

Weekly ICBM EAR Report



Image: Illustration of the Sentinel next-generation ICBM. Credit: Northrop Grumman - Space News

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ICBM EAR Week of July 13th

Prepared by Peter Huessy, President of GeoStrategic Analysis, Senior Fellow, Gold Institute for International Strategy and Senior Fellow, National Institute for Deterrence Studies

Events of Significance

Missile defense breakfast seminar July 24th with Dr. Uzi Rubin, former head of the Israel Office of Missile Defense, speaking at the Capitol Hill Club, 8-9am on the missile threat and missile defense developments in the Middle East.

Rear Adm. Todd Figanbaum relieved Rear Adm. Chris Nash as the commander of COMSUBGRU 9 during a ceremony at Naval Base Kitsap that was attended by USSTRATCOM Commander Adm. Rich Correll.

Farewell to a great friend and wonderful USAF officer and supporter of our ICBM leg of the Triad, Maj Gen Stacy Jo Huser. On July 10th, Maj. Gen. Colin Connor assumed command of Twentieth Air Force from **Maj. Gen. Stacy Jo Huser**, during a ceremony at F.E. Warren AFB.

Commentary and Quotes of the Week

Under Secretary of State for Arms Control and International Security Thomas G. DiNanno: “Great meeting with German Ambassador to the U.S. Jens Hanefeld to discuss a range of security topics, including U.S. extended deterrence in Europe, global nuclear nonproliferation, and counterterrorism.”

Northrop Grumman: “We’ve broken ground on a new building at our Roy Innovation Center campus in Utah, expanding support of the Sentinel program for the @USAirForce.”

Indiana State Senator Gregory J. Goode: Honored to acknowledge the critical work of NSWC Crane and to listen to the inspiring words of leadership from U.S. Navy Admiral Richard Correll.

Lt. Gen. Douglas A. Schiess: China is moving “breathtakingly fast” to develop its counter-space and space superiority capabilities.

US Strategic Developments

Northrop Grumman: “Designed to deter threats for generations to come, Sentinel modernizes the ground-leg of America’s Nuclear Triad. We’re accelerating progress to field this critical capability starting in the early 2030s.”

President Trump: “The Hormuz Strait is OPEN, and will remain OPEN, with or without Iran. We are reinstating THE IRANIAN BLOCKADE, so named because it is only stopping Iran’s ships or customers from entering or leaving. All other countries will have fair and open use of the Strait. The U.S.A. will be, from this point forward, known as ‘THE GUARDIAN OF THE HORMUZ STRAIT.’

NNSA Administrator Brandon Williams: “Achieving startup authorization for the Calcliner Project at @y12nsc is an important step for the overall safety, security, and long-term viability of uranium operations for the nation. President Trump has made it abundantly clear that we need to move faster and safer than ever before and this project demonstrates that we can meet the demands our deterrent mission dictates.”

Lt. Gen. Douglas A. Schiess – The next Chief of Space Operations – warned that China is moving “breathtakingly fast” to develop its counter-space and space superiority capabilities.

U.S. forces expanded their airstrike campaign against Iran on Friday by targeting more bridges, energy sites and a tower at a key Iranian port.

Congressional Strategic Developments

Senate Democrats voted to block consideration of the \$1.15 trillion FY27 defense authorization bill, citing frustration with the Iran war and concerns about the growth in military spending.

Allison Bawden, director of the GAO's Natural Resources and Environment team: "NNSA has lots of exciting scientific equipment—like linear accelerators and huge supercomputers—that it uses to design, assess, and certify the nation's stockpile of nuclear weapons. However, much of it is decades old and needs repair."

President Trump has sent Congress formal notification that hostilities against Iran resumed on July 7, a letter his administration sees as opening a new 60-day window to use the military in the region without congressional approval."

International Strategic Developments

Anne Keast-Butler, the director of GCHQ — the U.K.'s intelligence, cyber and security agency — warns Britain is at a 'moment of consequence,' with the country facing increasingly brazen behavior from hostile nations. The ground beneath our feet is shifting, with new technologies creating a 'narrowing window for the U.K. and allies to stay ahead. These events taken in total mean that the new normal has shifted when it comes to cyber-attacks against critical infrastructure sectors. State and local governments, utilities and others defending these key systems need to be prepared. The cyber-attacks affecting key physical assets from global nation-states are just getting started.

Rebecca Heinrichs in the [Daily Wire](#) writes that President Donald Trump made significant headway at last week's North Atlantic Treaty Organization summit, including encouraging member states to increase their defense commitments and strengthen their support for Ukraine's war effort against Russia. See this link: [Trump's Hardball with NATO Gets Results in Ankara](#)

Explosions rocked a Russian air base overnight after a reported Ukrainian drone strike. The [Engels-2 air base] is home to Russia's long-range nuclear-capable bombers.

Lithuanian President Gitanas Nausėda warned that intelligence assessments suggest that Russia is planning potential attacks on critical infrastructure in the Baltic states or Poland.

Germany and France are pushing ahead with cooperation on nuclear deterrence, with German aircraft taking part in a French nuclear exercise on Thursday for the first time.

Ukraine's allies pledged more air defense support for Kyiv and the preparation of a multinational force to be deployed after a ceasefire in an effort to increase pressure on Russia to end its war.

CJCS Gen. Dan Caine and his counterparts from Japan and South Korea reaffirmed that three-way security cooperation is critical to countering regional challenges, including North Korean nuclear and missile threats.

Book Announcement: The publication of *Learning to Love the Bomb: Understanding the American Nuclear Arsenal* achieved **Amazon's #1 New Release ranking in the Arms Control category**, an accomplishment that reflects the quality of the work and the collective effort of the many experts who helped bring this project to life. I especially thank Adam Lowther and Curtis McGiffin for their oversight and leadership in its production.

