



QUINCY INSTITUTE  
FOR RESPONSIBLE  
STATECRAFT

# Achieving a Safer U.S. Nuclear Posture

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**by Joseph Cirincione**

Distinguished Non-Resident Fellow  
Quincy Institute for Responsible Statecraft

# Executive Summary

- U.S. nuclear posture is on a dangerous path that imperils national security and expends far too many resources. It is not a rational response to external threats but is driven primarily by domestic factors including a hubristic strategy of nuclear supremacy, partisan politics, and entrenched arms lobbies with formidable influence in the Pentagon and Congress.
- A safer nuclear policy entails, among other steps, reducing the number of deployed strategic warheads by one-third, to about 1,000, taking nuclear-armed missiles off hair-trigger alert, embracing no first use or sole purpose doctrines, and requiring an additional senior official to authorize launch. Pacts such as AUKUS that encourage the spread of nuclear weapons technology must also be rethought.
- If implemented, these policies will greatly reduce risk while maintaining deterrence; they will also lead to significant savings in the national security budget. A majority of independent experts believe that U.S. national security objectives can be met at far lower levels and with a safer nuclear posture, saving hundreds of billions of dollars over the next few decades.
- Many of these recommendations can be implemented even if the Biden administration's upcoming Nuclear Posture Review proves disappointing. The president retains substantial policy and budgetary options for reducing the risk of nuclear war and the cost of nuclear deterrence.

## Introduction

Joe Biden is now the fourteenth president over eight decades to attempt to reconcile the risks that derive from nuclear deployments with the demands of deterrence. He is discovering how difficult this can be.

It appears that Biden will pass on his best chance to operationalize his stated goal of reducing the role of nuclear weapons in U.S. security policy when the administration issues its Nuclear Posture Review in early 2022.<sup>1</sup>

The administration seems to have decided to adjust nuclear policy and programs at the margins while making no significant changes to the Pentagon's budgets and deployments. Press reports indicate that the 2022 NPR may cancel one or two small weapons programs begun during the Trump administration, retire an older warhead, and ratchet back Trump-era policies that allowed the use of nuclear weapons in a wide variety of conflict situations.<sup>2</sup>

## *Every president in the nuclear age has struggled to control the weapons supposedly under his sole authority.*

At the same time, the review will endorse dozens of nuclear-weapons programs that will cost an estimated \$634 billion over this decade, according to the Congressional Budget Office.<sup>3</sup> This includes proceeding with a new land-based strategic missile rushed toward production in the last months of the previous administration without examining less expensive and less dangerous alternatives to its production.<sup>4</sup> This project alone could cost \$264 billion over its lifetime.

This failure is not unique to Biden. Every president in the nuclear age has struggled to control the weapons supposedly under his sole authority.

Primarily, this is because U.S. nuclear posture is not a rational response to an external threat environment but is driven by domestic actors who see nuclear superiority as a

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

<sup>2</sup> Bender, Bryan. "Biden team weighs killing Trump's new nuclear weapons." *Politico*, January 12, 2022. <https://www.politico.com/news/2022/01/12/biden-trump-nuclear-weapons-526976>.

<sup>3</sup> "Projected Costs of U.S. Nuclear Forces, 2021 to 2030." Congressional Budget Office, May 2021. <https://www.cbo.gov/publication/57240>.

<sup>4</sup> Capaccio, Anthony. "New U.S. ICBM Cost up to \$264 Billion over Decades." *Bloomberg News*, October 3, 2020. <https://www.bloomberg.com/news/articles/2020-10-03/new-u-s-icbms-could-cost-up-to-264-billion-over-decades>.

tool of U.S. global dominance, by those who use nuclear security as a wedge issue in partisan politics, and by a powerful consortium of arms corporations that realize vast profits from manufacturing, marketing, and maintaining these deadly arsenals.<sup>5</sup>

The question is complicated today by a process that gives those most interested in continuing nuclear programs the authority to write the policy governing these weapons. President Clinton was the first to issue an NPR in 1994; Biden should be the last. Policy should flow from the White House to executing departments, not the reverse.

The roots of the problem, however, go far deeper.

## **The beginnings: An unconstrained arms race**

Nuclear weapons began with the Nazis.

In 1939, scientists feared that Hitler was moving aggressively to use their recent breakthrough discovery of nuclear fission to build a “super weapon.” Some, led by Leo Szilard and Albert Einstein, urged the American government to start a program to construct “extremely powerful bombs of a new type” for the sole purpose of deterring Hitler. Others asked the same of the British government — noting, however, that since “the bomb could probably not be used without killing large numbers of civilians, this may make it unsuitable as a weapon for use by this country.”<sup>6</sup>

By the time the first atomic bomb was tested in 1945, the Allies had defeated Hitler and strategies of total war had erased hesitations about killing large numbers of civilians. Military plans were well under way for using the bomb against Japan. Some Manhattan Project scientists warned that using the bomb without a system of international controls in place would be “a flying start of an unlimited armaments race.”<sup>7</sup> President Truman did not stop the attacks on Hiroshima and Nagasaki, but he finally intervened

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<sup>5</sup> Cirincione, Joseph. “How the Nuclear Game Is Rigged to Maintain the Status Quo,” *Responsible Statecraft*, November 9, 2021. <https://responsiblestatecraft.org/2021/11/09/how-the-nuclear-game-is-rigged-to-maintain-the-status-quo/>.

<sup>6</sup> Cirincione, Joseph. *Bomb Scare: The History and Future of Nuclear Weapons*. New York: Columbia University Press, 2007. 1–4. <http://cup.columbia.edu/book/bomb-scare/9780231135108>.

<sup>7</sup> Frank, James, et al. “Report of the Committee on Political and Social Problems.” Manhattan Project Metallurgical Laboratory. University of Chicago, June 11, 1945. <https://www.atomicheritage.org/key-documents/franck-report>.

when he learned that a third Japanese city was to be destroyed. Close advisers said that for Truman the “thought of wiping out another 100,000 people was too horrible.”<sup>8</sup>

Soon after the war, Truman introduced the very first resolution to the new United Nations, calling for the “elimination from national armaments of atomic weapons.”<sup>9</sup> His effort collapsed as the Soviet–U.S. rivalry grew increasingly hostile. Nuclear weapons production slowly ramped up. When Stalin detonated the Soviet Union’s first atomic bomb in 1949, the arms race exploded.

