



PROCEEDINGS

A NEW STRATEGIC REVIEW FOR A NEW AGE: 2025

The remarks below were delivered at a symposium on “A New Strategic Review for a New Age: 2025” hosted by the National Institute for Public Policy on August 26, 2025. The symposium highlighted a new National Institute study that examined how the United States should adapt its deterrence policies and forces to meet the looming threats posed by adversaries seeking to overturn the existing global order.

Keith B. Payne

Keith B. Payne is President of the National Institute for Public Policy and previously served as Deputy Assistant Secretary of Defense for Forces Policy.

Thank you Dave, and thanks to all who have joined us today for another of National Institute’s online seminars.

Dave Trachtenberg typically moderates these seminars, and does a great job of it. I will host today’s seminar because Dave is a speaker, and it is too much to ask to simultaneously serve on the panel and moderate.

I will offer a few opening remarks and then we will hear from today’s panel of speakers in alphabetical order.

- Frank C. Miller
- ADM Charles Richard
- Tom Scheber
- Mark Schneider, and
- David Trachtenberg

I would like to start by noting that, for decades, every new Presidential Administration has sought to put its mark on U.S. nuclear deterrence policies and capabilities. New Administrations like to give new names to their deterrence policies, but continuity is the real hallmark of U.S. nuclear deterrence policy. Most recently, the Biden Administration gave us “integrated deterrence,” which in fact, introduced nothing truly new beyond the name.

In anticipation of a new Administration taking office in 2025, my colleagues and I began working in late 2024 on a strategic review.

The results of this study were published last month in a report entitled, *A New Strategic Review for a New Age*. The goal of this study is to *help inform the New Administration and Congress* with regard to the looming nuclear threat environment and U.S. options for sustaining nuclear deterrence.

Contributors to this study effort included:

- General Kevin P. Chilton, USAF (Ret.)
- Michaela Dodge
- Robert Joseph
- Mitch Kugler
- Frank C. Miller



- ADM Charles Richard
- Thomas Scheber
- Mark B. Schneider, and
- David J. Trachtenberg

I would like to thank each of these outstanding experts for their contributions to this study.

I will take just a few minutes to provide a 50,00-foot overview of the study's main points, after which we will hear more from our great panel of speakers.

We are fortunate today to have several members of this study team here to discuss the report.

The starting point for this study is the reality that the contemporary U.S. plan for nuclear force modernization and the New START Treaty was established at a time when American officials generally believed that U.S. relations with Russia and China were relatively benign and would *improve further*. They also believed that nuclear weapons and deterrence were of greatly diminishing value. That deeply mistaken backdrop was the context for the existing U.S. nuclear modernization program.

History has instead given us a nuclear threat environment that is much worse than was expected in 2010. The question before us is whether and how the Trump Administration will now adjust the current nuclear modernization program for the reality of an unexpectedly dangerous threat environment.

Washington essentially now has three options:

1. It can lower its current definition of what is necessary for deterrence and happily announce that the current modernization program is *adequate or much more than is needed*. This is the “less is enough” approach preferred by many (I call this the “Minimum Deterrence” school solution).

Or,

2. Washington can maintain its long-standing definition of adequacy and hope against hope that deterrence simply is not tested while we await the replacement systems coming online. This is the “do-nothing new” path preferred by many.

Or,

3. Washington can move forward urgently to strengthen the U.S. deterrence position. This is the “do more now” approach suggested by the 2023 Strategic Posture Commission. (I call this the Herman Kahn school solution).

Our recently released study concludes that this third option is the *most prudent given* Chinese, Russian and North Korean goals and posturing over the past decade. As Winston Churchill said, “occasionally, you have to take the enemy into account.”

Unfortunately, given the past four decades of deep U.S. strategic and non-strategic force reductions, and the atrophying of the U.S. nuclear infrastructure, the United States is limited

in its near-term capacity to strengthen its nuclear force posture by the number of available strategic bombers, missiles and warheads.

Today, the United States reportedly has ~1,660 deployed strategic nuclear weapons. With this level of capability, even with the planned U.S. force replacement program, the United States likely cannot fully hold at risk Russian and Chinese targets related to deterrence, particularly given Beijing's new nuclear force expansion and construction of underground facilities.

Nuclear force upload, which Mark Schneider will discuss in greater detail, is the timely, low-cost option for strengthening deterrence in the near term. In fact, nuclear upload is likely the only way America can adequately enhance the strategic nuclear force size and flexibility needed to tailor deterrence in the near term.