NIPP's Mark Schneider writes about multinational arms control challenges.



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Key Study of the Week: America Needs Low-Yield Nukes

PAUL AMATO
June 26, 2026

Nuclear policy debates are at their best when they force hard questions about risk, deterrence, and military necessity. They are at their worst when disagreement is recast as bad faith. In 2018, as an outgrowth of a rigorous policy review process, the Trump administration's *Nuclear Posture Review* identified a need for supplemental low-yield nuclear capabilities to augment the U.S. nuclear arsenal. This was presented as an effort to raise the nuclear threshold of adversaries who may believe they could employ nuclear weapons in limited ways to escalate their way out of failed or failing conventional conflict.

To address this concern, the 2018 *Nuclear Posture Review* called for introduction of two supplemental low-yield nuclear capabilities: a submarine-launched ballistic missile and a nuclear-armed sea-launched cruise missile. Eventually, the United States fielded the low-yield submarine-launched ballistic missile warhead, designated the W76-2. Though the Biden administration later cancelled the nuclear-armed sea-launched cruise missile, Congress in 2024 resurrected it, directing the Department of Defense to pursue the capability. More recently, the Department of Defense official responsible for nuclear deterrence policy and programs testified to the importance of such theater-range nuclear options, noting that the nuclear-armed sea-launched cruise missile is just "one example."

In the face of these developments, Jay Tilden, in a recent article, argues that advocates of supplemental low-yield nuclear capabilities have been "contriving imaginary gaps in nuclear deterrence." According to Tilden, linking a deterrence gap to a need for additional nuclear capabilities is a contrivance, the alleged capabilities gap is a self-imposed personal preference (or in his words a "normative constraint") rather than a genuine operational deficiency, the United States already has sufficient ways to deter or respond to limited nuclear strikes, and former officials publicly advertising American vulnerabilities to argue for such capabilities are harming the country.

Having spent more than 16 years in the Office of the Under Secretary of Defense for Policy — including 12 years as director for Nuclear Deterrence Policy — I believe that Tilden's characterization is factually incorrect, misleading, and unfair. My team and I organized, staffed, managed, drafted, and published both the 2018 and 2022 *Nuclear Posture Reviews* on behalf of senior leadership. I witnessed firsthand how these decisions were reached and how the underlying analysis was conducted.

Reasonable and informed people can disagree about the necessity of any particular nuclear capability. Such debates are healthy and necessary. But Tilden, whose duties at the time focused on nonproliferation, counterproliferation, and nuclear weapons security, was not present for the deterrence discussions that led to these recommendations, so he has little insight into the operational considerations that weighed in favor of such supplemental low-yield capabilities in 2018. In making his case in 2026 against them, he not only questions the veracity of the conclusions that led to the 2018 recommendations but seeks to undermine the efficacy of the arguments former officials are making today by questioning their underlying motives. The historical record — and my firsthand experience — tell a substantially different story than the one Tilden offers.

The Gap is Real, and the Prescription is Sound

To his credit, Tilden concedes that Russia and China field theater nuclear systems and suggests countervailing U.S. capabilities may have significant operational utility. However, he minimizes the risk that such adversary capabilities may pose to U.S. and allied posture today and makes the case that additional U.S. low-yield nuclear capabilities are not just unnecessary, but the product of contrivance and irrational handwringing. A rebuttal of his argument requires a bit of context and a review of the historical record.

President Barack Obama's eight-year effort to reduce the role of nuclear weapons in U.S. strategy initially bore fruit, leading to the conclusion of the New START Treaty with Russia in 2010 and a revised U.S. nuclear strategy in 2013. But hopes for further progress were dashed in part by Russian unwillingness to agree to further strategic arms reductions, Russia's cheating on the Intermediate Range Nuclear Forces Treaty, and Russia's illegal annexation of Crimea and aggression in eastern Ukraine. All this was context as the U.S. policy, military, and intelligence communities observed growing evidence that Russian strategy and capabilities contemplated the potential employment of theater nuclear weapons early in a conflict with NATO. In this respect, Russia retains a significant advantage over the United States and its allies in such theater range systems, both in numbers and in diversity.

With this background, the Trump administration initiated a strategy review early in its tenure, releasing its *Nuclear Posture Review* in 2018. Among other things, it concluded that nuclear-armed U.S. adversaries — particularly

Russia — were developing and fielding an array of lower-yield nuclear forces with diverse ranges, yields, and delivery methods to support coercive nuclear escalation strategies against the United States and its allies.

In regional conflicts where the United States maintained conventional superiority, such capabilities could provide adversaries with an advantage in circumstances where the adversary used the threat of nuclear escalation to potentially coerce the United States and its allies from responding decisively to conventional aggression, or where the United States lacked the means to respond to the limited use of nuclear weapons proportionately or in a timely manner. Then-Secretary of Defense Jim Mattis, in his preface to the 2018 *Nuclear Posture Review*, referred to this development as “troubling.”

From this, the *Nuclear Posture Review* concluded that, if deterrence failed in a regional conflict, the president lacked adequate options to accomplish U.S. objectives, which included the ability to restore deterrence in circumstances well short of an all-out strategic exchange. Put bluntly, credibly deterring or responding to the threat of limited nuclear use required credible and proportionate response options, which the United States at the time lacked. Hence, the decision to pursue the W76-2 warhead and the nuclear-armed sea-launched cruise missile. Coincidentally, Russia’s President Vladimir Putin, as recently as the June 2026 St. Petersburg International Economic Forum, boasted about the Russian advantage in tactical nuclear weapons, stating that Europeans are “more or less defenseless” against these capabilities.