Einstein noted with alarm in 1950 that weapons production, “originally supposed to be a preventive measure, assumes an hysterical character.” President Eisenhower agreed. “Let no one think that the expenditure of vast sums for weapons and systems of defense can guarantee absolute safety for the cities and citizens of any nation,” he said in 1953. “The awful arithmetic of the atomic bomb does not permit any such easy solution.” But Eisenhower buckled to the military-industrial complex he famously warned against in later years and oversaw the creation of a nuclear arsenal that expanded from 200 atomic bombs in the late 1940s to more than 20,000 hydrogen bombs by 1960.<sup>10</sup>

Thus began the struggle waged for the eight decades of the nuclear age, between those who see nuclear weapons as essential to asserting U.S. global dominance and those who recognize the deterrence value of these weapons but also view them as uniquely dangerous and unsuited for actual warfare.

## The drivers of U.S. nuclear policy

President Biden has been a lifelong champion of nuclear-arms control. During his 2020 presidential campaign he promised to “restore American leadership on arms control and

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<sup>8</sup> Norris, Robert S. *Racing for the Bomb: General Leslie R. Groves, the Manhattan Project’s Indispensable Man*. South Royalton, Vermont: Steerforth Press, 2002. 424–425.

<sup>9</sup> Musto, Ryan A. “First UN Resolution Holds Lessons for Latest Nuclear Treaty.” *Arms Control Today*, January–February 2020.

<https://www.armscontrol.org/act/2021-01/features/first-un-resolution-holds-lessons-latest-nuclear-treaty>.

<sup>10</sup> See Cirincione. *Bomb Scare*. Chs. 1–3.

nonproliferation as a central pillar of U.S. global leadership.”<sup>11</sup> But all indications are that, like Eisenhower, he will bend to the nuclear-industrial complex.

It is the latest sign that U.S. nuclear posture is driven today not by sound strategy or morality but by a combination of arguments for global primacy, domestic politics, and profits.

Biden appears to have concluded that it is too costly in political terms to fight for his views. He has let the Pentagon dictate his strategy rather than challenge a bureaucracy resisting any alteration of current programs and doctrine. But it is not too late for the administration to change course.

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“Biden can expect the review process to offer him few real options for nuclear policy reform; these options will likely allow, at best, only narrow deviations from the status quo,” American University Professor Sharon Weiner recently wrote. “The nuclear weapons establishment will limit choice by presenting everything as an interlocking set of military requirements instead of multiple options for meeting deterrence goals.”<sup>12</sup>

The review process Weiner references begins with the Nuclear Posture Review, which summarizes U.S. declaratory policy. NPRs consistently fall short of the views of the president they are supposed to represent because they are written by those with the biggest stake in maintaining and expanding current nuclear programs. The Pentagon holds the pen, with token participation of other departments and agencies and with few

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<sup>11</sup> “Joe Biden: A Lifelong Champion of Nuclear Arms Control.” The Council for a Livable World. <https://livableworld.org/meet-the-candidates/joe-biden-a-lifelong-champion-of-nuclear-arms-control/>.

<sup>12</sup> Weiner, Sharon K. “The Biden Nuclear Posture Review: Resetting the Requirements for Nuclear Deterrence.” *Arms Control Today*, January–February 2022. <https://www.armscontrol.org/act/2022-01/features/biden-nuclear-posture-review-resetting-requirements-nuclear-deterrence>.

fiscal constraints. Those who oppose the status quo are bullied, isolated, and pushed aside.

The dismissal of Leonor Tomero as deputy assistant secretary of defense after Senate staff complained that she was not sufficiently supportive of new nuclear weapons is the most recent example of this.<sup>13</sup> *The Bulletin of the Atomic Scientists* noted Tomero's removal as one factor in its decision to keep its Doomsday Clock at 100 seconds to midnight this year: "Reports of congressional interference in the process, resulting in the firing of personnel conducting the review, suggests unwelcome politicization that could well affect the outcome and make more rational nuclear weapons policies hard to effect."<sup>14</sup>

The situation is just as bad in Congress. Many members base their votes on politics (fear that opposing a nuclear weapon will make them look weak), or on money (securing the economic benefits that contracts, bases, and other facilities deliver to their states). Worse, unlike the restrictions governing many government officials, there is no ban on direct and generous contributions to these members from the arms corporations that profit most from congressional decisions.<sup>15</sup> How the weapons will be deployed, what the consequences of their use will be, and how many weapons are needed – these are remote considerations.

Thus, nuclear policy today is not the refined result of the lofty, somber, necessarily secret deliberations that many Americans may imagine. It is crafted by networks housed in the U.S. Strategic Command and the Pentagon and running through the Congress and associated nuclear contractors and corporations. This nuclear priesthood benefits personally and professionally from the production of nuclear weapons – and it usually prevails.

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<sup>13</sup> See Seligman, Lara, Alexander Ward, and Paul McLeary. "Pentagon's top nuclear policy official ousted in reorganization." *Politico*, September 9, 2021.

<https://www.politico.com/news/2021/09/21/pentagon-top-nuclear-official-ousted-reorganization-513502>.

<sup>14</sup> "At Doom's Doorstep: It Is 100 Seconds to Midnight," 2022 Doomsday Clock Statement. *The Bulletin of the Atomic Scientists*, January 20, 2022. <https://thebulletin.org/doomsday-clock/current-time/>.

<sup>15</sup> Dillow, Clay. "Defense contractors outgun other corporations in PAC contributions." *Fortune*, July 15, 2015. <https://fortune.com/2015/07/15/defense-contractors-pac/>.

## Why do we still have so many nuclear weapons?

Although politics, bureaucracy, and greed have always played prominent roles in shaping U.S. nuclear policy, one could argue that as recently as the 1980s, strategic considerations drove weapons development. John F. Kennedy's 1960 presidential campaign featured fears of a "missile gap" with the Soviet Union. Ronald Reagan's 1980 campaign warned of a "window of vulnerability" that the Soviets would soon exploit to launch a devastating first strike on the United States. Scores of experts lined up on each side of these heated debates.