The entire U.S. strategic nuclear triad could be uploaded before the first element of the planned modernization program becomes operational. *Upload is not a substitute for the modernization program* as the existing Triad is aging out rapidly, but it may be critical for deterrence in the near term.

Upload, even under the limits of New START, could provide ~2,200 warheads. If not constrained by New START, the U.S. could have a deployed strategic ballistic missile force of ~2,626 warheads—depending upon decisions related to necessary missile range and the required number of single warhead missiles. Additionally, bomber weapons could be somewhat increased via uploading.

The cost of upload would likely be quite modest. An August 2020 report of the Congressional Budget Office concluded that: 1) expanding nuclear forces to the Moscow Treaty limit (2,200 warheads) “would not increase the Department of Defense’s (DoD’s) costs relative to its current plans....”; and 2) “Increasing warhead loadings to reach the START II limits [3,500 warheads] would incur about \$100 million in onetime costs for DoD.”

In sum, nuclear weapons upload of legacy and eventually replacement forces is a near-term option. To do otherwise will be to risk that the planned nuclear modernization program will be too slow and too limited for confident deterrence in a rapidly worsening threat environment.

There are several actions the Congress should take promptly with respect to the upload of nuclear weapons. Dave Trachtenberg will discuss these in more detail shortly.

What about arms control in this context? Some former U.S. officials continue to claim that arms control can solve or help to solve the current threat challenges. This is no surprise; Americans typically want to solve nuclear threat problems via arms control.

Yet, as Dave Trachtenberg also will discuss, China, Russia, North Korea, and Iran are not interested in “stability.” They seek a new world order at the expense of the United States and allies. As long as this authoritarian Axis continues to view the United States as the impediment to their drive to reorganize the world order, it is simply naive to expect them to accept meaningful limitations on the military means that undergird their drive to reorder the globe. To expect otherwise would be to repeat dangerous past mistakes, such as President George H.W. Bush’s PNI initiatives.

What about missile defense in this context? Missile defense is no substitute for offensive capabilities that can hold at risk what opponents value.

But, moving now progressively to protect U.S. nuclear retaliatory capabilities, including nuclear command, control, and communications, is an urgent priority. The more effectively the United States provides this protection, the more able it will likely be to deter war—there are no trade-offs in this regard.

Critics of homeland missile defense are now repeating the same arguments I have heard since the 1960s: 1) Homeland defense cannot work; 2) homeland defense will destabilize deterrence; and 3) homeland defense will cause our opponents to arms race. These arguments have driven U.S. missile defense policy for decades.

But for all their repetition and policy influence, these arguments are demonstrably bogus or logically incoherent in the contemporary threat context. 1) Homeland defense likely *can work* in extremely helpful ways for deterrence and if deterrence fails; 2) homeland defense will likely *strengthen* deterrence in most plausible scenarios; and 3) our opponents have been arms racing for a decade or more for their own reasons in the context of a minimalist U.S. strategic defense capability—U.S. homeland defense now hardly is the cause of their racing.

Finally, our study examines the nuclear infrastructure. Tom Scheber will discuss this in some detail shortly. I will simply conclude by noting that the responsive infrastructure emphasized over two decades ago in the 2001 NPR is still years—perhaps a decade—away. Significant improvements are needed if it is to be capable of its mission.

That is a 50,000-foot summary of our study. I would like to invite Frank Miller to provide his comments. Frank served generously as a Senior Reviewer. Frank, the virtual floor is yours.

Franklin Miller

Franklin Miller is former Senior Director for Defense Policy and Arms Control on the National Security Council Staff.

I want to begin by congratulating Keith Payne and his NIPP team on the publication of “A New Strategic Review for a New Age: 2025.” It is extremely timely, hits the target squarely, and will, I hope, be taken up by the Trump Administration as a guide for how to act and progress over the next three and a half years...and especially the next five and some months leading up to what many of us hope is the burial of the Russian-violated and no longer useful New START Treaty.

I view “A New Strategic Review” as the most recent step in an intellectual journey which began with the October 2023 report of the bipartisan, congressionally mandated, Strategic Posture Commission, and then progressed with the Biden Administration’s Presidential Nuclear Targeting guidance of fall 2024. The journey began with the critical recognition,

which the NIPP report concurs with, that we must today deter Russia and China simultaneously (as well as maintaining a reserve for rogue states like North Korea).