While the cruise missile story has evolved since 2018 — a topic discussed further below, **Tilden broadly attacks advocates of such low-yield theater weapons as advancing a personal preference and not solving an operational challenge.** According to him, these advocates misuse concepts such as proportionality and immediacy to make their case when the United States already has sufficient options to respond to a non-strategic nuclear attack. But his argument is superficial and incomplete.

Yes, immediacy and proportionality are important operational considerations, though Tilden’s linkage of proportionality to the law of armed conflict in this context is inapt, as addressed by Brad Clark in a [2025 article](#). But by narrowly framing this aspect of his discussion Tilden creates a straw man that is easily dismissed. The list of operational considerations that inform this debate goes far beyond Tilden’s treatment, both in public debate and in classified settings.

In a [2025 article on the importance of augmenting U.S. theater nuclear forces](#), Greg Weaver, the former deputy director for strategic stability in the Joint Chiefs of Staff’s Strategic Plans and Policy shop and deputy director for policy and plans at U.S. Strategic Command, reviewed the limitations of current U.S. theater nuclear forces and arguments in favor of augmenting them. Weaver focuses specifically on the “operational details” that Tilden demands. He identifies a series of attributes that credible U.S. theater nuclear systems should possess, explains why they are operationally important, and identifies alternative capabilities for consideration. **The attributes he identified include: survivable without a lengthy time to get ready for employment (hours, not days), forward deployed continuously in both Europe and Asia, warheads with a range of explosive yields and multiple fusing options, deliverable on operationally relevant timelines, highly likely to penetrate adversary defenses even in very limited strikes, effective against the full range of likely targets necessary to enable U.S. strategy, and able to enhance the nation’s technical hedge capability and contribute to meeting increased strategic nuclear targeting requirements.**

I will not restate all that is in Weaver’s comprehensive article. But to expand on one element of it, and to illustrate the broader point, I will briefly address operational aspects of U.S. and allied dual-capable aircraft in Europe.

Over the last six decades, U.S. and allied dual-capable aircraft have served as the backbone of NATO’s deterrence and defense posture. These aircraft are operated by the United States and select allies and are designed to deliver U.S. nuclear gravity bombs forward-deployed in Europe.

Should conflict arise, say because of a Russian incursion into the Baltics, there may be days, weeks, or months of conventional kinetic operations between NATO and Russia before the conflict approaches the nuclear threshold. In that period, there is a risk that fixed locations such as dual-capable aircraft operating bases and nuclear weapons storage locations will have been attacked conventionally, causing attrition to the aircraft and weapons needed by the United States and its allies in extreme circumstances. Similarly — because these aircraft are dual-capable — some, many, or all of them will have been conducting conventional missions. In that time, there is no telling how many dual-capable aircraft — and their crews — will have been attrited. And, if that time comes, it is hard to predict how effective Russia’s integrated air and missile defenses will remain, or whether the dual-capable aircraft and their accompanying support packages will be able to prosecute the targets necessary to favorably manage escalation.

This and the issues Weaver more fully addresses provide a flavor of the types of operational considerations discussed in reviews like the 2018 *Nuclear Posture Review*. Such considerations were central to *Nuclear Posture*

Review deliberations and to subsequent efforts to implement its results. Given the existential risk that nuclear war presents, and the real-world operational implications of a capability such as dual-capable aircraft in Europe — or their complete absence from the Indo-Pacific — there are legitimate reasons for the United States to consider, and advocates to recommend, the addition of supplemental regional nuclear capabilities to the U.S. arsenal.

The Nuclear Posture Review Process Mitigated the Risks Tilden Trumpets

Tilden also does not address the multiple mechanisms in either the 2018 *Nuclear Posture Review* and its 2022 successor that safeguarded against the kind of threat inflation he alleges and the alleged normative analysis he decries.

First, the reviews were inclusive, involving all relevant stakeholders, including multiple components from the Office of Secretary of Defense, the Joint Staff, combatant commands, the military services, and other agencies, including the Department of Energy's National Nuclear Security Administration, the agency where Mr. Tilden worked during this timeframe. Stakeholders were represented by veteran national security experts and practitioners at the senior executive, general, or flag officer level. With this collection of participants, there was ample opportunity for institutional and bureaucratic views and concerns to be registered and questionable assumptions and conclusions to be challenged.

Second, each review began with an intensive analysis of the intelligence issues associated with actors of relevance in the nuclear deterrence space. Only with a common sight picture of the threat is it possible to conduct informed discussion and debate over strategy adjustments and needed capabilities. Intelligence officials from across the intelligence community contributed to the review, and dissenting views, where appropriate, were raised. There was no cherry-picking of intelligence and, when questions were raised, they were subject to further briefing and analysis until consensus was reached.

Third, only after completing the intelligence briefings did participants turn to questions of strategy and the capabilities needed to execute the strategy. Though conducted in classified spaces, these discussions were open and transparent, and participants had a full opportunity to address their unique concerns. This environment did not lend itself to imaginary or contrived conclusions.

Finally, when discussions were complete, high-profile recommendations were made to senior leadership for decision: the secretary of defense, interagency principals, or the president, depending on the topic. Ultimately, those decisions became core components of the written *Nuclear Posture Review*, which was then coordinated within the Department of Defense, the U.S. military, and other agencies for final review and approval. These processes are critical to understand, as the coordination process of the written document itself afforded senior leadership from any stakeholder — including Tilden's National Nuclear Security Administration — a final opportunity to object to Nuclear Posture Review conclusions.

The bottom line is to demonstrate not just the rigor of this process, but to point out that threat inflation and material solutions based on normative analysis alone would not have passed muster. While Tilden is free to disagree with *Nuclear Posture Review* conclusions or policy prescriptions, his assertion that the results were imaginary and the capability recommendations were contrived is simply not true.