As he had promised, Reagan embarked on a massive nuclear buildup in his first term, but he surprised everyone with a dramatic pivot in his second term to policies that broke the back of the arms race and ushered in a new era of nuclear reductions. Although he failed to achieve, as he said in his second inaugural address, "the total elimination one day of nuclear weapons from the face of the Earth,"<sup>16</sup> he negotiated the first treaties to eliminate rather than just limit nuclear arsenals.

Washington and Moscow signed Reagan's Intermediate-Range Nuclear Forces Treaty, the [INF treaty](#), in 1987. It destroyed almost 3,000 nuclear weapons deployed by the United States and the Soviet Union in Europe. The first Strategic Arms Reduction Treaty, START, was signed in 1991 and cut U.S. and Soviet strategic arsenals in half. Reagan began the negotiations, George H. W. Bush completed them, and the Senate approved the pact overwhelmingly.<sup>17</sup>

The turn away from the arms race accelerated with the end of the Cold War. President Bush negotiated further cuts in a [START II](#) treaty (never ratified but largely implemented) and eliminated almost 17,000 U.S. and Soviet nuclear weapons under his unilateral 1991 [Presidential Nuclear Initiative](#); Soviet leader Mikhail Gorbachev quickly reciprocated. Bush greatly reduced the risk of accidental war by reducing the alert

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<sup>16</sup> Reagan, Ronald. "Second Inaugural Address," January 21, 1985. <https://www.bartleby.com/124/pres62.html>.

<sup>17</sup> Freedman, Lawrence D. "Strategic Arms Reduction Talks." *Britannica*. <https://www.britannica.com/event/Strategic-Arms-Reduction-Talks>.

status of thousands of weapons, including taking all U.S. nuclear-armed bombers off strip alert for the first time since 1957.<sup>18</sup>

These and subsequently negotiated agreements and unilateral decisions reduced global stockpiles of nuclear weapons by more than 85 percent from their levels at the height of the Cold War. Global totals are down from a high of 66,000 nuclear weapons in 1986 to slightly fewer than 13,000 today; the United States and Russia still hold 90 percent of all weapons.

**Table No. 1. The nine nuclear nations**

Nation	Nuclear Weapons
Russia	5,977
United States	5,428
China	350
France	290
United Kingdom	225
Pakistan	165
India	160
Israel	90
North Korea	(20)
TOTAL	12,700

Source: [Status of World Nuclear Forces](#), Federation of American Scientists.

There are also many fewer nations trying to acquire nuclear weapons. Arms negotiations, diplomacy, and security assurances persuaded most nations to abandon nuclear-weapons programs, and, in several cases, to give up nuclear weapons, including South Africa, Ukraine, Belarus, and Kazakhstan. Kennedy worried in 1960 that up to 25 nations were pursuing programs to develop these weapons; two nations are currently prompting proliferation concerns: North Korea, which has produced enough nuclear

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<sup>18</sup> See Koch, Susan J. "The Presidential Nuclear Initiatives of 1991–1992." National Defense University Press, September 2012. [https://ndupress.ndu.edu/portals/68/documents/casestudies/cswmd\\_casestudy-5.pdf](https://ndupress.ndu.edu/portals/68/documents/casestudies/cswmd_casestudy-5.pdf); Corin, Eli. "Presidential Nuclear Initiative: An Alternative Paradigm for Arms Control." Nuclear Threat Initiative, February 29, 2004. <https://www.nti.org/analysis/articles/presidential-nuclear-initiatives/>.

material for 40 to 50 weapons, and Iran, which U.S. intelligence finds abandoned its nuclear-weapon program in 2003, but which has increased its ability to produce material that could be used for weapons since Washington's exit, during Trump's presidency four years ago, from the 2015 agreement constraining its nuclear fuel programs. To be noted in this connection: Pakistan, India, and Israel are prominent failures of proliferation diplomacy efforts; they remain outside of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons and their arsenals pose serious risks of regional and global catastrophe.

*President Clinton set the pattern still favored by centrist politicians: policy support for arms control and financial support for large military budgets.*

Most Americans believed that these successful policies ended the arms race and tuned out of arms control debates with the end of the Cold War. But reductions stalled in the 1990s. President Clinton set the pattern still favored by centrist politicians: policy support for arms control and financial support for large military budgets.

Clinton focused on negotiated agreements that restrained weapons programs in other nations, including an agreement that halted North Korea's nuclear program, an historic campaign to extend the NPT indefinitely, and a global ban on nuclear weapons tests (which the Republican-controlled Senate [refused](#) to ratify). He also implemented the successful Cooperative Threat Reduction programs begun by Congress to secure and eliminate former Soviet nuclear stockpiles. Clinton was unable, however, to initiate new reductions in existing nuclear weapons: He implemented the treaties negotiated by his predecessors but kept U.S. nuclear-force levels flat during his eight years in office.

As the record indicates, Republican presidents have historically achieved deeper nuclear reductions. Clinton's successor, George W. Bush, reduced the U.S. stockpile by almost 50 percent, from 10,577 to 5,929, during his two terms.

Bush, however, turned the U.S. policy to stop the spread of these weapons on its head. Guided by John Bolton, who served as Bush's undersecretary of state for arms control, and a rising cohort of neoconservatives who saw nuclear proliferation as part of a larger, global struggle, he switched U.S. policies from nonproliferation to "counterproliferation."

Whereas previous presidents had viewed the spread of nuclear, biological, and chemical weapons as a paramount concern and sought their reduction through treaties, the neoconservatives framed the danger as the nexus of outlaw regimes, weapons of mass destruction, and terrorists. Their answer was to eliminate regimes, not weapons. They changed the focus from the "what" to the "who." The United States would decide which countries were responsible enough to have weapons of mass destruction and which were not. U.S. power, not treaties, would enforce this judgment. Warnings of mushroom clouds became the clarion call for regime-change campaigns.<sup>19</sup>

By the time President Obama took office in 2009, the Bush policy had failed catastrophically. Bush's administration destroyed Clinton's 1994 agreement curtailing North Korea's fledgling nuclear program (resulting in the North's first nuclear weapons test, in 2006), launched a disastrous war to eliminate Iraqi leader Saddam Hussein and his (nonexistent) weapons of mass destruction, and rejected Iran's offers to negotiate an end to its then-tiny nuclear-research program in favor of regime change.<sup>20</sup>

In response to the failures of the Clinton and Bush administrations, a nonpartisan consensus for a shift in nuclear strategy grew among the core of America's security elite.<sup>21</sup> Many senior strategists — including many former cabinet members and military chiefs who had guided the buildup of the vast nuclear-weapons complex — came to believe that it was time to reduce that complex.<sup>22</sup> They concluded that the country could

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<sup>19</sup> Cirincione, Joseph. "Strategic Collapse: The Failure of the Bush Nuclear Doctrine." *Arms Control Today*, November–December 2008.