At a more granular level, there are a number of points and recommendations I want to call out specifically for special emphasis and importance:

- The difference between a desired force posture to deal most effectively with the simultaneous deterrence threat and what is likely to be practicable in the near term.
- The need to identify near-term actions and decisions that could help adjust the posture rapidly to the extent feasible.
- The fact that upload of D-5's and Minuteman III's is advantageous and timely and necessary but it is not a substitute for modernization.
- We should fund and proceed as rapidly as possible to proceed with D-5 upload, back-filling the D-5 tubes removed from strategic service due to New START, upload Minuteman III, and reconvert B-52s removed from the nuclear role due to New START back to nuclear use.
- We should declare that the United States will build a minimum of 15 new Columbia SSBNs, increase the B-21 buy to a minimum of 150 aircraft, increase the Long-Range Stand Off (LRSO) buy such that every Air-Launched Cruise Missile (ALCM) hook on a B-52, B-2 and B-21 has an LRSO matched to it.
- We must take steps to accelerate the SLCM-N IOC and initiate design, development, and fielding of a stand-off nuclear system for the F-35.
- We should proceed with a multi-layered (including space-based) Golden Dome defense to raise the cost of enemy ballistic and air-breathing attack on the United States and our allies and to protect against all but massive strikes.
- We must challenge the arms control community to advance cogent, meaningful, and thoughtful arguments for new agreements. Their canonical ones: to prevent arms races and to maintain guardrails are shopworn and indeed bankrupt.

I believe the NIPP report covers all of these bases, and I urge the Administration to embrace it and implement its decisions rapidly and expeditiously.

Thomas Scheber

Thomas Scheber is former Director of Strike Policy and Integration, Office of the Secretary of Defense.

I will start with a bit of background.

Until it was shut down in 1989, the DOE nuclear warhead infrastructure had been continuously active for over forty years and had produced tens of thousands of nuclear warheads. By most accounts, it was a highly successful industrial enterprise. Since 1989, the United States has not produced a single nuclear warhead.

The 2001 *Nuclear Posture Review* called for deep reductions in the size of the nuclear force in combination with the revitalization of the nuclear infrastructure.

The role of the responsive infrastructure was defined as being ready to assess the reliability of the U.S. nuclear warheads, to evaluate the nuclear arsenals of adversaries, and to respond with warhead life extension programs, other modifications, or new designs in a timely manner.

In 2015, John Harvey and I wrote a report on our assessment of the Responsive Infrastructure. That report is available on the NIPP web site.

That assessment found significant shortcomings in the infrastructure at that time—both in the revitalization of industrial facilities and in the balance of technical programs at the Laboratories. We identified specific steps to remediate those deficiencies.

The responsive infrastructure section of this new report builds on the 2015 assessment. It finds that the deficiencies identified in 2015 still exist and need remedial action.

What can the reader expect to find that is new? I will mention three areas that may be of interest.

First, the report provides a short section on government decisions, which seemed appropriate at the time, but which have broken the previously successful industrial model for building warheads.

Let me briefly explain:

- In 1989, after over four decades of continuous operation, the nuclear warhead production infrastructure of the United States was shut down due to regulatory non-compliance at the plutonium pit fabrication plant in Rocky Flats, Colorado. Without newly produced pits, everything in the warhead production complex came to a halt.
- In 1991, since the production complex was idle, a reconfiguration plan was devised, and some infrastructure missions were transferred to other sites; some sites were permanently closed and many skilled workers retired.
- Next, the primary mission of this enterprise was changed from replacing older warheads with newly produced warheads at planned end of service life and implementing a new mission—life-extending aging warheads.
- And in 1992, nuclear testing ceased. Testing was, and still is, the only way to demonstrate conclusively that each type of warhead functions as expected.

In addition, the office tasked with coordinating the fabrication of warhead components, shipping, and assembling complete nuclear warheads was disestablished.

Second, the second major topic discussed in this new report contains a list of key infrastructure capabilities that are needed for a responsive infrastructure and describes the current status of each. This section of the report will be perhaps the most familiar to readers.

The assessment concludes that the industrial infrastructure needed is still years—perhaps a decade—away.

The report identifies actions still needed to complete modernizing industrial facilities. All are important. Some are urgent.

Actions listed as urgent deal with:

- **Plutonium processing and fabrication:** proceed with greater urgency to achieve an operational pit fabrication capability at Los Alamos; accelerate the second fabrication site at the Savannah River Site (SRS); and develop plans for each site to be able to scale-up plutonium pit production quantities in a timely manner.
- **Nuclear test readiness:** survey test readiness capabilities and take immediate corrective action to restore a readiness capability to conduct a fully instrumented nuclear test within two years; also, appropriate funds for test readiness and keep the funding in an “escrow” account to be used, when needed, to begin test preparations.
- **DoD and NNSA Program Integration:** The W93 warhead development program presents a unique opportunity to get the entire NNSA infrastructure up and running in coordination with DoD. The following actions will have to be completed and integrated:
 - Warhead development and production (by NNSA)
 - New reentry vehicle development for SLBMs (by DoD)
 - DoD/NNSA integration

This will be the first opportunity in almost forty years for all elements of the industrial enterprise, as well as DoD, to work together and produce a new nuclear warhead.