Multiple Reviews, Consistent Conclusions

Tilden cannot also avoid the fact that three separate review bodies — and Congress — have reached remarkably similar conclusions. The Biden administration's 2022 *Nuclear Posture Review* identified the same fundamental deterrence challenge for the United States as the 2018 review:

[W]e must be able to deter conventional aggression that has the potential to escalate to nuclear employment of any scale. Russia presents the most acute example of this problem today, given its significantly larger stockpile of regional nuclear systems and the possibility it would use these forces to try to win a war on its periphery or avoid defeat if it were in danger of losing a conventional war. Deterring Russian limited nuclear use in a regional conflict is a high U.S. and NATO priority.

While choosing to cancel the nuclear-armed sea-launched cruise missile, the Biden review concluded that U.S. low-yield capabilities remained key in deterring theater nuclear attacks and resisting nuclear coercion. It then chose to retain the W76-2 in the U.S. arsenal, noting that it "currently provides an important means to deter limited nuclear use." Ultimately, President Joseph Biden issued nuclear employment strategy guidance in 2024, emphasizing the importance of fielding capabilities suited to deterring and responding to limited nuclear employment to favorably manage escalation.

The 2023 bipartisan Strategic Posture Commission report recognized the same fundamental challenge. The Commission recommended that U.S. theater nuclear force posture be urgently modified to provide "a range of

militarily effective nuclear response options to deter or counter Chinese or Russian limited nuclear use in theater.” Importantly, the Commission was not bound by either the Trump or the Biden administrations’ assumptions or conclusions regarding deterrence needs or the proposed solution. Nevertheless, it independently reached a similar judgment.

While Tilden may point to the Biden administration’s decision to cancel the nuclear-armed sea-launched cruise missile as evidence that the solution proposed by advocates is contrived, I reach the opposite conclusion. First, the *Nuclear Posture Review* is evidence of a rigorous review process where serious people debated serious issues. In both 2018 and 2022, these debates led to different solutions for the same problem. This is not evidence of imagination or contrivance, but rather the product of a healthy bureaucratic and interagency review process that led to different, but nevertheless defensible recommendations. Second, and more important to refuting Tilden’s point on the nuclear-armed sea-launched cruise missile, Congress in [2024 overruled the Biden Administration’s cancellation decision, directing establishment of a nuclear-armed sea-launched cruise missile program of record](#). [That effort is ongoing today](#).

Ultimately, far from just a normative preference for more capabilities, a wide array of deterrence and national security professionals in different venues over a period of years examined the security environment and adversary capabilities to ascertain whether the United States had the operationally relevant capabilities needed to credibly deter adversaries or, if deterrence failed, to achieve U.S. and allied objectives across the spectrum of conflict. It cannot be reasonably said that two different *Nuclear Posture Reviews*, the Strategic Posture Commission, and Congress each fell victim to an imaginary deterrence gap and independently contrived a need for supplemental low-yield nuclear capabilities to address this challenge.

Former Officials Have the Right and Obligation to Speak Up

Perhaps the most troubling aspect of Tilden’s article is his criticism of former government officials for speaking out in favor of supplementing U.S. theater nuclear capabilities. He asserts that former officials who identify weak spots in U.S. deterrence posture are doing strategic damage to the United States or, worse, that some of them have institutional incentives to prevaricate on these issues.

Tilden is correct to the extent he argues that policymakers and former government officials should be cautious about overstating threats or creating self-fulfilling procurement pressures. I am sure the former officials he names in his article would agree with this. But is the only alternative their silence?

To the contrary, former civilian and military officials should not be expected to fall silent when they leave government. The United States has long benefited from a tradition in which former officials continue to contribute to public debate on defense policy, military strategy, and force structure. These individuals often possess decades of experience in government, operational commands, intelligence organizations, and defense planning. They retain valuable expertise that can help policymakers, legislators, journalists, and the public understand emerging threats and assess whether the nation is adequately prepared to meet them. This is particularly important on these topics, given the specialized knowledge and expertise that comes only from long study and involvement in nuclear policy and the nuclear deterrence mission, combined with the profound soberness that comes from a life’s work seeking to reduce the risk of nuclear war.

Dispensing with this, Tilden wields his arguments as both a sword and a shield. On the one hand, he asserts that the deterrence gap is imaginary and that the solutions proposed by experts are normative and contrived. On the other hand, he argues that former officials who highlight their concerns publicly are doing strategic damage to the United States. He cannot have it both ways. To the contrary, former government officials perform an important public service by identifying emerging dangers before they manifest, and open debate helps decision makers and the public understand the risks and prioritize resources to address them.

[Winston Churchill provides perhaps the most famous example of this](#). During much of the 1930s, while out of government, Churchill repeatedly warned that Nazi Germany was rearming and that Britain was inadequately prepared for the challenge. His warnings were frequently criticized as alarmist and politically motivated. Yet his willingness to speak publicly about what he perceived to be a growing strategic danger contributed to a national debate that, in hindsight, appears prescient rather than reckless.

The lesson is not that former officials are always right. It is that democratic societies benefit when experienced practitioners are free to challenge prevailing assumptions and raise concerns about looming security risks without having their motives impugned. It would be manifestly irresponsible for current and former officials to fail to inform the public and their elected representatives of a potential existential threat to the United States.