<https://www.armscontrol.org/act/2008-11/features/strategic-collapse-failure-bush-nuclear-doctrine>.

<sup>20</sup> Cirincione. "Strategic Collapse."

<sup>21</sup> See, for example, Nitze, Paul. "A Threat Mostly to Ourselves." *The New York Times*, October 28, 1999.

<https://www.nytimes.com/1999/10/28/opinion/a-threat-mostly-to-ourselves.html>.

<sup>22</sup> For a history of this trend and Obama-era policy, see Cirincione, Joseph. *Nuclear Nightmares: Securing the World before It Is Too Late*. New York: Columbia University Press, 2013.

<http://cup.columbia.edu/book/nuclear-nightmares/9780231164047>.

be made safer and more secure by moving step-by-step to reduce and eventually eliminate these arsenals.<sup>23</sup>

Obama embraced these views and gave them poetic voice. Despite his best efforts, however, he could not prevail over a ferocious counterattack from nuclear hawks who frustrated his efforts to build on the Reagan–H.W. Bush legacy. By 2011, the hawks had defeated Obama. Fierce opposition to Obama’s modest New START accord dragged out Senate approval until the last legislative day of 2010, crippling chances for approval of any other treaties and leaving most of his senior advisers with a severe case of arms-control fatigue. I noted in *Foreign Affairs* at the time:

[Domestic political] opponents and a resistant nuclear bureaucracy have stymied further progress. Contracts raced ahead of policy. Congress pushed through budgets to develop a new generation of nuclear arms before the president and the Pentagon could agree on the specifics of the new course. Unless this is reversed, in the coming decade Washington may actually spend more on the country’s nuclear weapons programs than it has in the past.<sup>24</sup>

It was not reversed. Obama’s commitment to stream \$88 billion toward nuclear modernization (while he negotiated new treaties he believed would make much of that spending unnecessary) metastasized into today’s \$2 trillion flood of contracts. Nuclear hawks, meanwhile, rode Donald Trump’s presidency to unfettered command of nuclear policy. This destroyed the relative caution of Obama’s NPR with an expansion of nuclear programs and missions and accelerated contracts without any serious negotiations with other nuclear-armed states.

As a result, nuclear-weapons reductions ground to a halt. The last treaty reducing U.S. and Russian weapons was signed in 2010 and will expire within four years, with no new reduction talks in sight. Policies of regime change failed catastrophically, unable to end

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<sup>23</sup> As the push toward total elimination faltered in the later Obama period, the focus turned toward major reductions.

<sup>24</sup> Cirincione, Joseph. “Obama’s Nuclear Future, The Battle to Reduce the U.S. Nuclear Stockpile Begins.” *Foreign Affairs*, March 6, 2013. <https://www.foreignaffairs.com/articles/united-states/2013-03-06/obamas-nuclear-future>.

any “rogue state” programs. All nine nuclear-armed states are now building new weapons.

*These policy failures keep nuclear weapons as one of the three great crises that threaten destruction on a planetary scale.*

In effect, the nuclear hysteria of the 1950s and 1960s has returned today in modified form. The United States and Russia still field huge arsenals while developing new nuclear weapons and junking many of the treaty guardrails that helped reduce weapons and contain risks. This adds even greater risks in light of the crisis over Ukraine that is unfolding as this brief is published. Exaggerated estimations of the threat posed by China now justify vast new military expenditures, new weapons, and new confrontations that only increase the risks to U.S. national security. Current trends in nuclear-weapons deployments echo dangerous Cold War thinking, emphasizing more “usable” weapons integrated with conventional war plans.<sup>25</sup>

These policy failures keep nuclear weapons as one of the three great crises that threaten destruction on a planetary scale. Climate change can destroy human civilization over decades. Pandemics can devastate populations over years. Nuclear weapons can destroy all that humanity has created over millennia in a single afternoon. Of these, the threat of nuclear war is the easiest to prevent, if there is the political will.

## **Towards a safer nuclear posture**

We do not have to repeat the mistakes of the past. We can and must return to policies that preserved deterrence, reduced the risk of nuclear war, shrank global arsenals, effectively halted nuclear testing by the major powers, and ended or curtailed nuclear programs in dozens of countries. Current trend lines are a major departure from the

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<sup>25</sup> Arkin, William M. and Marc Ambinder. “Ukraine Crisis Could Lead to Nuclear War under New Strategy.” *Newsweek*, February 4, 2022.  
<https://www.newsweek.com/exclusive-ukraine-crisis-could-lead-nuclear-war-under-new-strategy-1676022>

policies of nuclear reductions that began under President Reagan and continued until recently. These policies worked; we abandon them at our peril.

Carnegie Endowment scholars Toby Dalton and Ariel Levite warn that “stalled progress toward nuclear disarmament by states with nuclear weapons,” and the spread of sensitive nuclear materials and technologies, have pushed the global nonproliferation regime to the breaking point.<sup>26</sup> Biden’s AUKUS deal, announced simultaneously in Canberra, London, and Washington last September, sets a dangerous precedent, allowing Australia for the first time to enrich uranium to near-bomb levels of purity to fuel nuclear reactors in new attack submarines it will now acquire, thus opening the door to future proliferation.<sup>27</sup> Urgent steps are needed, argue Dalton and Levite, “to restore the nonproliferation regime’s role as a bulwark of global stability.”

