Hearing on
"Nuclear Deterrence Policy and Strategy"

Written Testimony by

Dr. Matthew Kroenig

Deputy Director, Scowcroft Center for Strategy and Security, Atlantic Council
Professor, Department of Government and School of Foreign Service, Georgetown University
Former Senior Policy Adviser, Office of the Secretary of Defense

Strategic Forces Subcommittee
Senate Armed Services Committee

June 16, 2021

Chairman King, Ranking Member Fischer, thank you for the opportunity to appear before the Subcommittee on Strategic Forces to discuss U.S. nuclear deterrence strategy and policy.

US nuclear weapons play a special role in underpinning international peace and security and the US-led, rules-based international system. The nuclear threat to the United States and its democratic allies is growing, as nuclear-armed, revisionist, autocratic powers (Russia, China, and North Korea) are relying more on nuclear weapons in their strategies and are modernizing and expanding their arsenals. This means that the United States needs to retain a robust, flexible, and modernized nuclear force to meet its national security objectives.

The Special Role of US Nuclear Weapons

US nuclear strategy is an important, but widely misunderstood subject. Many do not appreciate the special role played by US nuclear weapons. US nuclear weapons are distinctive for three reasons.[1] First, unlike other countries, the United States uses its nuclear weapons not only to defend itself, but also to protect the entire free world. The United States extends nuclear deterrence to over thirty formal treaty allies in Europe and the Indo-Pacific. These allies depend on US nuclear weapons for their security. This extended deterrence policy advances US interests by ensuring stability in the world's most important geopolitical regions – countries protected by US nuclear weapons include the world's best-governed democracies and combine to make up almost 60 percent of global GDP.[2] By extending nuclear deterrence to its allies, the United States also prevents the spread of the world's most dangerous weapons by

[1] This testimony draws heavily on Matthew Kroenig, *The Logic of American Nuclear Strategy: Why Strategic Superiority Matters* (New York: Oxford University Press, 2018).
[2] Ash Jain and Matthew Kroenig, *Present at the Re-Creation: A Global Strategy for Revitalizing, Adapting, and Defending a Rules-Based International System*, Atlantic Council Strategy Paper, December 2019.

dissuading these countries from building independent nuclear arsenals. The Biden administration has rightly made strengthening alliances and the US-led, rules-based international system a policy priority.[3] A strong US nuclear deterrent is a (perhaps the) central pillar of the US alliance network and the rules-based international system.

US nuclear weapons are special for a second reason: the United States practices counterforce nuclear targeting. Other countries, such as China, are believed to practice counter value targeting. In other words, in the event of a nuclear war, China would employ its nuclear weapons against US population centers with the goal of slaughtering as many innocent civilians as possible. In contrast, the United States plans to use its nuclear weapons only against legitimate military targets, such as: enemy nuclear forces and bases, command and control nodes, and leadership sites. The United States practices counterforce targeting for legal, ethical, and strategic reasons. As President Obama made clear in his 2013 nuclear employment guidance to the Department of Defense, a counterforce targeting strategy helps the United States remain in compliance with the Law of Armed Conflict, which requires countries to distinguish between military and civilian targets.[4] It also helps the United States to meet its goal of "achieving objectives if deterrence fails."[5] The primary purpose of US nuclear weapons is to deter nuclear attack, but, if deterrence were to fail, the United States would not simply accept "mutually assured destruction." Counterforce targeting potentially allows the United States to destroy enemy nuclear weapons before they can be used against the United States or its allies, limiting damage and potentially saving millions of lives.

