



AP PHOTO/US AIR FORCE

# Orienting the 2009 Nuclear Posture Review

## A Roadmap

---

Andrew Grotto Center for American Progress

Joe Cirincione Ploughshares Fund

November 2008



Center for American Progress



# Orienting the 2009 Nuclear Posture Review

## A Roadmap

---

**Andrew Grotto** Center for American Progress

**Joe Cirincione** Ploughshares Fund

November 2008



# Contents

<b>1</b>	<b>Executive summary</b>
<b>3</b>	<b>An emerging bipartisan consensus for a new nuclear posture</b>
3	CHART: Global nuclear stockpiles, 1955–2008
<b>4</b>	<b>21<sup>st</sup> century nuclear threats</b>
4	Nuclear terrorism and rogue states
5	The nuclear black market
6	Nuclear energy and nuclear weapons proliferation
<b>8</b>	<b>The imperative of U.S. leadership</b>
8	Russia's key role
10	CHART: The NPT'S "grand bargain"
<b>11</b>	<b>Needed: a new U.S. nuclear weapons posture</b>
<b>12</b>	<b>Structuring the 2009 NPR</b>
<b>16</b>	<b>Sequencing the 2009 NPR</b>
16	During the transition
16	The first 100 days
17	The first year
<b>18</b>	<b>A progressive nuclear posture: key policy issues</b>
18	Deterrence and doctrine
18	CHART: U.S. nuclear forces by the numbers (active stockpile)
19	Force structure and the nuclear weapons complex
19	CHART: Key nuclear weapons-related facilities
20	Nonproliferation and arms control
21	CHART: U.S. nuclear forces and the nuclear triad
<b>21</b>	<b>Appendix I: "Revised Nuclear Posture Review" (S1070 FY 2008 National Defense Authorization Act)</b>
<b>23</b>	<b>Appendix II: Past as prelude: the politics and process of nuclear posture reviews</b>
<b>28</b>	<b>Appendix III: A brief history of strategic arms control, 1969–2008</b>
<b>32</b>	<b>Selected references</b>
<b>35</b>	<b>Endnotes</b>
<b>36</b>	<b>About the authors</b>



# Executive summary

There is an emerging bipartisan consensus that America's current nuclear weapons posture imposes an unnecessary burden on U.S. efforts to prevent nuclear terrorism and curtail the spread of nuclear weapons, materials, and technology to additional nation-states. It holds that the United States must retain a nuclear arsenal as a strategic deterrent, but should embrace the vision laid out by senior statesmen George Shultz, Henry Kissinger, William Perry, and Sam Nunn of a world free of nuclear weapons in order to strengthen America's ability to exercise global leadership in countering 21<sup>st</sup> century nuclear threats. The Obama administration should use the congressionally mandated 2009–2010 Nuclear Posture Review, or NPR, to realign nuclear policy, forces, and posture with these threats. This study makes the case for why a successful NPR should be among the Obama administration's top priorities and provides a roadmap on how to structure and manage the review so that it achieves key policy objectives. It is not a study on nuclear weapons doctrine.

The 2009–2010 NPR will be the third formal review of U.S. nuclear strategy conducted since the end of the Cold War. The preceding reviews were conducted early in each of the Clinton and Bush administrations' first terms. The Clinton administration's review essentially ratified the Cold War status quo, despite an urgent need to recalibrate in light of the Soviet Union's collapse and the need to work with Moscow to prevent the further spread of nuclear weapons, materials, and technology. The National Security Council was largely disengaged from the process, as the White House was just emerging from a series of bitter disputes with the armed forces over such issues as Somalia and gays in the military. The administration was also battling both the military and an increasingly hostile Congress over defense spending priorities. The Department of Defense underwent a leadership change in the middle of the review, and other issues, such as dealing with North Korea's nuclear program and the multiple proliferation concerns presented by the collapse of the Soviet Union, competed for senior appointees' finite time and resources.

The second formal NPR took place in 2001 under vastly different political and policy circumstances. It was driven by presidential prerogatives, which guaranteed that senior officials would invest time and energy in the NPR process. The review yielded the administration's preferred policy outcomes, but it also undermined America's nonproliferation credentials.

The goals of the 2009–2010 NPR should be to recalibrate America’s nuclear deterrent in light of existing and emerging threats, strengthen America’s hand in negotiations on improvements to the global nuclear nonproliferation regime, and send a clear signal to the world that the United States is charting a new, multilateral course. Success in achieving these goals hinges on development of a coherent, realistic strategy for conducting the review that ensures senior appointees devote sustained attention even as they confront other national security challenges. The strategy should be organized according to these principles:

- Do not politicize nuclear weapons doctrine.
- Conduct the review as a strategy-driven exercise guided by a vision for nuclear weapons policy elaborated by the president.
- Consult and engage the Joint Chiefs of Staff.
- Consult and engage Congress.
- Appoint experienced professionals to carry out the vision.
- Ensure that the review is interagency.
- Consult and engage key allies and partners.
- Develop a communications plan.

This study identifies the key nuclear policy issues that demand senior-level attention, which we identify as falling into three categories: “Deterrence and Doctrine,” “Force Structure and the Nuclear Weapons Complex,” and “Nonproliferation and Arms Control.” It also provides a notional timeline for sequencing the review.

These recommendations and findings are based on a review and comparison of how the structure of the Clinton and Bush administration NPRs, conducted in 1993–1994 and 2001, shaped the final review product in each case. The study was also informed by nearly two dozen interviews and informal discussions with experts, congressional staff, and former senior officials with experience in nuclear policy from both sides of the political spectrum. The authors take sole responsibility for the content of this report.

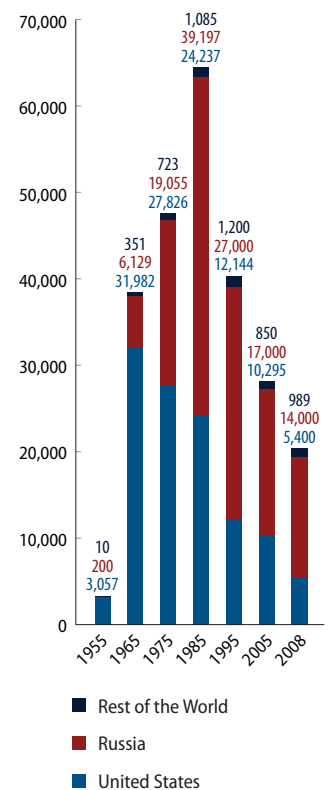


# An emerging bipartisan consensus for a new nuclear posture

There is an emerging bipartisan consensus that America's current nuclear weapons posture—the policies governing the role, mission, and size of the U.S. nuclear weapons arsenal—imposes an unnecessary burden on U.S. efforts to prevent nuclear terrorism and curtail the spread of nuclear weapons, materials, and technology to additional nation-states. This consensus, which includes more than two-thirds of living former national security advisors and secretaries of state or defense, acknowledges the ongoing role of U.S. nuclear weapons as a strategic deterrent for the United States and its allies. But the consensus also embraces the vision of “a world free of nuclear weapons” articulated by former Secretaries of State George Shultz and Henry Kissinger, former Secretary of Defense William Perry, and former Senator Sam Nunn (D-GA) in a pair of *Wall Street Journal* op-eds.<sup>1</sup>

The emerging consensus rests on two propositions. First, it holds that the current posture is based on outdated Cold War assumptions about nuclear targeting that emphasize the need to deter large-scale, preemptive nuclear strikes by Russia, our former Cold War adversary. Cold War hostilities ended more than 15 years ago with the collapse of the Soviet Union and the Warsaw Pact. Although the United States and Russia have serious differences over a range of international security issues and retain large nuclear arsenals, the two nations no longer consider each other as irreconcilable ideological adversaries. China has an estimated two dozen ballistic missiles capable of delivering a nuclear payload to the continental United States and is slowly modernizing its nuclear forces. Taiwan remains a potential flashpoint in U.S.-China relations, but as long as all parties respect the principles laid out in the three U.S.-China Joint Communiqués and the one China policy, armed conflict is a remote possibility and nuclear conflict even more so. Although the United States will retain a nuclear arsenal for as long as other countries possess them, these developments have brought the world a step closer to achieving President Ronald Reagan's dream that one day “nuclear weapons will be banished from the face of the earth.”