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Restoring the regime will require policies that reduce the role and number of U.S. nuclear weapons, that recognize the profound moral questions raised by the use of these weapons (and the consequent civilian toll), and that seek to avoid risky or dangerous doctrines and postures that can trigger nuclear war, as Kennedy put it, “by accident, miscalculation, or madness.” Nuclear weapons may be a means of deterrence in some cases, but they are never a tool for waging war.

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<sup>26</sup> Dalton, Toby, and Ariel Levite. “The Non-Proliferation Regime Is Breaking.” *Foreign Affairs*, January 13, 2022. <https://www.foreignaffairs.com/articles/world/2022-01-13/nonproliferation-regime-breaking?eType=EmailBlastContent&eId=32f0b9e7-a836-4034-8bd0-3f0c650f35ef>.

<sup>27</sup> Shidore, Sarang. “AUKUS’ military alliance is another Western attempt to isolate China.” *Responsible Statecraft*, September 17, 2021. <https://responsiblestatecraft.org/2021/09/17/uk-us-australian-nuclear-sub-deal-is-another-western-attempt-to-isolate-china/>.

In sum, the United States does not need its current arsenal of 5,428 hydrogen bombs to protect the American people.<sup>28</sup> The nuclear doctrine and posture adopted in the fearsome days of the Cold War – including “massive retaliation,” the first use of nuclear weapons in a conventional conflict, the sole authority of the president to fire these weapons, and keeping more than a thousand missiles ready to launch in minutes – combine now to present an unacceptable risk of nuclear disaster.<sup>29</sup> Deterrence can be preserved by means of a much smaller arsenal and a shift to a lower-risk nuclear posture.

## Nuclear pivot point

Regrettably, the president and Congress appear unwilling to slow or reverse plans to replace the nuclear weapons constructed during the Carter and Reagan presidencies, which are now reaching the end of their operational life. Those weapons were built, in turn, to replace those constructed during the Eisenhower, Kennedy, and Johnson administrations.<sup>30</sup>

In 2017, the Congressional Budget Office estimated that this third wave of nuclear modernization would cost at least \$1.2 trillion over 30 years, or \$1.7 trillion in inflation-adjusted dollars. Since then, costs have risen and new programs have been added. The total burden now is certainly more than \$2 trillion. Worse, these weapons will carry a nuclear posture developed during the terrors of the Cold War almost to the end of the 21st century.

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<sup>28</sup> Kristenson, Hans M., and Matt Korda. “United States Nuclear Forces, 2021.” *The Bulletin of the Atomic Scientists*, January 26, 2021. <https://doi.org/10.1080/00963402.2020.1859865>.

The Defense Department maintains “an estimated stockpile of approximately 3,800 warheads. Of these, 1,800 warheads are deployed, while approximately 2,000 are held in reserve. Additionally, approximately 1,750 retired warheads are awaiting dismantlement, giving a total inventory of approximately 5,550 nuclear warheads.”

<sup>29</sup> Cirincione, Joseph. “No president should have the absolute authority to launch nuclear weapons.” *The Washington Post*, December 1, 2019.

<https://www.washingtonpost.com/opinions/2019/12/01/no-president-should-have-absolute-authority-launch-nuclear-weapons/>.

<sup>30</sup> For example, the United States has built three generations of nuclear-armed strategic submarines: The Polaris class started during the Kennedy administration, the Trident class begun under President Reagan, and now the Columbia class begun by President Obama and continued under President Trump. These are roughly matched by three generations of nuclear-armed ICBMs and strategic bombers.

These expansive, expensive programs are justified at the strategic level by arguments indistinguishable from those advanced to counter the Soviet threat decades ago. Now as then, nuclear hawks say the new weapons are needed to dominate the escalatory ladder at every level, from battlefield nukes to globe-spanning missiles. Now as then, they argue that arms competition, not arms control, will keep the peace. Deterrence “depends on maintaining a large, modern and calibrated arsenal that contains no gaps in a potential escalation cycle,” argues *New York Times* columnist Bret Stephens.<sup>31</sup>

*At every fork in the nuclear road, weapon proponents insisted that the current forces were the bare minimum necessary for security.*

Senator Tom Cotton, the Arkansas Republican, agrees. “It is very expensive and hard work to win an arms race, but it is much better to win an arms race than to lose a war,” he said last year.<sup>32</sup> China must be stopped from increasing its arsenal lest it lead to “nuclear overmatch” against the United States, Cotton also asserted.<sup>33</sup> These absurd comparisons – even if China quadrupled its arsenal it would still be one-fifth the size of the U.S. force – demonstrate how easily the pathology of U.S. primacy leads to wasteful spending and dangerous military postures.<sup>34</sup>

Similar arguments have been made at every stage of the nuclear buildups and drawdowns. At every fork in the nuclear road, weapon proponents insisted that the current forces were the bare minimum necessary for security, and many such advocates claimed more were needed. Often, this meant many more. When Gen. Thomas Power was head of the Strategic Air Command in 1961, for example, he insisted to President

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<sup>31</sup> Stephens, Bret. “The U.S. Needs More Nukes,” *The New York Times*. August 9, 2019. <https://www.nytimes.com/2019/08/09/opinion/russia-nuclear-treaty-inf.html>.

<sup>32</sup> Howe, Elizabeth. “Lawmakers Push Chinese Threat at Indo-Pacific Commander’s Hearing.” *Defense One*, March 9, 2021. <https://www.defenseone.com/threats/2021/03/gop-lawmakers-push-chinese-threat-indo-pacific-commanders-hearing/172572/>.

<sup>33</sup> Larison, Daniel, “Hawks up the ante: China is now a nuclear threat, too.” *Responsible Statecraft*, April 8, 2021. <https://responsiblestatecraft.org/2021/04/08/hawks-up-the-ante-china-is-now-a-nuclear-threat-too/>.

<sup>34</sup> See Cirincione, Joseph. “The Dual Nature of China’s Nuclear Modernization.” *Georgetown Journal of International Affairs*, December 29, 2021. <https://qija.georgetown.edu/2021/12/29/the-dual-nature-of-chinas-nuclear-modernization/>.