A counterforce targeting policy has important implications for nuclear force sizing. If the United States pursued a countervalue policy designed to kill large numbers of innocent civilians in Beijing and Moscow, then a small nuclear arsenal might suffice. A counterforce policy, however, requires the United States to possess sufficient numbers of nuclear weapons to cover the nuclear-related targets (missile silos, naval bases, air bases, command and control nodes, leadership sites etc.) in Russia, China, and North Korea. Moreover, military planners are cautious. When planning something as important as destroying an enemy nuclear system, one does not want to miss. Outside analysts, therefore, often assume that the United States should plan to allocate two offensive nuclear warheads against each enemy nuclear target.[6] Indeed, in my 2018 book, I used open source information to count the number of nuclear-related targets in Russia, China, and North Korea and multiplied by two. I came up with a number just over 2,000, which is roughly the size of the US nuclear arsenal today.[7]

Third, US nuclear weapons are unique because the United States can afford it. Other countries, such as France and China in the past, settled for a smaller nuclear force because they could not hope to build a superpower nuclear arsenal.[8] The United States, on the other hand, has possessed

[3] *Interim National Security Strategic Guidance*, The White House, March 2021.
[4] *Report on Nuclear Employment Strategy of the United States*, Office of the Secretary of Defense, 2013.
[5] *Nuclear Posture Review*, Office of the Secretary of Defense 2018; and Report on Nuclear Employment Strategy 2013.
[6] Keir Lieber and Daryl Press, "The End of MAD: The Nuclear Dimension of US Primacy," *International Security*, Vol. 30, No. 4 (Spring 2006), pp. 7-44.
[7] Kroenig, *The Logic of American Nuclear Strategy*, p. 202.
[8] Matthew Kroenig, "The History of Proliferation Optimism: Does it Have a Future?" *Journal of Strategic Studies,* Vol. 38, No. 1-2 (2015): pp. 98-125.

the world's largest and most innovative economy since the beginning of the nuclear age. It has been able to field a robust nuclear force at a reasonable cost. Indeed, current planned nuclear weapons modernization efforts are expected to make up only around 5% of the US defense budget.

In sum, the United States demands more of its nuclear weapons than other countries and, therefore, requires a more robust force. As US President John F. Kennedy put it in 1961, the United States needs a nuclear arsenal "second to none."[9]

The Deteriorating International Security Environment

The international security environment for the United States and its allies has deteriorated over the past decade as autocratic, great power competitors, Russia and China, have pursued more aggressive, revisionist foreign policies.[10] The U.S.'s three nuclear-armed adversaries, Russia, China, and North Korea are all modernizing and expanding their nuclear arsenals and relying more on nuclear weapons in their defense strategies.

Russian revisionism, including its conventional aggression and nuclear buildup, poses a serious threat to the security of the United States and its NATO allies. In recent years, Russia has invaded its neighbors, projected military force into distant regions, threatened the United States and NATO, and meddled in Western elections. At the same time, Russia is expanding and modernizing its nuclear arsenal.[11] Even as it complies with the New START Treaty, Moscow builds up categories of nuclear weapons not covered in the Treaty, including battlefield and so-called exotic nuclear weapons.[12] This unconstrained buildup arguably gives Russia a quantitative and some qualitative nuclear advantages over the United States. Russia regularly employs its nuclear weapons as a backstop to coercion and aggression. It is likely that in the event of a major conflict with the United States or NATO, Russia would use, or threaten to use, nuclear weapons in a bid to terminate the conflict on terms favorable to Moscow.[13]

China's rise and assertive and revisionist foreign policy poses the greatest threat to US national security and the US-led, rules based international system.[14] Beijing is also rapidly expanding its nuclear capabilities. The Defense Intelligence Agency has estimated that China's nuclear forces will at least double within the next decade and Admiral Charles Richard, commander of US Strategic Command, has predicted that the Chinese arsenal might triple or quadruple.[15] China

[9] Remarks of Senator John F. Kennedy in the United States Senate, Monday, February 29, 1960, JFK Library and Museum.
[10] 2017 NSS; Matthew Kroenig, *The Return of Great Power Rivalry: Democracy versus Autocracy from the Ancient World to the US and China* (New York: Oxford University Press, 2020).
[11] Matthew Kroenig, "The Renewed Russian Nuclear Threat and NATO Nuclear Deterrence Posture," Atlantic Council Issue Brief, February 2016.
[12] Matthew Kroenig, Mark Massa, and Christian Trotti, "Russia's Exotic Nuclear Weapons and Implications for the United States and NATO," Atlantic Council Issue Brief, March 2020.
[13] Matthew Kroenig, *A Strategy for Deterring Russian De-escalation Strikes*, Atlantic Council Issue Brief, April 2018.
[14] Matthew Kroenig and Jeffry Cimmino, "Global Strategy 2021: An Allied Strategy for China," Atlantic Council Strategy Paper Series, December 2020.
[15] Robert P. Ashley, Jr., "Russian and Chinese Nuclear Modernization Trends," Remarks at the Hudson Institute, May 29, 2019; Charles A. Richard, "Forging 21st-Century Strategic Deterrence," *Proceedings*, February 2021.