Third, the report addresses the question: **So What! Why is this issue so important at this time? The U.S. has gotten by with a partially functional infrastructure for over 35 years. What is the urgent concern now?**

This new report describes why achieving a functionally responsive infrastructure has become increasingly important at this time and why getting the infrastructure fully up and running is not likely to be achieved smoothly even after all facility modernization is completed.

1. **How nuclear weapons work:** Unlike the operation of conventional explosives, the successful operation of a nuclear warhead design currently in the U.S. inventory involves precise timing, successful generation of both fission and fusion reactions in the weapon primary, and transfer of x-rays, and fusion in the secondary. All must occur as designed within one ten-thousandths of a second while the warhead is blowing itself up. There are many possible ways in which these sophisticated designs could fail.

Eventually life extension of existing warheads will no longer be feasible due to aging and multiple modifications, and the old warheads will have to be replaced with

newly built ones. A fully operational infrastructure, including nuclear testing, will be important to respond and be ready to respond to future needs.

2. **Russia and China:** In the 1990s, the United States was so far ahead of Russia and China in its ability to design and produce nuclear warheads that a challenge from either was viewed as inconceivable. However, in 2025, U.S. capabilities have atrophied while Russian and Chinese infrastructure capabilities have been modernized and have been fully active for decades. Currently, U.S. capabilities are inferior in many ways to those of both Russia and China.
3. **Industrial best practices:** Lessons from other industries indicate that restarting the U.S. production complex for nuclear warheads after thirty-five years may be more difficult than anticipated.

I have read a number of analyses regarding the aircraft production industry and the problems that have been identified at Boeing's enterprise. I was struck by the parallels between identified causes of problems at Boeing and similar patterns in the warhead industry. For example, the corporate culture of the leadership at Boeing changed significantly after Boeing's 1997 merger with McDonald-Douglas—from a leadership culture that demanded engineering excellence to one driven by cost efficiencies.

Similarly, the culture of the leadership of the nuclear complex has also changed significantly since it was shut down in 1989. In the past, the nuclear complex was managed by designers, engineers, and production experts with years of experience in the industry. It is now driven primarily by analysts and computer simulation personnel that have never designed and produced a new nuclear warhead.

Other parallels with industry are discussed in the report.

Mark B. Schneider

Mark B. Schneider is former Principal Director for Forces Policy, Office of the Secretary of Defense.

In 2024, the Biden Administration pointed publicly to the Russian, Chinese and North Korean nuclear force buildups and the potential need to strengthen U.S. nuclear capabilities in response to these threats, although it left the decision to the incoming Trump Administration.¹ Particularly troubling, the United States may have significantly underestimated Russian and Chinese nuclear capabilities.

¹ Pranay Vaddi, "Adapting the U.S. Approach to Arms Control and Nonproliferation to a New Era," Arms Control Association, June 7, 2024, available at <https://www.armscontrol.org/2024AnnualMeeting/Pranay-Vaddi-remarks>.
"Nuclear Threats and the Role of Allies': Remarks by Acting Assistant Secretary of Defense for Space Policy Dr. Vipin Narang at CSIS," August 1, 2024, available at

Moscow has been in violation of the New START Treaty since 2022 when it refused to allow Treaty-required on-site inspections (which are critical to warhead counting) and in 2023 Putin illegally “suspended” the entire Treaty.² The extent to which Russia may have covertly uploaded its strategic nuclear forces is uncertain since the last New START Treaty on-site inspection happened in March 2020 and Russian strategic nuclear forces may have been covertly uploaded.³

Contemporary U.S. plans for the modernization of nuclear forces are an approximately 15-year-old legacy of the Obama Administration and they are moving slowly.⁴ While the basic U.S. approach to nuclear deterrence has not significantly changed for decades, Washington’s ability to implement it has drastically declined due to the combination of deep U.S. nuclear weapons reductions and the expansion of opponents’ nuclear and other military forces, particularly China.⁵

Today, the United States reportedly has ~1,660 deployed strategic nuclear weapons.⁶ With this level of capability, even with planned U.S. force modernization, the United States likely cannot fully hold at risk Russian and Chinese targets related to deterrence.⁷ Absent U.S. action, the situation will get worse.