Kennedy and Defense Secretary Robert McNamara that he needed 10,000 Minuteman intercontinental ballistic missiles, ICBMs, to safeguard America.<sup>35</sup> They instead settled on 1,000 because, McNamara said, “that was a nice round number.”<sup>36</sup>

Scores of scholarly studies refute the specious theoretical claims of nuclear-warfare advocates. They have also detailed how security can be maintained and increased through a major shift in nuclear policy. Indeed, the majority of independent experts believe that U.S. national security objectives can be met at far lower levels and with a safer nuclear posture.<sup>37</sup>

Among the most authoritative of these reports is a 2013 study by the Joint Chiefs of Staff, which concluded that the number of deployed nuclear warheads “could be cut by at least a third without harming national security.”<sup>38</sup> A force of 1,000 to 1,100 deployed strategic warheads could “deter attack or protect American interests by targeting fewer, but more important, military or political sites in Russia, China and several other nations.” These reductions could be implemented unilaterally, the military research study concluded, no matter what Russia decided to do. Lt. Gen. James Kowalski, then head of the Global Strike Command, said that only after cutting below 1,000 strategic warheads would the military require “major structural changes in how we do this business.”

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<sup>35</sup> Norris, Robert S. “The History of the U.S. Nuclear Stockpile, 1945–2013.” Federation of American Scientists. *Public Interest Reports*, August 15, 2013. <https://fas.org/pir-pubs/the-history-of-the-u-s-nuclear-stockpile-1945-2013/>.

<sup>36</sup> Conversations with the author. See also “Sixty Years of Trying to Control the Bomb.” *Talk of the Nation with Neal Conan*. National Public Radio, November 8, 2005. <https://www.npr.org/transcripts/4994161>.

<sup>37</sup>See, for example, Drell, Sidney D., and James E. Goodby. “What Are Nuclear Weapons For? Recommendations for Restructuring U.S. Nuclear Forces.” The Arms Control Association, October 2007. [https://www.armscontrol.org/sites/default/files/files/Reports/Report\\_2007October\\_What\\_Are\\_Nuclear\\_Weapons\\_For.pdf](https://www.armscontrol.org/sites/default/files/files/Reports/Report_2007October_What_Are_Nuclear_Weapons_For.pdf); Kristensen, Hans M., Robert S. Norris, and Ivan Oelrich. “From Counterforce to Minimal Deterrence.” Federation of American Scientists and The Natural Resources Defense Council, 2009. [https://pubs.fas.org/\\_docs/occasionalpaper7.pdf](https://pubs.fas.org/_docs/occasionalpaper7.pdf); “Eliminating Nuclear Threats.” The International Commission on Nuclear Non-proliferation and Disarmament, May 2010. <http://www.icnnd.org/reference/reports/ent/index.html>; Pifer, Steven, and Michael E. O’Hanlon. *The Opportunity: Next Steps in Reducing Nuclear Arms*. Washington. Brookings Institution Press, 2012. <https://muse.jhu.edu/book/29051>; Friedman, Benjamin H., and Christopher A. Preble. “The End of Overkill? Reassessing U.S. Nuclear Weapons Policy.” The CATO Institute, September 24, 2013. <https://www.cato.org/white-paper/end-overkill-reassessing-us-nuclear-weapons-policy>; Blair, Bruce G., with Jessica Sleight and Emma Claire Foley. “The End of Nuclear Warfighting: Moving to a Deterrence–Only Posture.” Program on Science and Global Security. Princeton University, September 2018. <https://www.globalzero.org/wp-content/uploads/2018/09/ANPR-Final.pdf>; Robinson, Mary, et al. “Nuclear Non–Proliferation and Disarmament, Policy Paper.” The Elders Foundation, November 2019. <https://theelders.org/sites/default/files/newsarticledocument/20191122-The-Elders-Nuclear-Position-Paper-Single-or-web.pdf>; Perry, William J. and Tom Z. Collina. *The Button*. Dallas. BenBella Books, 2020. <https://benbellabooks.com/shop/the-button/>.

<sup>38</sup> Smith, R. Jeffrey. “Obama administration embraces major new nuclear weapons cut.” The Center for Public Integrity, February 8, 2013. <https://publicintegrity.org/national-security/obama-administration-embraces-major-new-nuclear-weapons-cut/>.

Complementary reductions in short- and medium-range nuclear forces could bring the total arsenal down to 3,500, or perhaps as low as 2,500 warheads, the study found.

Media reporting about the U.S. programs is rare, and congressional hearings even rarer, though these systems will consume more than \$634 billion in this decade alone, far more than most hotly debated domestic programs.<sup>39</sup> There is more political space to make dramatic changes, however, than many imagine. If the issue has low salience among the American public, then responsible change carries few political risks.

Change must come. Experience shows that even historically high spending on military systems cannot be sustained indefinitely, despite the desire of many in Congress to do so. Pentagon budgets have soared from the \$300 billion allocated in the year before the September 11, 2001, attacks to \$778 billion in the budget recently approved.

Nuclear-weapons and related missile-defense programs account for almost one-tenth of this spending, at \$64 billion for the 2022 fiscal year and growing.<sup>40</sup> During the peak years of procurement, this amount will double, the Congressional Budget Office has concluded. In that report, issued in 2017, the CBO outlined seven different proposals for preserving deterrence while saving from \$27 billion to \$139 billion.<sup>41</sup> The three options that would reduce the force to 1,000 deployed strategic warheads would save the most, from \$66 billion to \$139 billion.

Rather than protecting America, these distorted budgets threaten the viability of the nation. “Defense spending crowds out funds for everything else a prosperous economy and a healthy society need,” says former Carnegie Endowment President Jessica Tuchman Mathews. It is “indefensible.”<sup>42</sup> Once the nation is through the current pandemic and the associated economic crisis, a reckoning may come. A president could and should articulate a long-term investment strategy aligned with the

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<sup>39</sup> “Projected Costs of U.S. Nuclear Forces, 2021 to 2030.” Congressional Budget Office, May 2021. [https://www.cbo.gov/publication/57240#:~:text=The%20estimate%20of%20%24634%20billion,period%20\(see%20Table%202\).](https://www.cbo.gov/publication/57240#:~:text=The%20estimate%20of%20%24634%20billion,period%20(see%20Table%202).)