also maintains a large arsenal of nuclear-capable short, medium, and intermediate-range missiles, providing Beijing a theater nuclear advantage in the Indo-Pacific.[16] China's nuclear buildup threatens the US goal, articulated in the 2018 US National Defense Strategy of maintaining a favorable regional balance of power.[17] It also undermines all of the major goals articulated in the 2018 Nuclear Posture Review, including: deterrence, assurance, achieving objectives if deterrence fails, and hedging against an uncertain future.[18] Perhaps most significantly, China's nuclear buildup means that for the first time, the United States will need to plan for two distinct adversaries (Russia and China) with significant nuclear capabilities. China maintains a formal "no first use" policy (NFU), but the Pentagon questions this stated policy and China would likely brandish its nuclear weapons for deterrent and coercive purposes in the event of conflict.[19]

North Korea has become only the third US adversary with the ability to hold the US homeland at risk with the threat of nuclear war. It is estimated that Pyongyang possesses dozens of nuclear warheads and the ability to deliver them against US bases, forces, and allies in the Indo-Pacific.[20] Moreover, North Korea's intercontinental ballistic missiles (ICBMs) can reach Hawaii, Alaska, and much of the continental United States.[21] In the event of a conflict, North Korea would have an incentive to use nuclear weapons early in an attempt to halt a major war and preserve the regime of Kim Jong Un.

Iran does not possess nuclear weapons and US policy should be to prevent Tehran from obtaining them. Nevertheless, Iran possesses a latent nuclear weapons capability and, if US policy fails, Tehran could become a nuclear weapons power in short order. Moreover, like the above countries, Iran has the ability to conduct a variety of nonnuclear strategic attacks against the United States and US forces, bases, and allies and partners.

US Nuclear Posture and Capabilities

To address these threats, the United States needs to maintain a robust, flexible, and modernized nuclear deterrent. The United States should continue with the bipartisan nuclear modernization plan started by President Obama and continued by President Trump. This includes: the Ground Based Strategic Deterrent (GBSD); B21 bombers; the long-range standoff weapon (LRSO); Columbia-class ballistic missile submarines; nuclear command, control, and communications (NC3); and the underlying nuclear enterprise. In addition, the United States should continue with the "supplemental capabilities" called for in the 2018 US Nuclear Posture Review, including the W76-2 low-yield submarine-launched ballistic missile (LYBM) and a modern nuclear sea-launched cruise missile (SLCM-N). These capabilities are important for deterring Russian

[16] *Military and Security Developments Involving the People's Republic of China,* Annual Report to Congress, Office of the Secretary of Defense, 2020.
[17] *Summary of the 2018 National Defense Strategy of the United States of America: Strengthening the American Military's Competitive Edge*, Office of the Secretary of Defense, 2018.
[18] US Nuclear Posture Review, 2018.
[19] *Military and Security Developments Involving the People's Republic of China*, Office of the Secretary of Defense, 2020.
[20] "North Korea's Nuclear Weapons and Missile Programs," In Focus, Congressional Research Service, April 14, 2021.
[21] Ibid.

nuclear "de-escalation" strikes, for redressing nonstrategic nuclear imbalances, and for assuring allies in both Europe and the Indo-Pacific.[22]

In its Interim National Security Strategic Guidance, the Biden administration announced an intention to "reduce the role of nuclear weapons."[23] This statement provides cause for concern. Some have suggested this could be achieved by: reducing the size of the US ICBM force, delaying the purchase of GBSD, or scrapping SLCM-N or LRSO. Shedding these needed US nuclear capabilities would not produce much in the way of meaningful benefits, but they would weaken the US nuclear deterrent, be interpreted as a lack of resolve by US adversaries, and cause US allies to doubt whether Washington intends to live up to its alliance commitments. Instead, the Biden administration should meet its stated objective of reducing the role of nuclear weapons through other more responsible measures, such as by strengthening US conventional capabilities and missile defenses.