Do such public arguments hand adversaries an advantage? I think not, for at least three reasons. First, China and Russia are sophisticated military competitors in their own right. The contemporary issues debated by U.S. experts

— targeting strategies, strategic force size and posture, U.S. regional nuclear capabilities, etc. — are likely well known to them based on their own assessments of the security environment and venues where such issues are discussed openly, such as in regular meetings in support of the Treaty on the Non-Proliferation of Nuclear Weapons. Second, current plans to modernize and sustain the U.S. nuclear deterrent are projected by the [Congressional Budget Office to cost nearly \\$1 trillion over the next decade](#). Given the scale of this effort, congressional members need to understand in an unclassified manner why such capabilities are needed so that they can later defend their votes to the public. In fact, in an annual spring ritual, senior civilian and military leaders are called to Congress to testify on a myriad of such topics related to a president's budget submission, including recommendations for such capabilities. Third, the United States has a long-standing legal and regulatory practice of providing unclassified reports to Congress, and of declassifying formerly classified national security materials. Because U.S. nuclear policy today reflects more historical continuity than change, many of the issues reflected in current debates are already well known and in the public realm.

Fortunately for Tilden and for those former officials he references in his article, we live in a democracy where such transparency and debates do not reflect a flaw in the system. Rather, it is evidence that the system is functioning as intended. Debate — informed by the facts and the record — should be welcomed.

It is possible that this facet of Tilden's argument is more than just a rhetorical tool. Former government officials who held security clearances have a lifetime obligation to protect classified information. Some may still hold clearances and do classified work. There are also ethical rules governing conflicts of interest once an official leaves government. Beyond vague but carefully worded innuendo and colloquial phrases — referencing a “self-licking ice cream cone” — Tilden offers no evidence to back up such serious charges.

Ultimately, there was nothing about these discussions and decisions that was imagined or contrived. And former officials who continue to make the case for low-yield capabilities are performing a valuable public service. Tilden is welcome to join the debate. But that debate should be based on facts and the record, and not upon vague allusions to impropriety intended to undermine the credibility of opposing voices. The debate and our country deserve better.

Conclusion

Reasonable people can disagree about the nuclear capabilities the United States should field to confront the 21st-century security environment. But disagreement and informed debate are not what is at issue here. The historical record is clear. Two presidentially directed posture reviews, a bipartisan commission, Congress, and experienced practitioners examined the same security environment and identified the same underlying challenge. They did not all arrive at identical solutions for the challenge, but their conclusions were remarkably similar. To characterize those conclusions as imaginary, contrived, or self-interested is not an argument — it is an unsubstantiated assertion. Given the rapidly changing nuclear landscape, the United States needs more serious debate on deterrence, not less. The stakes are too high for anything less.

Essay: Bulletin of Atomic Scientists

According to a new essay in the Bulletin of Atomic Scientists, [London shifting from nuclear deterrence to war-fighting](#). Here is the essay:

After decades of gradual disarmament, London is quietly reversing course by expanding its warhead stockpile, altering its nuclear doctrine, and acquiring stealth F-35As to carry US tactical nuclear bombs, write **S.M. Amadae** and **Tom Stevenson**. Driven by pre-Cold War planning rather than modern democratic mandate, this shift toward first-use, non-strategic capabilities risks destabilizing the European balance and inviting catastrophic escalation with Russia. [Read more.](#)

The authors contend this: The deployment of high-precision, variable-yield counter-force weapons [such as the B61-12 gravity bomb] signals a willingness to carry out retaliatory or pre-emptive nuclear strikes on an adversary.

What is strange is to describe a “retaliatory strike” as a return to or adoption of “nuclear warfighting?” A retaliatory strike simply is carrying out a deterrent threat--otherwise deterrence is simply a bluff. The Russians may be conventionally inferior to NATO, but Moscow definitely has at least a 10 to 1 superiority in theater nuclear weaponry. While enhancing the NATO conventional forces in response doesn't seem to be on the table of approved measures as the authors believe it would only trigger more nuclear weapons deployed by Moscow. Their implicit solution: for NATO and the US to be inferior militarily across the board so as not to trigger Russian fears and threats. This is the same narrative used by opponents of nuclear modernization and US and NATO counter-force nuclear deterrent strategies during the Cold War where blame for whatever problems existed in the nuclear balance were the fault of NATO, [such as the Soviet SS-20 missile deployments.]

Economic update from the IMF: GDP Growth: US: 2.3% Germany: 0.7% France: 0.6% UK: 1.0% Japan: 0.6% India: 6.4% Russia: 1.1% Brazil: 2.4% Saudi Arabia: 1.7% Nigeria: 4.1%

ICBM EAR Commentary on the Tilden Essay

Here is where I think Tilden doesn't get things completely right. Tilden says there are many “Contriving imaginary gaps in nuclear deterrence” (He does stand down a little by acknowledging that many such folks were highly professional etc. However, take for example the argument over whether the 1975-80 window of vulnerability was deadly serious (and real) and whether the projected theater nuclear forces imbalance of today should also be taken seriously. The Soviet perception between 1977-82 was that the correlation of forces was benefiting Moscow and that numerous wars of national liberation and terrorism were switching multiple nations from pro-west to pro-Soviet. From 1969-80, according to some estimates, 24 nations flipped to the Soviet side of the equation or were victims of massive war trying to destroy their pro-west or at least friendly to the US position. This was deadly serious, which I think Tilden doesn't appreciate. The Carter response was to emphasize human rights---as in Nicaragua, Grenada, Iran etc. But not to support US allies. The Soviet threat was minimized as revolutions or “civil wars” were widely believed to be inevitable results of oppressive right-wing regimes allied with the United States---such as Nicaragua, Columbia, El Salvador and Angola.