<sup>40</sup> Montgomery, Monica. “FY2022 Defense Budget Request Briefing Book.” Center for Arms Control and Non-Proliferation, 2021. <https://armscontrolcenter.org/wp-content/uploads/2021/06/FY22-Defense-Budget.pdf>.

<sup>41</sup> “Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046.” Congressional Budget Office, October 31, 2017. <https://www.cbo.gov/publication/53211>.

<sup>42</sup> Mathews, Jessica. “America’s Indefensible Military Budget.” *The New York Review of Books*, July 18, 2019. <https://www.nybooks.com/articles/2019/07/18/americas-indefensible-defense-budget/>.

imperatives of the new challenges we face, not the needs of the nuclear-industrial complex.

Nuclear-weapons budgets should be the first on the chopping block for reductions, being relatively the least-necessary outlays and enjoying the least support among the service chiefs. When military budgets are growing, the emphasis is on unity, and each service branch gets a share. But when budgets contract, the chiefs tend to favor force posture and weapons they actually use, and their support for nuclear-weapons and missile defenses decline.

## What a president can do

It is not too late for Biden to overcome the limitations of the expected Pentagon's posture review. The game is not over. That is, there are still several ways that a president can change U.S. policy greatly to lower the risk of nuclear war and achieve cost reductions while not compromising national security.

*A president could and should articulate a long-term investment strategy aligned with the imperatives of the new challenges we face, not the needs of the nuclear-industrial complex.*

The first and easiest, says Adam Mount of the Federation of American Scientists, is for the undersecretary of defense for policy or the national security adviser to “rewrite the NPR material or make significant amendments at the 11th hour” as the document comes to the White House for the president’s approval.<sup>43</sup> They may be reluctant to make major changes, but they, or the president himself, might intervene on the one issue that has attracted the most press attention: the policy of no first use.

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<sup>43</sup> Mount, Adam. “The Biden Nuclear Posture Review: Obstacles to Reducing Reliance on Nuclear Weapons.” *Arms Control Today*, January–February 2022. <https://www.armscontrol.org/act/2022-01/features/biden-nuclear-posture-review-obstacles-reducing-reliance-nuclear-weapons>.

In one of his last speeches as vice-president, Biden said, “Given our nonnuclear capabilities and the nature of today’s threats, it’s hard to envision a plausible scenario in which the first use of nuclear weapons by the United States would be necessary or make sense.” Several times during the 2020 campaign, Biden said that “deterring, and, if necessary, retaliating against a nuclear attack should be the sole purpose of the U.S. nuclear arsenal.”<sup>44</sup>

A president can declare on his or her authority that henceforth it will be the policy of the United States never to initiate a nuclear war. This is the essence of legislation introduced in 2019 and again in 2021 by House Armed Services Committee Chairman Adam Smith and Senator Elizabeth Warren. “Threatening to use nuclear weapons first makes America less safe because it increases the chances of a miscalculation or an accident,” says Smith.<sup>45</sup> The proposed legislation effectively makes any first-use order to use nuclear weapons illegal, thus requiring military officers to refuse to implement such a command.

A “sole purpose” doctrine is similar and related to “no first use.” It is the commitment to use nuclear weapons only to deter or respond to a nuclear attack. Thus, U.S. nuclear weapons would not be used to deter or respond to chemical, biological, cyber, or conventional attacks, as Trump-era nuclear policies allow.<sup>46</sup>

The United States could adopt some variation of these concepts. The sooner the better, says Jon Wolfsthal, a former senior director for arms control and nonproliferation at the National Security Council and former special adviser to Biden during his vice-presidency. “The risk of a nuclear conflict erupting between the United States and Russia, and increasingly between the United States and China, is dangerously high,” he

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<sup>44</sup> Collina, Tom Z. “Unless Biden Acts Now, His Nuclear Policy Will Look a Lot Like Trump’s.” *Defense One*, January 13, 2022.

<https://www.defenseone.com/ideas/2022/01/unless-biden-acts-now-his-nuclear-policy-will-look-lot-trumps/360715/>.

<sup>45</sup> See “Chairman Smith, Senator Warren Introduce ‘No First Use’ Bill for Nuclear Weapons.” Adam Smith, Washington’s 9<sup>th</sup> District, April 15, 2021.

<https://adamsmith.house.gov/2021/4/chairman-smith-senator-warren-introduce-no-first-use-bill-for-nuclear-weapons>

<sup>46</sup> See “No First Use: Frequently Asked Questions.” Center for Arms Control and Non-Proliferation. <https://armscontrolcenter.org/issues/no-first-use/no-first-use-frequently-asked-questions/>.

writes. “Tensions over Ukraine or Taiwan could get out of hand quickly, with uncertain outcomes... Declaratory policy can be a powerful tool in reducing nuclear risks.”<sup>47</sup>

Even after the NPR is finalized, says Mount, “It is still possible that the administration could adjust declaratory policy through other means.”<sup>48</sup> Biden and his advisers can make significant changes over the next year or so as they develop the administration’s nuclear-employment guidance, the mechanism by which the recommendations of the NPR are translated into government actions.<sup>49</sup> This process is actually the more important component for setting U.S. policy. “It is in the implementation that the true strategy evolves,” observed Adm. Gerald Miller, former deputy director of the Joint Chiefs Strategic Targeting Planning Staff, “regardless of what is generated in the political and policy meeting rooms of any Administration.”<sup>50</sup>

Here, Biden can take two steps that could prevent a repeat of the nightmare scenario envisioned during the Trump administration – that is, the fear, real or perceived, that an unstable president could launch a nuclear war. Deepening domestic divisions in the United States during the 2020 election crisis led Gen. Mark Milley, chairman of the Joint Chiefs of Staff, to take extraordinary and possibly unconstitutional steps to ensure that military commanders checked with him before implementing a Trump order to launch nuclear weapons.<sup>51</sup>

Milley is not in the chain of command for launching nuclear weapons. Nor is any other senior official. Because of procedures adopted during the Cold War, a president of the United States has the sole, unfettered ability to order a nuclear strike at any time and for any reason. “I can go into my office and pick up a telephone,” President Nixon told

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<sup>47</sup> Wolfsthal, Jon. “The threat of nuclear conflict is high. We need a new commitment to de-escalation.” *The Washington Post*, January 17, 2022. <https://www.washingtonpost.com/opinions/2022/01/17/threat-nuclear-conflict-is-high-we-need-new-commitment-de-escalation/>.