**Global nuclear stockpiles**  
1955–2008



Source: NRDC (2006); Norris (2007); Norris & Kristensen (2008a); (2008b); (2008c); (2008d); (2007).

# 21<sup>st</sup> century nuclear threats

The second proposition underlying the bipartisan consensus is that many countries consider U.S. compliance with its nuclear disarmament obligations under Article VI of the Non-Proliferation Treaty, or NPT, a precondition before supporting additional U.S. nonproliferation initiatives that are vital to countering 21<sup>st</sup> century nuclear threats. These threats are characterized by the diffusion of nuclear materials, know-how, and technology—much of it with a civilian dimension—to state and non-state actors enabled by globalization and economic development. In the words of secretaries Shultz, Kissinger, Perry, and Sen. Nunn, “Without the vision of moving toward zero [nuclear weapons], we will not find the essential cooperation required to stop our downward spiral.”<sup>2</sup>

The United States cannot counter these threats alone. The success of American non-proliferation strategy is now tied in significant part to the willingness and capacity of other countries to make costly investments of time, money, and sovereignty in a host of domestic and international institutions designed to regulate the transfer of sensitive materials and technology, build confidence in global supplies of nuclear fuel so that domestic enrichment projects are unnecessary, penalize violations of nonproliferation norms, and deter future transgressions. The United States could acquire “much greater leverage to persuade other countries to take [these steps]” by addressing concerns about Article VI compliance, according to a nonproliferation policy task force chaired by ex-Secretary of State Madeleine Albright and former Secretary Perry.<sup>3</sup>

---

## Nuclear terrorism and rogue states

There is no single greater threat to the U.S. homeland than terrorist use of a nuclear device against an American city. Although the chances of this happening are small, the consequences of a nuclear attack would be devastating, likely killing hundreds of thousands of people, causing trillions of dollars in lasting damage, and forever changing our way of life. Potentially vulnerable stockpiles of weapons-usable, highly enriched uranium, or HEU—what a terrorist would need to build a crude nuclear device—exist at civilian research facilities in dozens of countries around the world. By securing or eliminating these stockpiles, the United States could practically guarantee against an act of nuclear terrorism. Yet the pace of efforts to address this key national security vulnerability by securing stockpiles and, preferably, phasing out the civilian use of HEU altogether lags behind the severity of the

threat. As of 2007, an estimated four out of five research reactors lacked adequate security to protect against sophisticated thieves, while only around one-third of HEU-fueled research reactors have had all their HEU monitoring removed.<sup>4</sup>

Rogue state acquisition of nuclear weapons presents a different, more complex challenge. It raises the chances of nuclear war through miscalculation or accident while providing an incentive for other countries to seek their own nuclear deterrent, potentially leading to regional arms races. Iran continues to press forward with its nuclear program in violation of successive U.N. Security Council resolutions demanding a suspension. North Korea has agreed in principle to eliminate its nuclear program as of this writing, but it is by no means certain whether ongoing negotiations will produce that outcome. Other states, such as Syria, may also have secret programs underway. Although concerns about U.S. compliance with NPT Article VI are unlikely to exert a direct influence on rogue states' nuclear ambitions, such concerns may influence the willingness of other countries to join an international effort to contain those ambitions using sanctions, diplomatic pressures, and other means. Finally, over the long run, an insistence by the world's strongest conventional military power, the United States, that it cannot meet its security needs without nuclear weapons can only make nuclear weapons more attractive for weaker powers.

---

## The nuclear black market

The lifeline for these illicit efforts is a nuclear black market comprised of skilled manufacturers, engineers and scientists, middle-men, and transportation and logistics channels. It is serviced by three broad types of proliferators that vary in their willingness and ability to combat proliferation: “willful proliferators,” such as the infamous A.Q. Khan, father of Pakistan’s centrifuge enrichment program; “willfully blind proliferators” that should reasonably know their skills and wares will be used to advance a bomb program but fail to perform due diligence; and “ignorant proliferators” that genuinely do not understand the proliferation consequences of their actions. Often, the actor in question is a private-sector entity operating in a country with uneven or largely non-existent governmental oversight over flows of potentially sensitive materials and technology. Each of these proliferators presents a unique challenge, but they all have this in common: They reflect fundamental weaknesses in domestic and international governance of global commerce.

In the industrialized West, there have been major improvements in export controls and related measures to clamp down on illicit nuclear trade during the past 15 years. These advances were spurred in large part by shocking revelations in the aftermath of the 1991 Gulf War concerning the size and scale of Saddam Hussein’s nuclear procurements during the 1980s. Iraq during this period, along with India, Pakistan, and others, exploited weaknesses in the export control regimes of the advanced industrial democracies, particularly in select European countries whose industries possessed high technologies. The exposure of A.Q. Khan’s network in 2003 motivated another round of improvements in many coun-

tries. Export controls remain a work in progress, despite decades of experience regulating nuclear exports. Constant vigilance is demanded to stay ahead of the proliferation curve.

Moreover, the forces of economic development, industrialization, and globalization are establishing new centers of high technology in the developing world that can serve as alternative suppliers for sensitive, precision technologies. A.Q. Khan, for example, set up a centrifuge component manufacturing facility in Malaysia, a country with little prior experience policing illicit transfers of proliferation-sensitive technologies. This development presents a grave and growing new challenge to the nonproliferation regime, for many of these countries—which are concentrated in the Non-Aligned Movement, or NAM, an international bloc of mostly developing countries—lack the domestic capability to adequately regulate sensitive technology flows and/or the political will to better regulate the flow of technology exports, which are often seen as essential to economic development for countries that have made export-led growth the cornerstone of their national economic policy. A United Nations Institute for Disarmament Research study reports, for example, that many developing countries “regard export controls with suspicion, viewing them as barriers to economic development at best, and at worst as part of a deliberate strategy of technology denial on the part of the developed world.”<sup>5</sup>

U.N. Security Council Resolution 1540 highlights the difficulties associated with motivating countries to spend scarce resources on nonproliferation efforts. It is, in essence, an unfunded mandate requiring that countries “adopt and enforce appropriate effective laws” preventing non-state actors from proliferating WMD. States must criminalize proliferation, adopt and enforce export and border controls, and institute effective physical protection measures. For many countries, particularly developing ones, this is a very tall order requiring potentially significant investments in a range of specialized regulatory capacity—investments they might prefer to spend on education, infrastructure, or public health. But UNSC-1540 does not define what “appropriate effective” means, leaving the interpretation to individual countries’ discretion. As a result of these factors, implementation among developing countries, according to the UNIDIR study, is weak.

---

## Nuclear energy and nuclear weapons proliferation

Future proliferants need not pursue the clandestine—and hence unambiguously illegal—route that Libya, Iraq, Iran, North Korea, and possibly Syria have taken. Instead, a government could announce a grandiose nuclear energy development program that includes a domestic nuclear fuel-making capability, ostensibly to guarantee a supply of nuclear fuel for its anticipated reactor fleet. The NPT does not expressly prohibit states from pursuing this technology, provided it is for avowedly peaceful purposes and the host government subjects it to IAEA inspections—even though it can produce fuel for bombs as well as reactors. If Iran, for example, had disclosed the existence of its nuclear fuel-making program from the beginning instead of hiding it in violation of its IAEA safeguards

agreement, the prevailing view among most international legal experts is that the program would be permissible under the NPT. IAEA inspections can verify that a declared facility is peaceful in nature, but they cannot prevent a country from kicking inspectors out and using the facility to produce fuel for bombs. Alternatively, a state can divert the experience and knowledge gained from operating a declared “peaceful” facility to a secret, undeclared facility dedicated to making bombs. That is why Iran’s nuclear fuel-making programs pose such a grave proliferation risk.

These scenarios are far from hypothetical. Iran already justifies its enrichment program on energy security grounds, and many developing countries are reluctant to strongly condemn Iran’s program for fear that further restrictions on nuclear fuel-making could jeopardize their energy security should they develop nuclear reactors for producing electricity. Other countries may well follow the more above-board route available to them under the NPT and pursue a weapons program under the guise of a civilian energy program.

This risk could grow precipitously in the coming decades if demand grows for nuclear energy as an alternative to burning fossil fuels for electricity production. At present, more than 90 percent of existing nuclear reactor capacity is concentrated in developed and transition economies. Most of the net growth in worldwide capacity, however, is projected to occur in developing countries, particularly in those associated with the Non-Aligned Movement. In just the past two years, for example, many such countries—including several U.S. partners in the Middle East—have announced ambitious nuclear energy development plans, citing concern over global warming and rapid demand growth for energy.