Tilden also has a point that describing vulnerabilities to gain support for policy changes can often exaggerate threats to the US. But the warnings have largely come from the left and have seriously misinformed the country. For example, Global warming and the claims of the Ice Caps disappearing. Or the false information about the pandemic and its origin. Or the economic gloom and doom from 1981-3 dismissing the Reagan economic reforms. And since the beginning of the nuclear age, virtually any US nuclear modernization has been described as the unnecessary and dangerous initiation of another arms race. [Today, Russia and China are together building and deploying some 30 different nuclear missiles, warheads, bombers, and submarines, while the US is building 5---the Columbia class submarine, the modified D-5 submarine launched ballistic missile, the Sentinel ICBM, the B21 Raider strategic bomber and the LRSO cruise missile for the bomber. The US has yet to deploy a single one of the new forces replacing our 55-70 year old legacy strategic nuclear forces. As for the common argument that the US seeking a deterrent force “second to none” spurs an arms race, essays by Dave Trachtenberg and Keith Payne have shown in detail why the Warnke arms race metaphor is not based on the facts. Former Secretary of Defense Brown put it this way: we build, they build, we stop, they build.

It is true that from 1987-2010 there were 5 signed strategic nuclear arms deals between Washington and Moscow, sometimes referred to as the golden age of arms control. Although true that the post USSR era led to markedly lower nuclear deployments, that was largely due to lack of budget \$ in Russia. From INF to New START Moscow bought time to keep the US had near the same level as Russia in strategic arms but decided inferior with respect to theater weapons. The Moscow treaty was 1700-2200 warheads. New START was 1550 nominally but actually nearer as high as 2100-2200. Putin was buying time to catch up just as Harold Brown claimed.

Tilden seems to miss the deliberate economic war on Moscow waged by Reagan, and the almost universal disapproval of the Reagan strategy including nuclear modernization, to say nothing of the near universal disapproval or the President's description of the Russian evil empire and the push for SDI, all three of which were solidified and markers laid down in the last week of March 1983.

Another Tilden mistake was to declare that China has a no first use policy for example. Admiral Charles Richard says that is completely false—total smokescreen by China. China has repeatedly said if Japan supports Taiwan, China will nuke Japan. So much for NFU.

Debt? The US spends \$1.6 trillion (Federal level) on means tested poverty programs and poverty remains at 13-15% most of the time except during real good economic growth when the poverty level may decline to 10-11%. Add in state and municipal poverty spending and you get over \$2 trillion the US spends annually. But in 1965, the poverty rate (15%) has been declining since post WWII. The war on poverty was actually not needed—according to Sarge Shriver the head of Johnson's "war on poverty" who told me this while we campaigned in 1972. In today's dollars, the US has spent \$30 trillion on the war on poverty. Thus, when Tilden complains about where the money will come from for the ALCM and SLCM, all nuclear spending of \$67B out of a \$7.1 trillion Federal budget is 9/10ths of 1%. (The Raider is 20% nuclear and thus I discount for that). Out of the NNSA/DoW nuclear budget, the two budgets for ALCM and SLCM combined are under \$2 billion. Tilden also contends that FOBs and other Russia and China nuclear deployments are in response to the US proposed Golden Dome, implying the absence of such missile defense plans might see these R and C programs disappear. But Golden Dome was an initiative in late 2025 and 2026, nearly 20+ years after the initial GBI limited defense deployments, and the R and C missile "responses" were largely initiated in 1999 and 2009.

It is true that Senator Kennedy exaggerated the Soviet threat. On the missile gap, Nixon could not respond during debates which would require disclosing classified info which Nixon could not do and Kennedy knew it. Kennedy had the same intel as a Senator. However, I am not sure **there are other examples where candidates knowingly have lied overstating the threat.** However, there are myriad examples of candidates minimizing the threat deliberately. For example, the 2026 intel folks not only did NOT do a worst case scenario but in this past year, the IC told us China growth in nuclear forces was slowing!! And did not even update their 2025 review. (See Mark Schneider's recent essay).

Another example: IC estimates of Soviet defense spending as a % of GDP were way too low in the 1970s—Johnny Foster led the effort to change that by going to GHWB; and the result? The IC folks admitted they got things wrong but only marginally bumped up estimates of Soviet defense spending. As Bush told Foster: the analysts did not want to upset détente! And another: the long standing Congressional Commission on China. In all its reports, what did they over-estimate re intel property thefts or China's plans to harm our infrastructure (Gilmore Commission predicted in 1997). And finally, in the 1990s, the Clinton admin deliberately downplayed missile threats—such as from Iran and NK. Said in 1999 that we had at least 15 years without any such threat developing. North Korea exploded a nuclear bomb in 2006. And launched an ICBM range missile as early as 2022.

Finally, re defense spending, even though the incoming Biden administration called for dramatically cutting defense back to pre WWII levels in terms of % of GDP spent on defense, the administration still projected a \$20 trillion increase in the deficit over 2021-2031. est Peter Huessy

New Essay of the Week

This essay echoes many other such essays now being published that argued nuclear deterrence has few positive attributes and doesn't contribute much to US security except "deterrence", as if preventing nuclear war is someone a minimum benefit.

Nichols argues that in Ukraine and Iran, Russia and America Are Rediscovering the Limits of Nuclear Weapons. This may very well be the nuclear issue of our time. The entire essay is here.

They buy deterrence. That's about it.

THE ATLANTIC ONLINE, JULY 13 | TOM NICHOLS

Henry Kissinger often said that nuclear arms are "weapons in search of a doctrine." After the Cold War, some strategists have tried to figure out what exactly these weapons could buy beyond deterrence. The answer, as it turns out, is: nothing.

Two wars taking place right now are cases in point. The ongoing American attacks on Iran and Russia's desperate campaign of atrocities in Ukraine have produced dramatic footage of two major powers taking on middleweight military opponents, inflicting grievous damage, and yet failing to achieve their goals. Among other painful lessons, the Americans and the Russians are learning, again, that their impressive array of nuclear weapons does not offer them a victorious path out of such conflicts.