Nuclear force upload is an advantageous and timely option for deterrence purposes and is the only near-term option relevant to the possibility of a 2027 Chinese attack on Taiwan and a coordinated or opportunistic Russian attack on NATO. Significant U.S. upload now requires prompt U.S. withdrawal from the expiring (in February 2026) New START Treaty. Given New START’s limit on accountable deployed warheads (1,550), the United States can upload its strategic missile force by only 131 warheads using the last available U.S. deployed START-accountable warhead number which is from 2023.⁸

The potential upload, even under the limits of New START, would provide ~2,200 warheads. Absent New START limits, the Trident SLBM force reportedly could be uploaded in months and the Minuteman ICBM force in about three to four years. In the past, the

<https://www.defense.gov/News/Speeches/Speech/Article/3858311/nuclear-threats-and-the-role-of-allies-remarks-by-acting-assistant-secretary-of/>.

² U.S. Department of State, Office of the Spokesperson, “Russian Noncompliance with and Invalid Suspension of the New START Treaty,” Fact Sheet, June 1, 2023, available at <https://2021-2025.state.gov/russian-noncompliance-with-and-invalid-suspension-ofthe-new-start-treaty/>.

³ Mark B. Schneider, “Red Flag: State Department Report on Russian New START Treaty Compliance,” *Real Clear Defense*, February 3, 2025, available at https://www.realcleardefense.com/articles/2025/02/04/red_flag_state_department_report_on_russian_new_start_treaty_compliance_1089158.html.

⁴ See the discussion in, Keith B. Payne and John S. Foster, Jr., *A New Nuclear Review for a New Age* (Fairfax, VA: National Institute Press, 2017), p. 22, available at <https://nipp.org/wpcontent/uploads/2021/03/A-New-Nuclear-Review-final.pdf>.

⁵ Mark B. Schneider and Keith B. Payne, *Tailored Deterrence and Low-Cost Nuclear Weapons Upload* (Fairfax, VA: National Institute Press, 2025), p. 9, available at <https://nipp.org/wp-content/uploads/2025/07/Vol.-5-No.-6.pdf>.

⁶ Hans M. Kristensen, Matt Korda, Eliana Johns and Mackenzie Knight, “United States nuclear weapons 2025,” *Bulletin of the Atomic Scientists*, March 2025, Vol. 81, No. 1, p. 53, available at <https://doi.org/10.1080/00963402.2024.2441624>.

⁷ Schneider and Payne, *Tailored Deterrence and Low-Cost Nuclear Weapons Upload*, op. cit., p. vi.

⁸ *Ibid.*, p. 16.

bomber force could be uploaded in a matter of weeks. However, a 2007 decision eliminated all but 528 nuclear ALCMs (now reduced by almost 20 years of testing) and all Advanced Cruise Missiles. It has drastically reduced upload potential.

Even with the large funding increases for the B-21 program in the Big Beautiful Bill, it is unlikely that a significant number of B-21s would be available by 2027, the date of a possible Chinese invasion of Taiwan, and the IOC for the rest of the modernization program is 2030 or later and is behind schedule.⁹

Under New START limits, the modernization program, while essential, will not substantially increase the number of U.S. deployed nuclear weapons except for bomber weapons.¹⁰ A few hundred more bomber weapons could probably be added but this means little unless we restore the ability to maintain a bomber alert.¹¹

At this point, nuclear weapons upload is likely the only way America can adequately enhance the force size and flexibility needed to tailor deterrence in the near term for the prevention of great power conflict, including major aggression against U.S. allies.¹²

Absent New START limits, with uploading, the Trident SLBM force reportedly could increase from ~960 to ~1,626 deployed warheads and the Minuteman ICBM force could increase from about 400 to ~1,000 deployed warheads, for a deployed strategic ballistic missile force of ~2,626 warheads.¹³ (Maximum SLBM upload would be 1,920 but this is unlikely because of range reduction.)¹⁴ Additionally, there will be several hundred bomber weapons which could be somewhat increased via uploading.

The number of warheads could be somewhat higher or lower than these estimates depending upon decisions related to necessary missile range, warhead footprint and the required number of single warhead missiles.¹⁵

The cost of upload to about 3,500 warheads would be quite modest—largely transportation and warhead installation. An August 2020 report of the Congressional Budget Office (CBO) concluded that: 1) expanding nuclear forces to the Moscow Treaty limit (2,200) warheads “would not increase the Department of Defense’s (DoD’s) costs relative to its current plans...”; and 2) “Increasing warhead loadings to reach the START II limits [3,500 warheads] would incur about \$100 million in onetime costs for DoD.”¹⁶ Moreover, the \$100 million would be spent over a period of several years.

