaratory policy to strengthen strategic stability.

## Further Integrate Nuclear and Conventional Deterrence

Beyond nuclear capabilities and policy, the Biden administration should explore reducing the role of nuclear weapons by evaluating whether it would be possible to achieve deterrence objectives for certain targets by substituting conventional weapons to achieve effects currently dependent on nuclear weapons. To the extent possible, relying on conventional weapons for certain missions could help maintain favorable balances of power in key regions to deter conventional conflict with nuclear-armed adversaries, which always carries the risk of nuclear use.

The Biden administration has emphasized the integration of nuclear and conventional deterrence in its security posture by embedding the traditional stand-alone NPR into the administration's broader national defense strategy.<sup>36</sup> To further increase the role of conventional weapons in strategic deterrence, the Biden administration can emphasize the role of nonnuclear weapons more in defense and deterrence strategy. In practice, this would reduce the role of nuclear weapons because it would give the president options to deter and respond to attack without resorting to nuclear weapons. This could include investing in prompt conventional fires capable of striking fleeting targets. Conventional hypersonic cruise missiles or theater-range ballistic missiles might fit this role. Furthermore, regional and homeland missile defenses can reduce the role of nuclear weapons by effectively defending from attacks that would otherwise demand a nuclear response. Investment in the United States' own ability to conduct nonnuclear strategic attack—such as counterspace or cyber weapons—could also be explicitly integrated into deterrent threats and defensive measures. Similarly, improving the resilience of NC3 could reduce the role of nuclear weapons by lowering the likelihood of US nuclear use in response to a nonnuclear strategic attack. These measures could include distributing the multi-functionality of current early-warning and communications satellites (each with few, high-value, and hence vulnerable, systems in orbit) to proliferated constellations of small, single-purpose satellites that can continue to function even with some losses.

34 George Perkovich and Pranay Vaddi, *Toward Just U.S. Nuclear Declaratory Policy*, Arms Control Today, March 2021, <https://www.armscontrol.org/act/2021-03/features/toward-just-us-nuclear-declaratory-policy>.

35 For a critique to some issues raised by George Perkovich and Pranay Vaddi, see John R. Harvey, "Anticipating the Biden Nuclear Posture Review," *Real Clear Defense*, September 9, 2021, [https://www.realcleardefense.com/articles/2021/09/09/anticipating\\_the\\_biden\\_nuclear\\_posture\\_review\\_793687.html](https://www.realcleardefense.com/articles/2021/09/09/anticipating_the_biden_nuclear_posture_review_793687.html).

36 C. Todd Lopez, "Nuclear Posture Review, National Defense Strategy Will Be Thoroughly Integrated," June 25, 2021, DoD News, <https://www.defense.gov/Explore/News/Article/Article/2671471/nuclear-posture-review-national-defense-strategy-will-be-thoroughly-integrated/>.

In considering these options, one must keep in mind that conventional weapons are unlikely to replace nuclear weapons for more than a few “niche” missions. That said, the ability to offer the president conventional options for certain missions that today require nuclear weapons demonstrates a commitment to reduce the role of nuclear weapons to the extent possible.

### Improve the Balance of Power in Key Regions

As many scholars have explained, the most likely path to nuclear war in the modern era is escalation from a conventional conflict. Thus, the most fundamental and effective way to reduce the role of nuclear weapons is to reduce the risk of war by maintaining a favorable balance of power in key regions. In the long term, the United States should seek to ameliorate or resolve the political conflicts that make war a possibility with its nuclear-armed adversaries.

### Engage in Serious Arms Control and Strategic Stability Dialogues—and Accept Trade-Offs

The final credible path to reducing the role of nuclear weapons is arms control. One of the first acts of Biden’s term was a “clean” extension of New START through 2026, limiting the United States and Russia to 1,550 accountable deployed strategic warheads. Given the collapse of the Intermediate-Range Nuclear Forces (INF) Treaty and the Open Skies Treaty during the Trump administration, New START is the last nuclear arms control treaty. Biden pledged to expand on New START’s extension to launch a new era of arms control.<sup>37</sup>

Arms controllers have their work cut out for them. Future arms control should address Russia’s nonstrategic and extra-New START exotic weapons as well as China’s rapidly expanding nuclear arsenal. Russia’s ability to compete outside of a New START context with its large nonstrategic nuclear weapons arsenal and exotic capabilities not covered by New START is alarming. Russia’s offer to limit all nuclear warheads, broached at the very end of Trump-era New START negotiations, should be the baseline for future arms control efforts. Future treaties that do not address the large imbalance in nonstrategic weapons are unlikely to pass muster in the Senate.

China’s significant nuclear buildup also poses a serious challenge to nuclear arms control. US government estimates that China’s arsenal is set to at least double or even triple or quadruple by the end of the decade are supported by recent open-source reporting, which reveals that China is building up to 250 ICBM silos.<sup>38</sup> Twenty-first century arms control should include a bilateral dialogue with China. In the 2030s and beyond, the United States will be faced for the first time by two nuclear near-peers. Can the “essential equivalence” approach that prevailed for much of the Cold War suffice in this environment, especially given the possibility of simultaneous aggression from Russia and China? Indeed, while the United States is bound by New START through 2026, the possibility for upward pressure on US force size cannot be excluded.