<sup>48</sup> Mount, Adam. “The Biden Nuclear Posture Review.”

<sup>49</sup> See, for example, “Fact Sheet: Nuclear Weapon Employment Strategy of the United States.” The White House, June 19, 2013. <https://obamawhitehouse.archives.gov/the-press-office/2013/06/19/fact-sheet-nuclear-weapons-employment-strategy-united-states>.

<sup>50</sup> Miller, Gerald E. “Beres and others have no access to the ‘true strategy.’” *Center Magazine*, November–December 1982.

<sup>51</sup> Pengelly, Martin. “Top General feared Trump would launch nuclear war, Woodward book reports.” *The Guardian*, September 13, 2021. <https://www.theguardian.com/books/2021/sep/14/mark-milley-donald-trump-bob-woodward-nuclear-war->

visiting lawmakers during his impeachment hearings, “and in 25 minutes, 70 million people would be dead.”<sup>52</sup>

Nixon was right. A president, on his or her own, can choose any of the pre-approved, legal attack options carried by a military aide who follows the president 24 hours a day and transmit his orders directly to the National Military Command Center, which will then transmit them to launch officers. Approximately 1,000 weapons are kept on high-alert, ready to launch within five minutes of an order. No one, under present rules, can counter the president’s order.

*Modernizing employment policies to prevent first use, requiring two people to authorize any use, and lengthening launch times would greatly improve the safety and security of U.S. nuclear weapons.*

A president on his or her own can change this dangerous and obsolete arrangement. It was created by presidential directives; it can be changed by presidential directives. Biden could announce that, henceforth, two people would be required to approve a decision to launch nuclear weapons. Various proposals have suggested the second authority be the vice-president, the secretary of defense, the speaker of the House, or, a variant, the Congress.<sup>53</sup>

Biden could also decide — the second step available to him now — that since there is virtually no risk of a massive “bolt-out-of-the-blue” attack, he no longer requires that nuclear-armed missiles be on hair-trigger alert. Lengthening the launch time to hours or days would give more time for deliberation and consultation.<sup>54</sup>

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<sup>52</sup>See Cirincione, Joseph. “No president should have the absolute authority to launch nuclear weapons.” *The Washington Post*, December 1, 2019. <https://www.washingtonpost.com/opinions/2019/12/01/no-president-should-have-absolute-authority-launch-nuclear-weapons/>.

<sup>53</sup> See “Senator Ed Markey and Representative Ted Lieu Announce Reintroduction of Bill to Limit U.S. President’s Ability to Start a Nuclear War.” Ed Markey, United States Senator for Massachusetts, January 19, 2021. <https://www.markey.senate.gov/news/press-releases/01/19/2021/senator-markey-and-rep-lieu-announce-reintroduction-of-bill-to-limit-us-presidents-ability-to-start-a-nuclear-war>.

<sup>54</sup> Blair, Bruce G., Harold A. Feiveson, and Frank N. von Hippel. “Taking Nuclear Weapons off Hair-Trigger Alert.” *Scientific American*, November 1997. <https://www.scientificamerican.com/article/taking-nuclear-weapons-off-hair-tr/>.

Modernizing employment policies to prevent first use, requiring two people to authorize any use, and lengthening launch times would greatly improve the safety and security of U.S. nuclear weapons without engendering the fierce opposition triggered by cuts to major programs. The necessary cuts, of course, should also be pursued.

Nearly 700 scientists, including 21 Nobel laureates, recently wrote in favor of just these policies. Ending the sole authority of the president to launch weapons and making clear that the United States will never start a nuclear war, they wrote, “reduces the likelihood that a conflict will escalate to nuclear war.”<sup>55</sup> The group also recommended reducing the national inventory to 1,000 deployed strategic warheads and canceling the ICBM program accelerated during the Trump administration’s final months.

Finally, should Biden decide that he wants to pursue his hope “to reimagine national security,” he has ample opportunity in his budgets for the 2023 fiscal year and beyond to shift funds from obsolete weapons to the real dangers facing America. To pave the way, he or any future president could, on sole authority, require serious review of the rationale for these delivery systems, warhead modernization, and the production of new plutonium cores for weapons. They could encourage congressional leaders to conduct hearings where alternatives could be examined. They could urge the directors of the national laboratories to diversify away from nuclear weapons research to research on pandemics, climate change, renewable energy, and other areas that would increase American competitiveness and innovation.

The imminent Nuclear Posture Review, while important, does not have to be the last word. In many ways, it could be seen as just an opening act in a drama that twists and turns to a much more satisfying and ultimately safer conclusion.

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<sup>55</sup> “Letter to President Joe Biden.”

<https://ucs-documents.s3.amazonaws.com/global-security/letter-POTUS-NPR-dated-12-16-21.pdf>; see also Sanger, David E. “Hundreds of Scientists Ask Biden to Cut the U.S. Nuclear Arsenal.” *The New York Times*, December 16, 2021. <https://www.nytimes.com/2021/12/16/us/politics/scientists-letter-nuclear-arsenal.html>.

## About the Author

**Joseph Cirincione** is a distinguished non-resident fellow at the Quincy Institute. As a national security analyst and author he has worked on nuclear-weapons issues in Washington for more than 35 years. He is the author or editor of seven books, including *Nuclear Nightmares: Securing the World before It Is Too Late*, and *Bomb Scare: The History and Future of Nuclear Weapons*. He served previously as president of the Ploughshares Fund, a global security foundation, vice-president for national security at the Center for American Progress, and director for nonproliferation at the Carnegie Endowment for International Peace, among other positions. He worked for over nine years on the professional staff of the Armed Services Committee and the Government Operations Committee in the U.S. House of Representatives. He served as an advisor to the presidential campaigns of Barack Obama, Bernie Sanders, and Elizabeth Warren and is a member of the Council on Foreign Relations.

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### CONTACT

Jessica Rosenblum

Director of Communications

Email: [rosenblum@quincyinst.org](mailto:rosenblum@quincyinst.org)

Tel: 202 279 0005