⁹ Madelyn Creedon and Jon Kyl, et al., Congressional Commission on the Strategic Posture of the United States, *America’s Strategic Posture, The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Alexandria, VA: Institute for Defense Analysis, 2023), pp. 43-49, available at <https://www.ida.org/-/media/feature/publications/a/am/americas-strategicposture/strategic-posture-commission-report.ashx>.

¹⁰ Schneider and Payne, *Tailored Deterrence and Low-Cost Nuclear Weapons Upload*, op. cit., pp. 16-17.

¹¹ *Ibid.*, pp. 26-27.

¹² *Ibid.*, p. 40.

¹³ *Ibid.*, pp. vii, 17.

¹⁴ *Ibid.*, p. 21.

¹⁵ *Ibid.*, p. viii.

¹⁶ Congressional Budget Office, “The Potential Costs of Expanding U.S. Strategic Nuclear Forces If the New START Treaty Expires,” August 2020, available at <https://www.cbo.gov/system/files/2020-08/56475-START.pdf>.

U.S. strategic nuclear forces could be fully uploaded before the first element of the planned modernization program becomes operational, which is not being pursued with urgency.

The planned 12 Columbia-class submarines will carry fewer missiles than the 14 Trident submarines and, according to STRATCOM Commander General Anthony Cotton, are “...the absolute minimum required to meet [the] strategic guidance.”¹⁷ To support deterrence now, some of the bombers should be put on alert to increase U.S. force survivability and resilience. There is a need to increase capabilities against hard and deeply buried targets. Both upload and modernization are necessary. Upload is the only near-term option.¹⁸

To deter adversaries that are increasingly deploying nuclear forces geared for warfighting, the United States needs diverse capabilities, including variable yield systems. Upload can help. Retention of the B83 and W88 weapons would also help. High delivery accuracy also increases deterrence strategy adaptability and targeting flexibility. We need higher accuracy than in the legacy program.¹⁹

Russia has a “vast arsenal of non-strategic nuclear weapons.”²⁰ Most estimates range from about 2,000 to 10,000.²¹ In February 2024, General Cotton said China “...has approximately 1,000 medium- and intermediate-range dual-capable... ballistic missiles....”²² China may also possess nuclear-capable cruise missiles, short-range ballistic missiles, and gravity bombs.²³

The United States needs more non-strategic nuclear capability for credible extended deterrence purposes. A straight-line projection of the Pentagon’s estimates over the last four years would result in about 900 Chinese nuclear warheads by 2027, and this may be a low estimate. There is serious funding for the development of SLCM-N in the Big Beautiful Bill. The use of TLAM Block 5 SLCM could substantially speed up availability.²⁴

¹⁷ Senate Armed Services Committee, “Statement of General Anthony J. Cotton,” March 26, 2025, p. 10, available at https://www.armed-services.senate.gov/imo/media/doc/testimony_of_general_anthony_jcotton2.pdf.

¹⁸ Schneider and Payne, *Tailored Deterrence and Low-Cost Nuclear Weapons Upload*, op. cit., pp. 28-30.

¹⁹ *Ibid.*, pp. 32-33.

²⁰ Office of Director of National Intelligence, *Annual Threat Assessment of the U.S. Intelligence Community*, March 2025, p. 20, available at <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2025-Unclassified-Report.pdf>.

²¹ Mark B. Schneider, *How Many Nuclear Weapons Does Russia Have? The Size and Characteristics of the Russian Nuclear Stockpile* (Fairfax, VA: National Institute Press, 2023), pp. 189-190, available at <https://nipp.org/wpcontent/uploads/2023/09/Vol.-3-No.-8.pdf>.

²² “Statement of General Anthony J. Cotton,” Senate Armed Services Committee, March 9, 2023, p. 6, available at <https://www.armedservices.senate.gov/imo/media/doc/2023%20USSTRATCOM%20Congressional%20Posture%20Statement%20-%20SASC.pdf>.

²³ Mark B. Schneider, “The Chinese Nuclear Threat,” *Information Series*, No. 599 (Fairfax, VA: National Institute Press, September 26, 2024), available at https://nipp.org/information_series/mark-b-schneiderthe-chinese-nuclear-threat-no-599-september-26-2024/.