To reduce this risk, the Biden administration should engage in bilateral arms control dialogues with China and Russia. Bringing China into arms control will be difficult given Beijing’s lack of history negotiating limits on its nuclear arsenal and the emphasis on secrecy in Chinese strategic culture. In the immediate term, US negotiators should pursue transparency and confidence-building measures, as well as strategic stability talks on a variety of military and security issues. For instance, the United States could agree to invite Chinese technical experts to New START verification visits to familiarize the Chinese technical community with verification protocols.<sup>39</sup> Congress may need to support such an effort with appropriate legislation.

Any progress on arms control will require compromise on both sides. For decades, but especially since Bush’s 2002 withdrawal from the ABM Treaty, Russia and China have cited US missile defenses to justify their nuclear buildups. This complaint seems disingenuous, both because both states field ballistic missile defenses of their own and because the United States deploys not nearly enough homeland missile interceptors to make a meaningful difference in these countries’ strategic deterrence. Nonetheless, the United States should consider, on a reciprocal basis, predictability and confidence-building measures, such as self-declared deployment projections of homeland missile defense interceptors. These types of data exchanges could reassure

37 Joseph R. Biden, Jr., “Why America Must Lead Again,” *Foreign Affairs*, March/April 2020, <https://www.foreignaffairs.com/articles/united-states/2020-01-23/why-america-must-lead-again>.

38 Richard, “Forging 21st-Century”; Warrick, “China is building”; Broad and Sanger, “A 2nd New Nuclear Missile Base for China.”

39 Matthew Kroenig and Mark J. Massa, *Toward trilateral arms control: Options for bringing China into the fold*, Atlantic Council, February 4, 2021, <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/toward-trilateral-arms-control-options-for-bringing-china-into-the-fold/>.

Russia and China that US defenses would not rise to a level that would threaten their strategic arsenals.

Similarly, while the United States should invest in the SLCM-N, it could consider trading off this capability in an appropriate arms control deal, as former Secretary of Defense James N. Mattis once suggested.<sup>40</sup> Any arms control treaty, and especially one that involved a trade-off in US capabilities, would need to be reciprocal and verifiable to be in US national security interests and to be politically acceptable.

Even if the effort is unsuccessful, the Biden administration should consider pursuing arms control essential to domestic political support for US nuclear strategy and US relations with the international community. The bipartisan consensus for US nuclear strategy has long rested on the two pillars of a strong deterrent and robust arms control. A good-faith effort to engage Russia and China—even if rebuffed—would be a strong signal that the administration had linked its modernization program to a solid arms control agenda and thereby increase domestic bipartisan support for both. Furthermore, given the growing momentum behind the Treaty on the Prohibition of Nuclear Weapons, and the strength of anti-nuclear parties in some key US allies, rejection by Russia and/or China of US good-faith arms control entreaties could demonstrate that the United States is the good actor when it comes to the mitigation of global nuclear threats.

## CONCLUSION

This issue brief recommends a path for the Biden administration's nuclear posture review that could, at the same time, reduce the role of nuclear weapons, modernize the nuclear triad while adapting to the current international security environment, and maintain the long-standing bipartisan consensus on US nuclear policy and posture. If the recommendations seem to reaffirm the path previously chosen by the Obama and Trump administrations, it is because the current and predicted future security environments simply do not allow for major policy or posture excursions at this time.

Reducing the role of US nuclear weapons in US national security strategy is not entirely up to the president. To be sure, the president can make it the stated policy of the United States, but whether that reduced role is recognized by allies and adversaries is another matter. Allies, still, will want to be assured by the US nuclear umbrella, so, for them, there remains an important role for nuclear weapons. Adversaries will determine what role nuclear weapons will play in their own national security regardless of US policy, and clearly that role seems to be gaining salience in Russia, China, North Korea, and perhaps other nations as well.

As this brief suggests, the president can try to reduce the role of nuclear weapons by taking steps to ensure the conditions are such that nuclear weapons do not come into play. This means maintaining a strong nuclear force to deter challenges at the outset, exploring the integration of nuclear with other nonnuclear capabilities that may help prevent conventional wars from escalating to nuclear wars, protecting the nation against rogue-state ballistic missile attack, and re-energizing arms control and other nuclear risk-reduction processes. It is an approach that seeks to maintain bipartisan support by combining deterrence with arms control to reduce nuclear dangers.

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40 Paul McLeary, "Mattis Wants Sub-Launched Nuclear Cruise Missile to Curb Russia," USNI, February 6, 2018, <https://news.usni.org/2018/02/06/mattis-wants-sub-launched-nuclear-cruise-missile-curb-russia>.

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