Americans since the end of the Cold War haven't bothered to think much about nuclear weapons. Last spring, the Trump administration decided to default to its 2018 Nuclear Posture Review, a report that is supposed to explain U.S. nuclear-weapons policy to Congress and the American people, rather than issue an update. But a lot has changed in almost 10 years, including the eruption of two sizable wars. Moreover, the United States is in the process of spending nearly \$1 trillion on modernizing its nuclear arms without anyone spelling out what the Pentagon would do with them.

The Cold War showed that strategic deterrence works to keep the peace among the nuclear-armed powers. It also showed that these arms have almost no use in regional conflicts. With two nuclear superpowers embroiled in two such wars, revisiting America's 20th-century experiences and learning from them is crucial.

The strategic nuclear standoff between the United States and the Soviet Union kept the Cold War from going hot. The Soviets and the Americans were perfectly willing to cause trouble for each other and even fight through proxies in various parts of the world, but neither side wanted events to escalate out of control and lead to complete annihilation. Even now the central mission of America's nuclear arsenal, as the Trump administration said in 2018, is "to deter potential adversaries from nuclear attack of any scale" against the United States. Unfortunately, the Trump administration wants to leave the door open to bringing nuclear weapons into any number of scenarios. Here, the president and his team have apparently failed to learn from history.

During the Cold War, the Americans were outnumbered by Soviet and Chinese forces. Unable to deploy forces around the globe to meet every possible instance of Communist aggression, U.S. strategists tried to figure out how nuclear weapons could be used in regional conflicts far from home. Over and over, they ran into dead ends.

In Korea, the U.S. military presented both Harry Truman and Dwight Eisenhower with plans to strike targets in East Asia, including China. Both presidents backed away from the idea, not least because of the obvious escalatory dangers of triggering war with the Soviet Union. In Vietnam, Senator Barry Goldwater famously suggested using nuclear weapons to defoliate Vietnam's jungles and expose enemy supply lines, an irresponsible idea that contributed to Goldwater's defeat. (Johnson, whose administration was secretly considering plans to nuke China's emerging nuclear capability in 1964, once made the dark joke to a reporter that "we can't let Goldwater and Red China both get the bomb at the same time. Then the shit would really hit the fan.") During the siege of Khe Sanh, the U.S. Army developed a plan, without Johnson's knowledge, for using nuclear weapons as a last resort should American forces face being overrun. When informed of its existence, Johnson was enraged and ordered the whole business terminated. Richard Nixon, during his first year in office, asked for plans to use nuclear arms against North Korea after becoming fed up with Pyongyang's provocations, including an April 1969

downing of a U.S. reconnaissance plane. Nixon was given various options, including precise strikes on military targets with nuclear bombs much smaller than those dropped on Japan in 1945. Once again, however, American planners could not figure out how to defang North Korea without causing ghastly destruction and risking escalation in an unstable part of the world. Nixon shelved the plan. At the end of the Cold War, the United States tried to dislodge Iraq from Kuwait, a conflict that could have entailed enemy chemical strikes on American and allied forces. American leaders never seriously contemplated the use of nuclear weapons. General George Lee Butler, the head of the U.S. Strategic Air Command at the time, later said that U.S. officials ruled out the nuclear option because their own studies had already told them that “a nuclear campaign against Iraq was militarily useless and politically preposterous.” Today, strategists might argue that the ability to influence new types of conflicts with nuclear threats, or the actual use of nuclear weapons, is no longer limited by outdated Cold War concerns about escalation. The current undersecretary of defense for policy, Elbridge Colby, wrote in 2013 that the United States should keep the option open to respond to a major cyberattack with thermonuclear weapons. But although the Cold War is over, the problems of using nuclear weapons against non-nuclear opponents all remain.

Threatening to use nuclear weapons is easy. Soviet and American leaders did it all the time during the Cold War. But figuring out where and how to use one is just as difficult today as it was 50 years ago. The difficulty of making credible nuclear threats hasn’t stopped some current leaders from trying their hand at it. When Russian President Vladimir Putin launched his war against Ukraine in the winter of 2022, he made a show of ordering his defense minister to put Russia’s strategic nuclear forces on a “special regime of combat duty.” These words had no real military meaning: No signs emerged of an elevated state of Russian nuclear readiness. Putin believed that a Russian attack against Ukraine would collapse the government in Kyiv in a matter of days, but the war quickly revealed how much the corrupt and incompetent Russian military had decayed over the past decade, and how much the Ukrainian armed forces had improved in the same period. Putin’s World War II blitz degenerated into World War I trench warfare.

As the magnitude of the Russian failure became apparent inside the Kremlin, U.S. officials worried that Putin might resort to the use of battlefield nuclear weapons. Russian nuclear doctrine states that the Russian Federation would use nuclear arms only in response to “critical” threats to its sovereignty and “territorial integrity,” but Putin has been cagily flexible about what any of that really means, and he has left it to surrogates on television and in his government to make explicit threats against Ukraine and the West. Russia has no real nuclear options in the Ukrainian slog. Even Putin likely realizes that the costs would be enormous and the gains negligible. For one thing, the wind blows from Ukraine into Russia, and he would risk poisoning his own people, a problem that could lead to a revolt among terrified Russians. The United States—at least under the previous Biden administration—has warned that such an act would provoke a massive military response. And Russia’s friend China has warned Putin that nuclear use would be the end of any support, which would make Russia even more of a pariah state than it already is.