²⁴ See the suggestion by Rob Soofer in Sydney J. Freedberg, Jr., “Sublaunched nuclear cruise missile will need ‘an entirely new industrial base,’ warns Navy admiral,” *Breaking Defense*, November 15, 2024, available at <https://breakingdefense.com/2024/11/sub-launchednuclear-cruise-missile-will-need-an-entirely-new-industrial-base-warnsnavy-admiral/>.

There are no U.S. nuclear weapons deployed in the Indo-Pacific region and our ability to rapidly deploy theater nuclear weapons is questionable.²⁵ The congressional Strategic Posture Commission rightly concluded that there is an “urgent need” for U.S. theater nuclear forces to be “deployed or based in the Asia-Pacific theater.”²⁶

It is necessary to give at least one U.S. hypersonic and other INF-range missiles a nuclear capability to enhance extended deterrence and reduce the risk of proliferation.²⁷ In the near term, inexpensive warhead upload may be the only option available option to help sustain nuclear deterrence in the Indo-Pacific.

David J. Trachtenberg

David J. Trachtenberg is Vice President of the National Institute for Public Policy and previously served as Deputy Under Secretary of Defense for Policy.

As has already been noted, our report talks about the importance of uploading weapons on existing platforms in order to help strengthen deterrence in the face of major nuclear weapons expansion programs by both Russia and China. In fact, given the breadth and scope of nuclear weapons modernization by Moscow and Beijing, coupled with the lack over many decades of any commensurate modernization program by the United States, we judge uploading nuclear weapons on existing ICBMs and SLBMs to be the quickest and most cost-effective way to bolster the overall U.S. nuclear deterrent. Our recommendation is also consistent with the 2023 conclusions of the Strategic Posture Commission.

Uploading actions can be taken by Executive Branch decision, but our report also notes that Congress can play an important role in facilitating the process by mandating and providing the necessary funding to proceed with these force enhancements on a timely basis.

The study recommends a number of actions Congress can take to facilitate the upload of U.S. nuclear weapons in ways that strengthen deterrence and extended deterrence. These include requiring official reports to identify U.S. deployed deterrence force requirements, Russian and Chinese upload capability and U.S. response options; ensuring adequate fiscal resources are provided to implement upload decisions and actions; directing expedited infrastructure improvements to meet national requirements; and mandating the

²⁵ Stephen Bryen, “The case for restoring US nukes in East Asia,” *Asia Times*, May 6, 2021, available at <https://asiatimes.com/2021/05/the-case-for-restoring-us-nukes.-in-east-asia/>. See also, Mark B. Schneider, “Does the United States Have Any Real Capability to Forward Deploy Nuclear Weapons Rapidly Outside of NATO Europe?,” *Real Clear Defense*, August 27, 2021, available at https://www.realcleardefense.com/articles/2021/08/27/does_the_united_states_have_any_real_capability_to_forward_deploy_nuclear_weapons_rapidly_outside_of_nato_europe_791788.html.

²⁶ Creedon and Kyl, et al., *The Final Report of the Congressional Commission on the Strategic Posture of the United States*, op. cit., p. viii.

²⁷ Schneider and Payne, *Tailored Deterrence and Low-Cost Nuclear Weapons Upload*, op. cit., p. 39.

reconstitution of a modern hedge stockpile of non-deployed warheads in the event of a further deterioration in the strategic environment.

As the report notes, uploading U.S. delivery systems is the most rapid and effective way to improve the efficacy of the U.S. nuclear deterrent. And the Congress should act expeditiously to implement the actions proposed. Accordingly, the report recommends suspending U.S. implementation of the New START Treaty to allow for upload increases in the number of operationally deployed warheads on strategic delivery vehicles.

Russia's suspension of New START frees Moscow to upload weapons on its delivery systems, and the lack of New START-mandated inspections since 2022 makes it impossible to know whether Russia has already expanded its strategic nuclear forces in this way, which seems likely.

Interestingly, the report's recommendation to suspend U.S. implementation of New START and proceed with uploading seems to have generated significant consternation among arms control advocates. In fact, some of the most vigorous arms control devotees are now calling for a new arms control agreement that prohibits upload.