Only a few non-aligned countries, such as Brazil and South Africa, currently possess domestic enrichment technology or have plans to pursue it; the risk that several or more may decide to do so in the future, however, is significant. Top nonproliferation priorities for the Obama administration will include reducing the incentive for indigenous fuel making by promoting credible, economically attractive alternatives to domestic fuel production, improving transparency of civilian nuclear energy programs by strengthening the International Atomic Energy Agency’s ability to conduct nuclear inspections, and strengthening export and border control regimes to curb the flow of illicit nuclear commerce. The challenge for nonproliferation diplomacy is that countries are under no general legal obligation to accept or support these measures. Some countries recognize the direct benefits they would derive from accepting these obligations and already support them. Other countries, however, do not and must be lobbied or cajoled into supporting them.

# The imperative of U.S. leadership

U.S. leadership is essential to mobilizing international action to reduce these risks. As former Secretaries Shultz, Perry, and Kissinger and Sen. Nunn wrote in their 2007 *Wall Street Journal* op-ed, it is “required to take the world to the next stage—to a solid consensus for reversing reliance on nuclear weapons globally as a vital contribution to preventing their proliferation into potentially dangerous hands, and ultimately ending them as a threat to the world.”

But many developing countries have rejected U.S. leadership. A recent UNIDIR study reports, for example, “a widespread belief in South-East Asia and elsewhere that an exaggerated non-state WMD threat is being used by the nuclear weapons states to distract attention from their failure to comply with their disarmament commitments.”<sup>6</sup> These countries accuse the United States of failing to uphold its commitment to nuclear disarmament as required by the NPT, citing the Bush administration’s repudiation of a political understanding reached at the 2000 NPT Review Conference on a series of 13 specific measures or actions that would serve as benchmarks for evaluating progress as well as the outcome of the 2001 NPR that, as explained in Appendix II, is widely interpreted as expanding the role of nuclear weapons in U.S. defense strategy. The 13 benchmarks include entry into force of the Comprehensive Test Ban Treaty and a Fissile Material Cut-Off Treaty with verification provisions, sustaining the Anti-Ballistic Missile Treaty, and other arms control measures. Increasingly, developing countries are the main targets of nonproliferation diplomacy, yet they have indicated they will not entertain the possibility of assuming new nonproliferation obligations unless the existing nuclear powers take further steps to reduce their arsenals. This issue will dominate the spring 2010 NPT Review Conference, which many experts regard as a make-or-break moment for the nonproliferation regime. The success of the conference—and the ability of the United States to advocate for necessary improvements to the nonproliferation regime—will turn in part on the nuclear weapons policies of the United States.

---

## Russia’s key role

Russian support is indispensable to any durable effort to constrain proliferation. It is already a major military and diplomatic power and a leading energy supplier due to its large reserves of oil and natural gas. It also has an advanced nuclear energy industry. These assets endow Russia with tremendous influence over proliferant states such as Iran—and

the prospects for more durable improvements to the nonproliferation regime, such as initiatives to constrain the spread of nuclear fuel-making facilities.

By the same token, the United States cannot revitalize international efforts to reduce nuclear weapon dangers with Russia, China, and other countries without a clear sense of how nuclear weapons fit into broader U.S. defense strategy. In December 2009, the cornerstone arms control agreement between the United States and Russia, the START treaty, will expire. This agreement specifies the essential procedures and mechanisms for verifying mutual compliance with agreements that reduce and eliminate nuclear arsenals, including the Moscow Treaty (also known as SORT) signed in 2002.

Other key items on the arms control and nonproliferation agendas include the disposition of the Comprehensive Test Ban Treaty, ongoing negotiations over a Fissile Material Cut-Off Treaty, convincing developing countries to renounce national uranium enrichment in favor of multilateral alternatives, and strengthening the IAEA's authority and ability to conduct nuclear inspections. Achievement of these objectives is likely to hinge in part on the status of U.S. nuclear weapons policy.

Unfortunately, the U.S.-Russia relationship, which had achieved unprecedented cooperation on nuclear nonproliferation matters in the 1990s, is broken. The Bush administration's withdrawal from the Anti-Ballistic Missile Treaty in 2001 set the stage for an increasingly acrimonious and at times hostile relationship between the two former military adversaries. Russia's leadership, particularly former President and current Prime Minister Vladimir Putin, deserves the lion's share of the blame for the downturn. Moscow has clamped down on freedoms at home and exploited its newfound clout in global energy markets to bully neighbors. In addition, its military conflict with Georgia in August 2008 has raised grave questions about Russia's strategic direction. But Bush administration policies ranging from the 2003 invasion of Iraq to its current efforts to establish a missile defense beachhead in Eastern Europe have fed the impression in Russia that the United States is not an enlightened superpower, but an expansionist one that seeks power and influence at Russia's expense. U.S.-Russian relations have reached a nadir not seen since the Cold War ended nearly 20 years ago.

## The NPT'S “grand bargain”

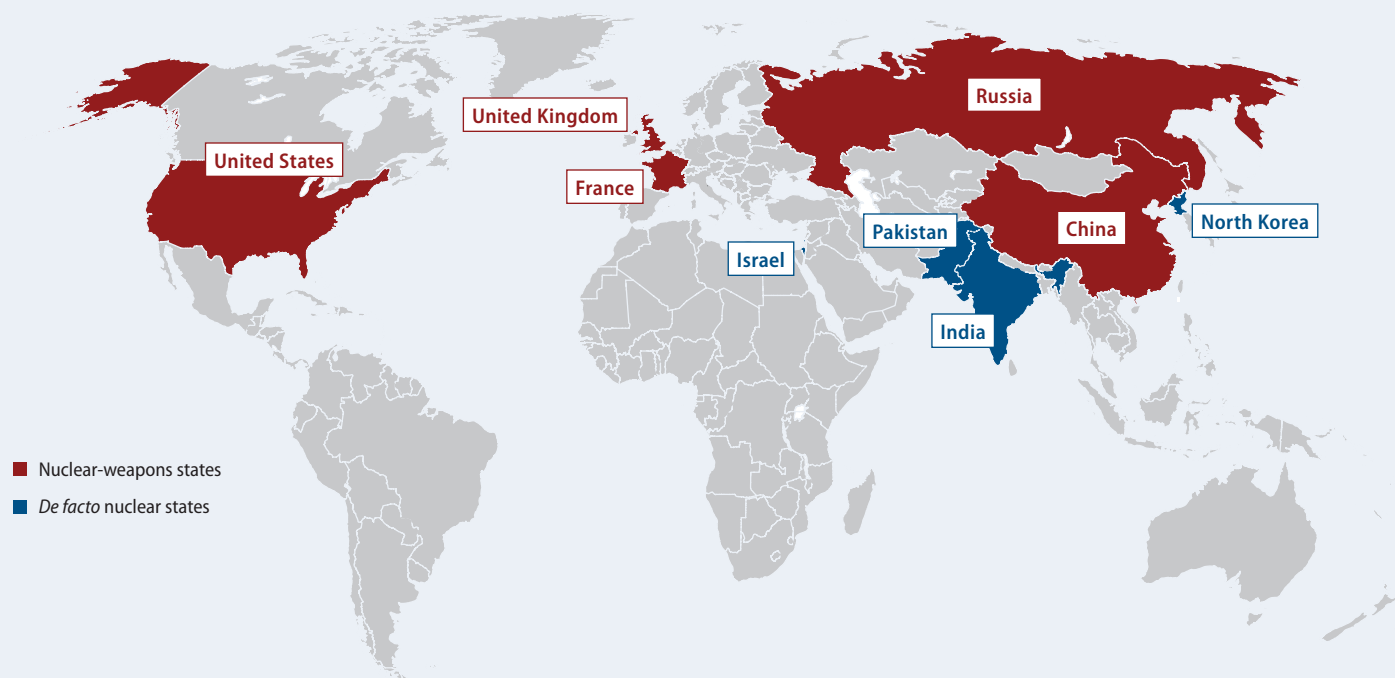
Regarded as the cornerstone of the nuclear nonproliferation regime, the NPT divides the world into nuclear-weapon states and non-nuclear weapon states. The treaty considers China, France, Russia, the United Kingdom, and the United States nuclear-weapon states. Every other country in the world is considered a *de jure* non-nuclear weapon state, even if they *de facto* possess nuclear weapons. Thus, India, Israel, North Korea, and Pakistan are considered non-nuclear weapon states under the NPT. Those four countries are also the only countries that aren't party to the treaty.