In 2023, Russia tried playing a different game when the Kremlin confirmed that it was moving nuclear weapons into Belarus, placing them outside Russia for the first time since the end of the Cold War. Putin apparently thinks that bringing these weapons close to an active war zone might increase the sense of risk in foreign capitals. The only person whose thinking seems to have changed, however, is Alexander Lukashenko, the dictator of Belarus. Last week, he announced that Belarus would not take part in any operations against Ukraine. The warheads remain in his country, but in storage and of little use to anyone. Putin’s various nuclear manipulations have bought him nothing. The war is now in its fourth year; Russian forces, bogged down at the front, are taking immense losses, and Ukraine is striking targets deep inside Russia, including the capital itself. When Trump asked Ukrainian President Volodymyr Zelensky last week if he was willing to go to Moscow to talk with Putin, Zelensky quipped: “It’s difficult. There are a lot of Ukrainian drones there. It’s very dangerous.”

A few thousand miles south of Moscow, the Iranians are inflicting a similar humiliation on the nuclear-armed Americans. Trump has issued multiple threats that could be taken to imply the use of nuclear weapons, and like Putin, he has learned that such threats generate few results but plenty of opprobrium. On April 7, Trump issued the genocidal threat that if Iran did not accede to various American demands, including opening the Strait of Hormuz, a “whole civilization will die tonight, never to be brought back again.” Only nuclear weapons can end a nation in one night, but the Iranians were unmoved; Trump’s unhinged statement instead brought global

condemnation, including from Leo XIV, the first American pope. Trump reversed course within a day by claiming, baselessly, that Iran had presented “a workable basis on which to negotiate.” In May, he tried again: “If there’s no cease-fire,” he said, “you’re just going to have to look at one big glow coming out of Iran.” Again, the world reacted, but Iran did not.

Trump’s threats of total destruction mean nothing, and even the enemy seems to know it. Indeed, his threats tend to come just as he’s about to capitulate, rather than escalate, so perhaps he uses them as a way of covering his retreats. Much like Putin, Trump refers to nuclear weapons but then does nothing to indicate that they are coming into play. For this, everyone should be grateful. Even if Trump were serious, however, he would face the same problem his predecessors faced in Asia and Putin faces in Ukraine: The political and economic costs of using a nuclear weapon would far outweigh any possible gains; it could generate an enormous number of casualties and bring radioactive fallout to friendly nations. American nuclear use would almost certainly rally the region—and much of the world, including NATO—against the United States.

Both Iran and Ukraine are outnumbered and outgunned by every measure of military strength, and yet the U.S. and Russia are facing historic defeats. Great empires have learned over and over that conventional wars are easy to lose for many reasons, including the mismatch between the ease of inflicting damage and the difficulty of holding territory, a problem that has frustrated U.S. planners across multiple conflicts. Nuclear weapons in these regional wars have been useless. What should Americans take from these experiences? Strategic nuclear weapons will continue to be the silent guardians of a global peace among the great powers, at least until the world can think of something better. But neither the United States nor other nations need a full panoply of nuclear options for every military eventuality. The Trump administration says that the United States would consider the employment of nuclear weapons only “in extreme circumstances to defend the vital interests of the United States, its allies, and partners.”

But what is an extreme circumstance? The United States is losing a war to Iran, which might seem “extreme,” but a U.S. defeat in the Gulf does not threaten the existence of the United States. A gigantic Russian army is making war in the middle of Europe—the kind of nightmare NATO was created to forestall—but the United States is working to defeat Russia without the direct involvement of U.S. or other NATO forces. And yet, the Trump administration wants to return to Cold War thinking: It withdrew from the 1987 treaty on intermediate nuclear forces and wants to place a new, nuclear-armed cruise missile on submarines. Trump also wants his new “Trump class” battleships (assuming they ever get built) to have nuclear weapons on them, a senseless move that would return nuclear arms to America’s surface ships for the first time since the early 1990s.

Nothing of consequence will be done to reform nuclear strategy while Trump is in office. But it’s not too early for the United States to look at the wars in Ukraine and Iran and draw some important conclusions. First, nuclear weapons cannot replace conventional power. China knows that the United States has nuclear weapons; what the leaders in Beijing need to see in the Pacific are ships, aircraft, personnel, and the will to defend our allies, not more nuclear warheads. The Iran war has depleted stocks of conventional U.S. attack munitions, not nuclear bombs. Second, the United States must wrench itself out of its Cold War mindset. For example, the U.S. maintains a policy of reserving the right to use nuclear weapons first, left over from the days when NATO was sure to be overrun by Soviet tanks in Europe in the first weeks of a conflict in Europe. Today, the situation is reversed: Russia would lose a conventional war with NATO, and quickly. Nothing is gained from holding on to a strategy from a half century ago that requires the U.S., even now, to keep a stockpile of tactical nuclear weapons in Europe. (Nor should the United States deploy more nuclear weapons in the Pacific region.) At the least, a policy declaration of “no first use” would help to ground American strategy in the new realities of the 21st century.

Finally, the United States needs a complete overhaul of its defense strategy. Trump has treated the entire world, including U.S. allies, as potentially hostile. His reckless and paranoid approach to security has left the United States less safe and the world less stable. The next administration will have to pick up the pieces. In the meantime, a new Congress can start examining some of the Pentagon’s requests that involve nuclear weapons—and start canceling them. One Cold War nuclear spending spree was enough.

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About the ICBM EAR

Peter Huessy's ICBM EAR Report was originally prepared for the USAF in 1981 to help inform US nuclear deterrent policy professionals at the height of the Cold War. Eventually it was provided only to key elements of the Nuclear related Aerospace Industry. The objective: help build an informed political community on nuclear deterrent issues, especially the deployment of the US nuclear deterrent, especially the MX (Peacekeeper) missile. The report covered developments in the nuclear arena on a weekly basis, including developments in Congress, key events, threat assessments, remarks of top US officials, international activity key to US security interests, nuclear budget and program element issues, and arms control and proliferation matters as well.

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