For example, Rose Gottemoeller, the chief New START negotiator, has proposed a 10-year arms control agreement that would include, in her words, "a ban on upload for the duration of the treaty." Her argument is that if the United States uploads warheads, quote, "Russia might do the same, and a form of arms race could begin."²⁸

Daryl Kimball of the Arms Control Association has called on the United States and Russia to negotiate "a unilateral, reciprocal arrangement that neither will exceed the deployed strategic warhead limit set by New START until a more permanent arms control arrangement comes into effect," because, he contends, "In the absence of such an arrangement, each side could upload warheads on their strategic delivery systems quickly...."²⁹

And the Federation of American Scientists has argued that without a new arms control agreement to follow New START, "both the United States and Russia could potentially increase their deployed nuclear arsenals by uploading several hundred of stored reserve warheads onto their launchers."³⁰

Clearly, our recommendation on uploading appears to be the main concern of arms control advocates and the number one action they wish to prohibit in any future arms control agreement.

Notwithstanding the fact that Russia is likely to have already uploaded warheads, the argument that U.S. actions are the driver of similar adversary reactions and that U.S. strategic

²⁸ Rose Gottemoeller, "Arms Control Is Not Dead Yet: American Should Pursue Parallel Nuclear Negotiations With China and Russia," *Foreign Affairs*, April 15, 2025, available at <https://www.foreignaffairs.com/united-states/arms-control-not-dead-yet>.

²⁹ Daryl G. Kimball, "A Plan to Reduce Nuclear Dangers in a Time of Peril," *Arms Control Today*, July/August 2023, available at <https://www.armscontrol.org/act/2023-07/focus/plan-reduce-nuclear-dangers-time-peril>.

³⁰ Hans M. Kristensen, Matt Korda, Eliana Johns, Mackenzie Knight-Boyle, "United States nuclear weapons, 2025," *Bulletin of the Atomic Scientists*, January 13, 2025, available at <https://thebulletin.org/premium/2025-01/united-states-nuclear-weapons-2025/>.

restraint will result in similar adversary restraint is an often repeated but wholly discredited Cold War theory that is demonstrably false.

In fact, what our report concludes, and what arms control proponents fail to acknowledge, is that no meaningful arms control agreement is possible as long as the parties have diametrically opposed goals and objectives. To paraphrase Clausewitz, arms control, like war, is “the continuation of politics by other means.” In other words, no agreement that serves U.S. national security interests is possible if the other parties to an agreement seek to undermine the very U.S. national security interests that arms control is supposed to protect and safeguard.

Arguments that arms control with Russia and China is necessary “to sustain a stable environment” and that the United States should “convince Beijing that its interests lie in predictability and stability” ignore the fact that neither Moscow nor Beijing are interested in sustaining the “stability” that the United States favors, as that stability—in the eyes of the Russian and Chinese leaderships—relegates them to second-class status on the world stage.

Arms control advocates wrongly assume a commonality of interests and objectives among Washington, Moscow and Beijing. For example, suggesting that arms control now will reverse China’s nuclear ambitions ignores the reality that Beijing’s nuclear buildup underpins its desire to expand its power and influence at America’s expense—a goal that China is unlikely to abandon by agreeing to negotiate arms limitations in the interest of “stability.”

Similarly, decades of Soviet and then Russian arms control cheating, coupled with the massive buildup of Russian nuclear forces and the plethora of nuclear threats expressed by Russian officials, show that Moscow has no interest in “mutual restraint.”

There is no reason to believe Beijing or Moscow have any interest in arms control to facilitate the U.S. definition of “stability.” Rather, they seek to upset the existing world order with assertive behavior and extensive military and nuclear capabilities—the antithesis of stability.

Wishful thinking that they share U.S. goals is more likely to encourage further delays in the necessary and long-overdue U.S. strategic modernization program, further undermining the efficacy and credibility of the U.S. nuclear deterrent, including the U.S. extended nuclear deterrent. It will also generate additional calls to prohibit the necessary upload of U.S. weapons that will help restore credible deterrence in the face of the aggressive nuclear buildups by U.S. adversaries.

As long as Russia and China continue to view the United States as the main impediment to their drive for global supremacy, arms control is destined to fail. It is simply unrealistic to assume that Moscow or Beijing will agree to any meaningful limitations on their respective military buildups, as those buildups underpin their drive for global dominance.

Under these circumstances, the United States must not succumb to the temptation of accepting an agreement that appears attractive but in reality works against U.S. national security interests.

As our study concludes, the American concept of “stability” does not align with the views of Russia or China. The Western desire to maintain the status quo, grounded in norms and

rules of behavior intended to preserve the sanctity of national borders, runs counter to their desire to change the status quo and establish a new world order in their favor. Under these conditions, meaningful arms control that advances American security and national interests is a chimera.

This is one of the new strategic realities in this new age. U.S. policy makers would do well to understand it and to act accordingly to preserve U.S. national security in the face of gathering storm clouds.