### Nuclear-weapon states:

- Won't proliferate to non-nuclear weapon states (Art I)
- Facilitate the use of peaceful nuclear technology (Art IV)
- Negotiate in good faith toward nuclear disarmament (Art VI)

### Non-nuclear weapon states party:

- Foreswear nuclear weapons (Art II)
- Accept IAEA safeguards over peaceful nuclear activities (Art III)





# Needed: a new U.S. nuclear weapons posture

The Obama administration must break this logjam—both with the developing world and with Russia—in order to effectively combat the nuclear threats of the 21<sup>st</sup> century. A renewed commitment on the part of the United States to reducing its nuclear arsenal, along with a reinvigorated strategic dialogue with Russia, would bolster America’s nonproliferation bona fides and enable it to reassume its traditional leadership role in efforts to strengthen the global nuclear nonproliferation regime.

Accordingly, the Obama administration should use the congressionally mandated 2009–2010 nuclear posture review [see Appendix I] to realign nuclear policy, forces, and posture with 21<sup>st</sup> century nuclear threats. The goals of the review should be to recalibrate the nuclear deterrent in light of existing and emerging threats, strengthen America’s hand in negotiations over improvements to the global nuclear nonproliferation regime, and send a clear signal to the world that the United States is charting a new course.

# Structuring the 2009 NPR

Success in achieving these goals hinges on development of a coherent, realistic strategy for conducting the review that ensures senior appointees from the departments of defense, state, and energy, along with the National Security Council, devote sustained attention even as they confront other national security challenges. The 2009 NPR will occur in a vastly more complex policy environment than either of the preceding two reviews, which occurred at the start of each of the Clinton and Bush administrations' first terms. The Obama administration will inherit a staggering array of major foreign policy challenges that will compete for the attention of senior appointees, including wars in Iraq and Afghanistan, terrorism, North Korea's nuclear weapons program, Iran's nuclear ambitions and growing regional clout, a broken U.S.-Russia relationship, energy insecurity, climate change, and a nonproliferation regime in urgent need of repair. It will also likely have to make a number of difficult choices about defense spending priorities.

Policy choices in one area may constrain or enable policy options in other areas. For example, some analysts have proposed eliminating the Kings Bay Naval Submarine Base in Georgia, which serves as the Atlantic seaport for America's SSBN fleet. From an operational standpoint, this would effectively eliminate the ability of the United States to conduct nuclear patrols in the Atlantic, which has implications for U.S. alliance relations in NATO and broader U.S. policy toward Russia as well. Administration policy toward nuclear testing—including the CTBT—will affect the ability of the United States to achieve diplomatic objectives at the 2010 NPT Review Conference. And a determination to press forward with missile defense installations in Eastern Europe will affect the prospects for bilateral arms control with Russia. Abandoning these installations, however, could have alliance repercussions. These are just a few illustrations of why it is essential to have a coherent strategy for carrying out the NPR.

Nationalism in Russia is at an apex, as is distrust of Washington. These dynamics reinforce the need for the Obama administration to seek a strategic dialogue with Russia, but they also raise questions about whether Russia's leadership is ready to engage the United States in a serious way, particularly with respect to strategic issues such as nuclear weapons, missile defense, and NATO expansion. The Obama administration must seek this dialogue, but have realistic expectations about what it is capable of producing in the near term.

Finally, the emerging bipartisan consensus on nuclear policy does not yet extend to such key questions as the appropriate nuclear weapons manufacturing complex to support the arsenal, the role and future of ballistic missile defense systems, and the military use of space. In addition, some conservative legislators and pundits further to the right on the political spectrum remain committed to a Cold War posture and have indicated strong support for a nuclear weapons complex capable of supporting a much larger arsenal than may be warranted by a realistic threat assessment. The Obama administration should expect these conservatives to challenge a progressive nuclear posture and seek to fracture the emerging bipartisan consensus.

In order to maximize the NPR's effectiveness and ensure its subsequent implementation, it should be structured according to the following list of core principles. These principles are derived from a series of wide-ranging interviews with experts and former senior officials with experience in nuclear policy from both sides of the political spectrum, and a review and comparison of how the structure of the Clinton and Bush administration NPRs shaped the final review product in each case (see Appendix II, "Past as Prelude: The Politics and Process of Nuclear Posture Reviews").

- **Conduct the NPR as a strategy-driven exercise guided by a vision for nuclear weapons policy elaborated by the president in a Presidential Decision Directive or other appropriate means.** A review process conducted without a sense for the ultimate destination is unlikely to produce any meaningful changes in the posture. This vision is essential for defining the parameters of interagency debate (what's settled and what's up for grabs), focusing the review process, and arming the president's appointees with political authority for driving the president's agenda forward. The president himself should determine the goal of the review, which could be as general as instructions to his senior appointees that they achieve deep cuts in nuclear forces consistent with sustaining deterrence and revitalize international arms control. His senior appointees should then lead the review, as opposed to delegating the review to mid-level appointees and career civil servants. This is essential in order to identify, weigh, and definitively settle tradeoffs across traditionally stovepiped policy areas.
- **Consult and engage the Joint Chiefs.** Their advice and support is essential to conducting a posture review and effectively communicating the results to the American people and Congress. The JCS are in all likelihood prepared to accept potentially significant changes in U.S. nuclear weapons policy, but their support should not be taken for granted. It is essential that they be actively consulted and brought into the review process.
- **Consult and engage with Congress.** The Obama administration could count on the support of a progressive Congress, provided key members of Congress are consulted at the onset of the review and given an interim report. Conservative legislators may attempt to challenge the Obama administration's nuclear weapons policies, but they

can be rebuffed if there is consistent, close communication between the White House and the Congress, accompanied by a concerted effort to reach out to moderate conservative legislators.

- **Do not politicize nuclear weapons doctrine.** The president must speak to the American people about the strategic threats to the nation, particularly nuclear terrorism and the risk of nuclear weapons use. His administration's nuclear policy, however, may be an attractive target for conservatives in Congress and elsewhere, particularly if they sense that the president is personally committed to the issue. There is little value in elevating the political profile of nuclear weapons doctrine beyond the broad parameters of the bipartisan consensus in favor of further reducing the size and strategic profile of nuclear weapons in U.S. strategy. This consensus is embodied in the joint writings of senior statesmen Shultz, Kissinger, Perry, and Nunn. Finally, the administration should be particularly careful not to make public commitments in advance of the review on specific numbers for the weapons stockpile.
- **Appoint experienced professionals to carry out the vision.** A successful NPR must engage a diverse spectrum of nuclear weapons policy constituencies, some of which may resist an effort to streamline U.S. nuclear forces. The process will go much more smoothly if the president taps experienced professionals who understand the inner workings of the nuclear weapons bureaucracy, have productive working relationships with the uniformed military and with each other, and enjoy the respect of civilian and uniformed career professionals alike. These individuals must also be able to count on the president's full support. The administration can gain additional insights and support for its policies from independent expert groups, including the congressionally mandated Commission on the Strategic Posture of the United States and the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism.
- **Ensure that the review is interagency.** All relevant agencies should have a seat at the table, though it is important to recognize that the personal relationships among the senior appointees and their commitment to the process will exert a far greater impact on the process than formal lines of consultation and communication.
- **Consult and engage key allies and partners.** America's allies are weary of foreign policy surprises and increasingly jittery about America's security commitment to them. The unease could grow among allies in the Middle East in light of Iran's nuclear ambitions and as the United States begins to redeploy from Iraq, in Eastern Europe due to Russia's armed conflict with Georgia, and in East Asia because of North Korea's nuclear program. This unease could corrode America's relationships and influence, and lead some countries to seek a nuclear weapons capability. It is essential that the NPR consider the effect that changes in the size and strategic profile of U.S. nuclear forces may have on America's alliances.