Some have also recommended that the United States adopt a NFU, but the United States already has a NFU for the vast majority of states in the international system. Current US policy provides assurances that "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."[24] The US nuclear threat remains on the table, therefore, for only a handful of nuclear-capable adversaries, such as Russia, China, North Korea, and Iran. Adopting a NFU would in practice, therefore, be a move to assure autocratic and revisionist adversaries that they can engage in nonnuclear aggression against the United States and its allies without fear of a US nuclear response. A NFU, therefore, would provide little practical benefit, but it could encourage adversary aggression and undermine assurances to US allies.

Indeed, given the deteriorating security environment, the United States must consider whether additional steps are needed to strengthen the US nuclear deterrent. The current and planned US nuclear force structure was decided in 2010, at a time when the security environment was benign and the risk of nuclear conflict was described as "remote."[25] That is not the security environment we inhabit today. It is hard to imagine that the strategic forces designed for 2010 are still suitable in 2021. As explained above, the US nuclear force should be sized to cover enemy strategic and nuclear targets. As Russian, Chinese, and North Korean nuclear capabilities have grown over the past decade, so too, have the number of targets that US nuclear forces must be able to hold at risk. Congress should require the Department of Defense to conduct an assessment as to whether it can still cover relevant enemy targets with 1,550 strategic deployed nuclear warheads, or whether a quantitative increase might be necessary.

The Russian and Chinese nonstrategic nuclear advantage over the United States and its allies in Europe and the Indo-Pacific, respectfully, provides another reason for concern. The United States does not need to match its adversaries warhead-for-warhead at the nonstrategic level, but it does need a flexible force that includes lower-yield capabilities that can be reliably delivered to targets in theater in order to deter Russian and Chinese limited nuclear strikes. The LRSO,

[22] Kroenig, *A Strategy for Deterring Russian Nuclear De-escalation Strikes*, 2018.
[23] *Interim National Security Strategic Guidance*, White House, March 2021, p. 13.
[24] Nuclear Posture Review, 2018, p. 21.
[25] Nuclear Posture Review Report, Office of the Secretary of Defense, 2010, p. 3.

LYBM, and SLCM-N provide capabilities in this space. Congress should require the Department of Defense to study whether existing capabilities are sufficient to deter the most plausible limited nuclear escalation scenarios with Russia and China or whether additional capabilities are needed to redress the US's nonstrategic nuclear disadvantages.

Arms Control and Nuclear Nonproliferation

The United States should also seek to address the threats posed by adversary nuclear programs through arms control and nonproliferation. A new arms control agreement with Russia should incorporate all nuclear weapons, including those not covered in New START. If arms control is to be meaningful in the twenty-first century, then China must be brought into the fold.[26] It will be difficult to reach new, binding arms control agreement with these countries in the near term, however, so the United States should begin with smaller steps, such as strategic security dialogues. The United States should continue to pursue nonproliferation policies to denuclearize North Korea and prevent Iran from acquiring nuclear weapons.

Conclusion

As the above analysis makes clear, if the United States were willing to abandon its alliance commitments, ignore international law, and pursue a more isolationist foreign policy, then it could afford to make deep cuts to its nuclear arsenal and maintain only a minimum deterrent. So long, however, as the United States wants to continue to play its traditional international leadership role, comply with the Law of Armed Conflict, and defend its allies and the rules-based international system, then it will continue to require a robust nuclear deterrent.

Thank you again for the opportunity to testify today, and I look forward to your questions.

[26] Matthew Kroenig and Mark J. Massa, *Toward Trilateral Arms Control: Options for Bringing China into the Fold*, Atlantic Council Issue Brief, February 2021.