- **Develop a communications plan.** This will ensure that the United States reaps the maximum possible international diplomatic benefit from its new posture at the 2010 NPT Review Conference, where NAM countries are likely to link their support for new nonproliferation obligations to progress on nuclear disarmament by the United States and other nuclear powers. The United States should seek to be as transparent as possible—consistent with sustaining deterrence—about the review’s results in order to counter misperceptions and concretely illustrate how the United States is fulfilling its nuclear disarmament commitments under NPT Article VI. In addition, conservatives must not be allowed to frame the debate over the results of the NPR. Their critique is likely to employ these five rhetorical strategies and arguments: attempt to inaccurately frame the stakes of the NPR as a choice between their vision of nuclear weapons policy and unilateral nuclear disarmament; ridicule the notion that nuclear reductions by the United States would have any impact on countries like Iran and North Korea when the main diplomatic objective is to influence non-aligned countries’ willingness to support America’s nonproliferation agenda; falsely suggest that other countries are modernizing their strategic arsenals while America is not; selectively interpret technical data on war-head reliability to justify large nuclear weapons production facilities; and offer unduly optimistic projections about the cost of these new facilities.

# Sequencing the 2009 NPR

The sequencing and pace of the review will depend largely on the degree to which the president and his senior appointees make it a priority, along with the broader political and policy climate in 2009. Still, it is useful to lay out a notional timeline in order to provide an initial framework for organizing the process.

---

## During the transition

- **Signal presidential commitment to a progressive nuclear posture.** The president-elect and/or his senior appointees should inform the JCS during transition briefings that the president-elect wants to take bold steps in the direction of a world free of nuclear weapons while preserving America's nuclear deterrent. The transition team should begin to outline the main parameters of a new Presidential Decision Directive on nuclear weapons policy.

---

## The first 100 days

- **Hold a meeting of the principals of the National Security Council, along with the commander of STRATCOM, to formally launch the review.** The goals of the meeting are to demonstrate presidential commitment to nuclear policy, identify which aspects of nuclear policy are settled and which are up for grabs, and establish a precedent for a robust interagency process. The president should request that the results of the review be given to him in the form of a memo of options that all participants in the review regard as legitimate, even if they prefer one over another. The advantage of this approach is that it doesn't require the president to explicitly overrule the viewpoint of any particular constituency when he chooses his preferred option.
- **Develop a process ensuring sustained senior-level commitment to implementing the president's vision.** The success of the review will hinge in significant part on the participation of senior-level political appointees capable of mobilizing their respective bureaucracies behind the president's vision, resolving interagency disputes, and engaging the JCS. This may require a careful examination of whether the Office of the Assistant Secretary of Defense for Special Operations/Low-Intensity Conflict & Interdependent

Capabilities, or SO/LIC&IC, which currently has responsibility for nuclear weapons policy at DOD, has the resources to effectively lead the review, given its other policy responsibilities. One option is to create a separate Office of Strategic Capabilities headed by its own assistant secretary. A second and perhaps preferred option, in light of the challenges associated with a significant reorganization of DOD, would be to appoint a strong assistant to the secretary of defense for nuclear, chemical and biological defense programs, or ATSD(NCB), and make it a direct report to the secretary of defense. This position already exists on paper and requires Senate confirmation.

- **Host a meeting with congressional leaders on the president's vision.** Congressional invitees should include the Senate Majority Leader, the Speaker of the House, and the Chair and Ranking Members of the House and Senate foreign relations and armed forces committees and relevant subcommittees.
- **Launch outreach process to key U.S. allies and partners.** The United States should launch consultations with NATO allies, in connection with NATO's effort to draft its new Strategic Concept, on the role of nuclear weapons in the alliance and the disposition of the estimated 350 tactical nuclear weapons forward-deployed by the United States in Europe. The United States should also initiate discussions on nuclear policy with the governments of Australia, Japan, and the Republic of Korea. It should also explore avenues to deepen a dialogue over strategic forces with China. Finally, the United States should seek a strategic dialogue with Russia on the role of nuclear weapons and the future of arms control in light of the December 2009 expiration of START I.

---

## The first year

- **Present Congress with an interim briefing.** The goal of the briefing is to give Congress an opportunity to weigh in on the process and to launch a process to resolve any disagreements well in advance of the February 2010 due date.
- **Provide the president with the options memo on nuclear weapons policy.** The NPR results should be delivered to the president by the secretaries of defense, energy, and state, along with the chairman of the JCS.
- **Launch a bipartisan process to address and resolve issues relevant to Senate ratification of the Comprehensive Test Ban Treaty.** The main issues are verification of the treaty and the treaty's implications for stockpile reliability.
- **Develop a communications plan on nuclear policy.** This should be considered a core part of the review, not an afterthought. In addition to framing the new posture to build domestic political support, the communications plan should also feature a vigorous strategy for maximizing U.S. diplomatic gains at the spring 2010 NPT Review Conference.

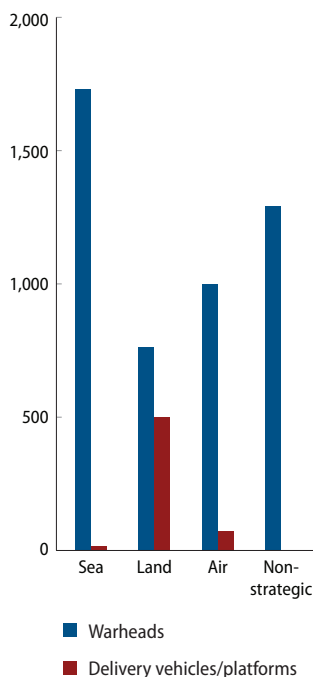
# A progressive nuclear posture: key policy issues

The demands made on the president and his senior appointees are great even in peacetime. But the Obama administration will inherit two wars and a host of other pressing national security problems that will compete for senior policymakers' limited pool of time and attention. It is therefore essential to identify in advance the key nuclear policy issues that are likely to demand senior-level decisions and guidance. These issues fall into three categories: "Deterrence and Doctrine"; "Force Structure and the Nuclear Weapons Complex"; and "Nonproliferation and Arms Control."

---

## Deterrence and doctrine

**U.S. nuclear forces by the numbers (active stockpile)**



Source: Norris and Kristensen (2008d).

- **The mission(s) and role(s) for nuclear weapons.** Should the employment of nuclear weapons be limited to deterring and if necessary responding to nuclear attacks? Or are there other legitimate missions for nuclear weapons, e.g. to preempt or retaliate against the use of chemical or biological weapons attacks? Would the United States ever use nuclear weapons first? What role, if any, exists for tactical nuclear weapons? Does uncertainty over the strategic direction of China or Russia materially affect these questions?
- **Nuclear weapons targeting plans.** Should the United States continue to rely on preset targeting plans against Russia, China, and other possible adversaries, or abandon them in favor of flexible targeting procedures that tailor a response to unique contingencies as they emerge?
- **Deployment practices, including alert rates.** Should the United States retain rapid launch options for nuclear weapons, such as "launch on warning" or "launch under attack"? What are the operational implications?
- **Declaratory policy.** Should the United States publicly renounce and/or reaffirm (as the case may be) its policies regarding security assurances?
- **The role, if any, of nuclear weapons in sustaining key security alliances.** How important is America's nuclear umbrella to the NATO alliance and U.S. relations with Japan? Should NATO remain a nuclear alliance? What about extending the umbrella to others, e.g. allies in the Middle East?



- The relationship between nuclear forces, conventional long-range strike, and ballistic missile defense systems.

## Force structure and the nuclear weapons complex

- The sum total of the arsenal, including deployed and reserve nuclear weapons.  
Should the total be a political decision dictated *ex ante* by the president (e.g., president issues instructions at the onset capping the total arsenal at 1,000 warheads)?

### Key nuclear weapons-related facilities

Bangor Naval Submarine Base, WA	Trident SBLMs and nuclear-capable sea-launched cruise missiles. Houses an estimated 2,364 warheads.
Barksdale AFB, LA	B-52H bombers. Houses 940 warheads.
Kansas City Plant, Kansas City, MO	Manufactures and procures non-nuclear components for nuclear weapons. Employs ~2,900 personnel.
Kings Bay Naval Submarine Base, GA	Trident SBLMs and nuclear-capable sea-launched cruise missiles. Houses an estimated 1,364 warheads.
Kirtland AFB, NM	Home of the Air Force Materiel Command's Nuclear Weapons Center (NWC). Houses an estimated 1,914 warheads.
Lawrence Livermore National Laboratory, Livermore, CA	Weapons design, surveillance, assessment, and refurbishment. Employs ~5,100 personnel.
Los Alamos National Laboratory, Los Alamos, NM	Weapons design, surveillance, assessment, and refurbishment. Employs ~5,900 personnel.
Malmstrom AFB, MT	Minuteman III ICBMs. Houses an estimated 535 warheads.
Minot AFB, ND	B-52H bombers, Minuteman III ICBMs, and nuclear-capable advanced cruise missiles and air-launched cruise missiles. Houses an estimated 1,250 warheads.
Nellis AFB, NV	Houses an estimated 902 warheads.
Nevada Test Site, Las Vegas, NV	Supports stockpile stewardship and sustains U.S. readiness to resume underground nuclear testing. Employs ~2,200 personnel.
Offutt AFB, NE	Home to U.S. Strategic Command (STRATCOM).
Pantex Plant, Amarillo, TX	Range of warhead surety and safety services, along with pit storage and warhead assembly and disassembly. Employs ~3,200 personnel.
Sandia National Laboratories, Albuquerque, NM; Livermore, CA; Kauai, HI; Tonopah, NV	Responsible for non-nuclear components and systems engineering. Employs ~5,100 personnel.
Savannah River Site, Aiken, SC	Produces and manages tritium for use in nuclear weapons. Employs ~1,700 personnel.
Warren AFB, CO, NE, WY	Minuteman III ICBMs. Houses an estimated 170 warheads.
Whiteman AFB, MO	B-2 bombers. Houses an estimated 136 warheads.
Y-12 National Security Complex, Oak Ridge, TN	Fabricates warhead parts and components from special nuclear materials. Employs ~4,000.

- **The configuration of the triad, including whether all three “legs” are required.** Should the United States eliminate one or more of the legs? What are the strategic, budgetary, and political implications of eliminating, for example, the bomber fleet and/or the intercontinental ballistic missile force?
- **The appropriate nuclear weapons surety and manufacturing base to guarantee the safety and reliability of the arsenal.** How can the United States sustain its nuclear weapons design expertise? Does the United States need to design and build new warheads? Does it need new nuclear weapons production facilities, e.g. to produce plutonium pits? What are the strategic, budgetary, and political implications?
- **Nuclear testing, including disposition of the Comprehensive Test Ban Treaty.** Can the Stockpile Stewardship Program guarantee the safety and reliability of the arsenal, particularly in the event of deep reductions that would reduce the number of weapons held in reserve or inactive status?

---

## Nonproliferation and arms control

- **The role of arms control.** Should the United States negotiate legally binding accords with Russia on nuclear reductions or pursue them unilaterally? If negotiated, to what extent should issues such as missile defense and NATO expansion be part of the discussions? If pursued unilaterally, what if Russia does not reciprocate? Where does China fit in? And where do allied (France and Great Britain) arsenals fit in?
- **The relationship between America’s nuclear posture and its ability to advocate on behalf of nuclear nonproliferation.** What can the United States do to address concerns expressed by many countries that it is not living up to its nuclear disarmament obligations under Article VI of the Nonproliferation Treaty?

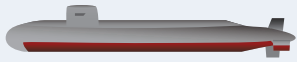
## U.S. nuclear forces and the nuclear triad

The United States currently has an estimated 10,000 nuclear warheads in its total stockpile of which approximately 5,400 nuclear warheads are in the active stockpile: 4,075 “operational” weapons and another 1,260 warheads kept in “reserve.” The operational stockpile consists of around 3,575 “strategic nuclear forces” and 500 “nonstrategic (‘tactical’) nuclear forces.” The remainder of the weapons is in storage awaiting dismantlement.

**Strategic nuclear forces.** A nuclear warhead is generally considered “strategic” if it is delivered using a long-range strategic delivery platform as part of a deterrence mission. These platforms include:

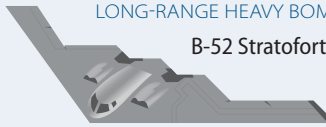


**INTERCONTINENTAL BALLISTIC MISSILES, OR ICBMS.** America has an estimated 500 Minuteman III ICBMs, but plans reductions to 450. The ICBMs are located at three U. S. Air Force bases in five states: Minot AFB (ND), Malmstrom AFB (MT), and Warren AFB (which overlaps corners of CO, NE, and WY). These ICBMs carry an estimated 764 nuclear warheads, most of which are 20 times more powerful than the atom bomb dropped on Hiroshima.



**BALLISTIC MISSILE SUBMARINES, OR SSBNS.** The United States has 14 SSBNs, two of which are currently in overhaul. These are based out of Bangor Naval Submarine Base (WA) or Kings Bay Naval Submarine Base (GA). The SSBN fleet can carry 288 Trident II D5 ballistic missiles. Each missile, in turn, can carry six nuclear warheads for a total of 1,728 operationally deployed strategic warheads on the SSBN fleet—nearly 40 percent of the operationally deployed arsenal. The explosive power of these warheads

ranges from eight times to 30 times more powerful than the Hiroshima device, depending on the warhead model. More than 60 percent of SSBN patrols now occur in the Pacific, compared to just 15 percent in the 1980s. The targets for these patrols are likely China, North Korea, and Russia.



**LONG-RANGE HEAVY BOMBERS.** Two bombers, the B-2 Spirit and B-52 Stratofortress, are dual-hatted for nuclear and conventional missions. America has 16 B-2s and 56 B-52s on operational status, and another four B-2s and 38 B-52Hs are used for training, testing, and backup missions. The B-52s are stationed at Barksdale AFB (LA) and Minot AFB (ND), and the B-2s at Whiteman AFB (MO). The bombers can carry several different types of nuclear weapons, including some with a so-called “dial-a-yield” capability that enables the user to choose from a range of explosive yields. The explosive power of the air-delivered strategic arsenal ranges from less than the explosive yield of the Hiroshima bomb to 80 times as powerful. More than 1,000 strategic warheads are operationally deployed to the bomber force.

**Non-strategic “tactical” nuclear forces.** These are nuclear weapons intended for tactical use on a military battlefield. There are no binding international legal constraints on them. America has an estimated 1,290 non-strategic weapons, of which 500 are considered “operational” and ready for deployment. The remaining 790 are considered “inactive.” An estimated 350 warheads from the active stockpile are forward deployed on the territory of several NATO allies. The non-strategic arsenal consists of sea-launched Tomahawk cruise missiles and air-launched gravity bombs.

Source: Norris & Kristensen (2008d).

# Appendix I

---

## “Revised Nuclear Posture Review” (§1070 FY 2008 National Defense Authorization Act)

- (a) **REQUIREMENT FOR COMPREHENSIVE REVIEW.**—In order to clarify U.S. nuclear deterrence policy and strategy for the near term, the secretary of defense shall conduct a comprehensive review of the nuclear posture of the United States for the next 5 to 10 years. The secretary shall conduct the review in consultation with the secretary of energy and the secretary of state.
- (b) **ELEMENTS OF REVIEW.**— The nuclear posture review shall include the following elements:
  - (1) The role of nuclear forces in U.S. military strategy, planning, and programming.
  - (2) The policy requirements and objectives for the United States to maintain a safe, reliable, and credible nuclear deterrence posture.
  - (3) The relationship among U.S. nuclear deterrence policy, targeting strategy, and arms control objectives.
  - (4) The role that missile defense capabilities and conventional strike forces play in determining the role and size of nuclear forces.
  - (5) The levels and composition of the nuclear delivery systems that will be required for implementing the United States’ national and military strategy, including any plans for replacing or modifying existing systems.
  - (6) The nuclear weapons complex that will be required for implementing the United States’ national and military strategy, including any plans to modernize or modify the complex.
  - (7) The active and inactive nuclear weapons stockpile that will be required for implementing the United States’ national and military strategy, including any plans for replacing or modifying warheads.
- (c) **REPORT TO CONGRESS.**—The secretary of defense shall submit to Congress, in unclassified and classified forms as necessary, a report on the results of the nuclear posture review conducted under this section. The report shall be submitted concurrently with the quadrennial defense review required to be submitted under section 118 of title 10, United States Code, in 2009.
- (d) **SENSE OF CONGRESS.**—It is the sense of Congress that the nuclear posture review conducted under this section should be used as a basis for establishing future U.S. arms control objectives and negotiating positions.

# Appendix II

---

## Past as prelude: the politics and process of nuclear posture reviews

The Obama administration's nuclear posture review will be the third formal review of U.S. nuclear strategy conducted since the end of the Cold War. The preceding reviews—conducted early in each of the Clinton and Bush administrations' first terms—occurred under different policy and political contexts that materially affected the conduct of the review and its impact on U.S. policy. Comparing the two provides crucial lessons on how to structure the 2009 NPR to achieve a desired result.

### The 1993–1994 NPR

The first NPR occurred in 1993–1994, during the first term of the Clinton administration. As a candidate in 1992, Clinton had made “change” a centerpiece of his campaign. His first secretary of defense, Les Aspin, brought that theme to the Pentagon, where he launched a major defense policy review to craft a U.S. defense policy for the post-Cold War era. The so-called Bottom-Up Review was completed in September 1993 and set the stage for the administration's NPR, which was launched shortly thereafter.

The original goal of the NPR was to focus on the role of nuclear deterrence in U.S. security strategy in the new post-Cold War environment. The main nuclear threat was considered by Clinton appointees to be the accidental or unauthorized launch of a weapon by Russia or the acquisition of nuclear weapons by a rogue state such as Iraq or North Korea, and not an intentional nuclear strike by the legitimate Russian leadership. The nuclear posture needed to complement America's broader efforts to address these threats. The risk of accidental or unauthorized launch could be reduced if both sides were to abandon nuclear war plans driven by the Cold War need to deter a surprise attack—which demanded large numbers of weapons on hair-trigger alert—in favor of a smaller, survivable force. The United States also sought to promote the nuclear nonproliferation norms captured in the 1968 Non-Proliferation Treaty, particularly in advance of the spring 1995 NPT Review and Extension Conference that would decide whether to indefinitely extend that treaty or allow its expiration later that year. The prospects for indefinite extension of the NPT could be maximized if the United States was seen as reducing the role of nuclear weapons in its own defense strategy.

In the end, however, the review generated a posture that more or less ratified the Cold War strategy of deploying thousands of nuclear weapons on hair-trigger alert. The story for why the review turned out this way is complex, but several themes stand out. Although the Cold War was over, there were some uncertainties over whether and when Russia, which remained a formidable strategic weapons power with tens of thousands of nuclear weapons, would evolve into a full-fledged democracy. Reasonable people could disagree on this fundamental dimension of the overall threat assessment, but opponents of change used this residual uncertainty, and in some cases exaggerated it, to support a hawkish position on Russia. There was no sustained interagency effort to resolve this divergence, which inherently favored the status quo policy of planning nuclear requirements and operations primarily on the basis of the potential threat posed by Moscow.

Similarly, there was a major gap between the uniformed military and the mid-level DOD political appointees that managed the NPR on what role nuclear weapons played in U.S. defense policy. STRATCOM was committed to sustaining and even expanding the status quo role of nuclear weapons. The political appointees, by contrast, judged that precision conventional weaponry had already begun to replace nuclear weapons in actual war fighting, and that this trend would only accelerate. The remaining mission for nuclear weapons was deterrence by the threat of overwhelming retaliation—and that mission, in their view, could be fulfilled solely by ballistic missile submarines.

The suggestion that the other two legs of the nuclear triad—intercontinental ballistic missiles and heavy bombers—were obsolete and could be on the chopping block prompted a vigorous campaign on the part of STRATCOM to preempt the formal NPR process with its own internal policy review and vigorous advocacy on the Hill. The uniformed military and the civilian nuclear weapons bureaucracy closed ranks around STRATCOM's perspective, and NPR proceedings were leaked to selected members of Congress, who then waged partisan attacks against the administration.

There was no concerted effort by senior political appointees to broker or settle these disputes over fundamental issues of U.S. grand strategy. The White House was just emerging from a series of bitter disputes with the armed forces over such issues as Somalia and gays in the military, and was battling both the military and an increasingly hostile Congress over defense spending priorities. The NSC was largely disengaged from the process, and DOD underwent a leadership change in the middle of the review and was preoccupied with other issues, such as dealing with North Korea's nuclear program and the multiple proliferation concerns presented by the collapse of the Soviet Union. In the end, the 1994 NPR essentially ratified the conclusions of STRATCOM's own internal policy review: keep the triad, pursue no further reductions beyond those agreed to in START II, and stick with current operational doctrine.

## The 2001 NPR

The second formal NPR took place in 2001 under vastly different political and policy circumstances, and was structured in such a way as to produce the administration's desired outcome. In a May 2000 presidential campaign speech, candidate George W. Bush linked reductions in U.S. nuclear forces to the aggressive pursuit of national missile defense, with the latter being a core ideological objective for conservatives. Upon taking office, President Bush told his senior advisors that he wanted the NPR to result in significant nuclear reductions. This instruction was likely motivated by a desire to recast U.S.-Russian relations in the post-Cold War era, a key objective of Condoleezza Rice, his national security advisor, and Stephen Hadley, Rice's deputy. Some senior officials in his administration also viewed the NPR process as an opportunity to consolidate support for withdrawing from the ABM Treaty, which was preordained, and pursuing national missile defense. These factors helped ensure that the NPR would be ideological and driven by two presidential prerogatives, which guaranteed that senior officials would invest time and energy in the NPR process. But it also produced a posture that undermined America's nonproliferation credentials.

The main parameters of the review were determined by a relatively small group of senior officials from the National Security Council and Department of Defense. The NPR was conducted primarily during the initial nine months of the new administration, a period of relative calm with few major international crises. Indeed, the main foreign policy battle the administration was gearing up for was over the ABM Treaty and missile defense. The administration attempted to take a page from Ronald Reagan's Strategic Defense Initiative, or SDI, playbook and link nuclear reductions to missile defense. By developing and deploying such a system, the United States could render rogue nuclear arsenals, in Reagan's words, "impotent and obsolete" and thereby free up the United States to make cuts in its own arsenal. The Bush administration also had the luxury of a less hostile Congress and, at least in 2001–2002, enjoyed a reputation for competency in defense policy due to the considerable experience of Bush's cabinet and senior advisors.

On matters of nuclear doctrine, the appointees had a head start in the review process: most of them were involved in a task force study on nuclear weapons policy convened in 2000 by the National Institute for Public Policy, a conservative think tank. According to some participants, this study served as a refresher on the relevance of nuclear weapons policy to U.S. national security and helped get senior appointees on the same page from day one.

Overall, the Bush NPR did not cut that hard against the grain of established nuclear orthodoxy within the Pentagon or generate any clear budgetary losers in the bureaucracy or Congress. This left the Bush administration's critics with few constituencies to link up with and limited channels to wage a campaign against the NPR results. (Indeed, the most

potent early critic of the administration's nuclear weapons policy turned out to be the Republican chairman of a House Appropriations subcommittee, David Hobson (OH), who challenged elements of the administration's nuclear weapons budget proposal and not the review's core conclusions *per se*.)

The NPR settled on 1,700–2,200 operationally deployed warheads, which marked a reduction of around two-thirds in the operationally deployed force. That figure was codified in a May 2002 agreement with Russia called the Strategic Offensive Reductions Treaty, or SORT. (Some senior officials, such as then-Deputy National Security Advisor Hadley, reportedly supported even deeper reductions, perhaps by several hundred, but were deterred by the prospect of a battle with then-Secretary of Defense Donald Rumsfeld).

Senior participants in the 2001 NPR genuinely believed they reduced the role of nuclear weapons in U.S. national security strategy. In his foreword to the NPR report submitted to Congress, for example, Secretary Rumsfeld announced that “the U.S. will be less dependent than it has been in the past on nuclear forces to provide its offensive deterrent capability.” But many countries, ranging from Russia to members of the NAM, judged the precise opposite when portions of the NPR were leaked to the press in early 2002. The NPR called for “greater flexibility” in the planning, development, and use of nuclear weapons, including the development and possible use of tactical nuclear weapons against rogue states such as Iran and North Korea. It also singled out China and Russia as possible targets for nuclear operations. Finally, the NPR divided U.S. strategic capabilities into three rhetorical categories described as the “new triad”: nuclear and conventional offenses, defenses such as missile defense, and a responsive nuclear weapons manufacturing and surety infrastructure. The intended goals of this formulation were to signal a reduction in the salience of nuclear weapons to U.S. strategic policy and to boost the profile of missile defense.

Aside from the emphasis on missile defense, these developments did not mark a significant change in nuclear weapons doctrine from the Clinton administration's posture. The United States already considered the listed countries as possible targets for nuclear operations, for example, even if it hadn't said so publicly. But the Bush administration's aggressive unilateralism—particularly its withdrawal from the ABM Treaty and its new doctrine of preventive war—created an interpretative context for the NPR's clumsily blunt language that led China, Russia, and many NAM countries to interpret the posture in the worst possible light. The “new triad” formulation, for example, was widely criticized as blurring the distinction between conventional and nuclear forces. And the administration's ill-advised proposals for developing new tactical nuclear weapons such as the so-called “bunker buster,” which senior NPR participants viewed as enhancing deterrence (as opposed to supplementing conventional military operations), dramatically reinforced this interpretation.



In the end, the 2001 NPR did great damage to America's nonproliferation credentials. The defense department, which had responsibility for the public relations component of the NPR, had neglected to invest any time or energy into how the NPR results might be received by the administration's many critics. When the criticisms began to mount, the administration made no concerted effort to counter them. This neglect is a reflection in part of the administration's unilateralism—many senior officials simply didn't care how foreign audiences would react. But the defense department was also distracted by the war in Afghanistan and early planning for the 2003 invasion of Iraq. Participants in the 2001 NPR believe that a more effective communications plan might have blunted some of the criticism, although the hostility that the Bush administration's broader unilateralism was generating around the world would have made this inherently difficult.

# Appendix III

---

## A brief history of strategic arms control, 1969–2008

### The Nixon/Ford years (1969–1977)

Strategic Arms Limitation Talks, or SALT I (1969–1972). This process led to the first treaties and agreements between the United States and the Soviet Union that would impose constraints on strategic weapons. The ABM Treaty was one product of this process. The other main product was the Interim Agreement, in which the United States and Russia agreed to stop building new ICBM silos, exercise restraint in expanding the size of existing ones, and cap the number of submarine-launched ballistic missiles and SSBNs. That agreement expired in 1977.

Anti-Ballistic Missile Treaty, or ABM (1972). The ABM Treaty banned deployment of a missile defense system intended to guard the entire nation against ballistic missiles, and prohibited a range of research and development activity that could lead to such a system. The United States withdrew from the treaty on June 13, 2002.

Threshold Test Ban Treaty, or TTBT (1974). Concluded by the Nixon administration, this early attempt at arms control prohibited nuclear tests that exceeded 150 kt (10 times the size of the Hiroshima bomb) and established a number of transparency and verification measures. Limiting the permissible yield for nuclear testing would constrain development of new, more powerful weapons that could be used in a nuclear first strike. Both parties announced in 1976 their intention to observe the treaty's yield limit pending ratification. Concerns over verification held up ratification, however, until 1987 when the two sides agreed on additional verification measures. The treaty finally entered into force in 1990. The treaty duration is rolling five-year terms, which are automatically renewed unless either party notifies the other of its intent to terminate.

---

### The Carter years (1977–1981)

SALT II (1972–1979). The SALT II process began months after the SALT I process ended. It produced a treaty in 1979 that would limit both sides to a total of 2,400 delivery vehicles, where each ICBM silo, submarine missile-launch tube, or bomber was consid-

ered a single delivery vehicle. When the Soviet Union invaded Afghanistan later that year, however, President Jimmy Carter asked the Senate to put advice and consent for the treaty on hold. Both countries initially pledged to abide by its terms pending ratification, but in May 1986 President Reagan renounced this pledge, saying “the United States must base decisions regarding its strategic force structure on the nature and magnitude of the threat posed by Soviet strategic forces and not on standards contained in the SALT structure.” Although the treaty was never ratified, Congress later that year enacted a nonbinding measure indicating “the sense of the Congress that it is in the national security interests of the United States to continue voluntary compliance with the central numerical sub-limits of the SALT II treaty as long as the Soviet Union complies with such sub-limits.”

### The Reagan/Bush years (1981–1993)

Intermediate-Range Nuclear Forces Treaty, or INF (1987). In this treaty, the United States and Russia agreed for the first time to eliminate an entire category of nuclear weapon: ground-launched ballistic missiles and cruise missiles with ranges between 500–5,500 kilometers. The treaty also featured provisions mandating on-site inspections to verify compliance and established a Special Verification Commission to facilitate treaty implementation. The treaty entered into force in June 1988. Treaty membership expanded in 1991 to include Belarus, Kazakhstan, and Ukraine, which along with Russia had inherited nuclear weapons when the Soviet Union dissolved. The provisions for on-site inspections expired on May 31, 2001, so verification is now conducted using surveillance satellites. The treaty is otherwise of unlimited duration.

Strategic Arms Reduction Treaty, or START I (1991). Under START, the United States and Russia agreed to reduce their deployed strategic arsenals to 1,600 delivery vehicles and 6,000 warheads. The treaty features elaborate counting rules for determining these limits. The parties agreed to destroy excess delivery vehicles and accept intrusive inspections to verify compliance. They also set a deadline of December 5, 2001 to comply with the treaty. All parties met that deadline.

The collapse of the Soviet Union in December 1991 delayed the treaty’s entry into force because it produced four states with nuclear weapons: Belarus, Kazakhstan, Russia, and Ukraine. In May 1992, the parties signed the Lisbon Protocol, in which all four countries (along with the United States) agreed to sign START I. Belarus, Kazakhstan, and Ukraine pledged to join the NPT as non-nuclear weapon states. START I entered into force in December 1994.

The treaty will expire on December 5, 2009 unless the parties agree to a five-year extension. An extension for other time periods would constitute an amendment of the treaty and therefore require re-ratification by both parties.

The Presidential Nuclear Initiatives, or PNIs (1991–1992). The PNI is the first and only concrete effort by the United States and Russia to jointly reduce their tactical nuclear weapons arsenals. On September 27, 1991, President George H.W. Bush announced that the United States would unilaterally end overseas deployment of ground-launched short-range nuclear weapons and destroy all weapons in this category. He also pledged to end deployments of tactical nuclear weapons on several naval platforms during “normal circumstances,” i.e. unless hostilities broke out.

Bush made these pledges in order to signal to the Soviet Union that the United States would not exploit Soviet weakness as the Soviet state disintegrated and to prompt Soviet president Mikhail Gorbachev to take reciprocal action. Bush worried that the command and control of the Soviet Union’s tactical nuclear forces, which it deployed in large numbers throughout the Warsaw Pact, could be compromised. Gorbachev reciprocated with pledges to eliminate and/or consolidate several categories of tactical nuclear weapons.

The PNIs resulted in the elimination of thousands of nuclear weapons, including 3,000 American weapons. Estimates of the current size of the Russian tactical arsenal vary widely, but the range is likely to be 3,000 to 6,000, down from between 12,000 to 21,700 in 1991. But there are no mechanisms in place to verify compliance with the pledge, and periodic efforts to negotiate transparency measures, such as accounting exchanges on inventories, have yet to succeed. Russia has conditioned further negotiations on the withdrawal of the remaining U.S. tactical nuclear forces from Europe, where they are deployed per NATO policy. A decision to remove them would require the consent of all 26 NATO countries.

### The Clinton years (1993–2001)

START II (1993) and START III. The core obligation in START II is to further reduce deployed strategic nuclear warheads to between 3,000 and 3,500. Another important feature of the treaty is that it would have banned multiple warheads on ICBMs. The United States ratified the treaty in January 1996 and Russia in May 2000, but Russia refused to exchange instruments of ratification unless the United States Congress approved a 1997 protocol that would extend the START II’s implementation deadline and a series of concurrently negotiated agreements that clarified and strengthened the ABM Treaty. Congress never approved these measures so START II has not entered into force.

START III was intended to serve as a follow-on agreement to START II. It envisioned further reductions and new transparency measures, but it was effectively superseded by the 2002 SORT agreement.

## The Bush years (2001–2009)

Strategic Offensive Reductions Treaty, or SORT (2002). Signed by Russia and the United States in May 2002, it commits the parties to limiting their respective arsenals of operationally deployed strategic warheads to 1,700 to 2,000 by December 31, 2012, on which date SORT expires.

SORT suffers from several shortcomings. The treaty incorporates the verification measures of the Strategic Arms Reduction Treaty, but that agreement is set to expire in December 2009, and there is no replacement for it yet. SORT does not specify a timetable or benchmarks to guide the implementation of the treaty, which makes it difficult to objectively assess treaty implementation. In addition, SORT does not establish any ceilings for the number of strategic warheads kept in reserve or require that excess strategic warheads be dismantled or destroyed, so when the treaty expires in 2012, either party could launch a rapid nuclear build-up using stockpiled weapons and delivery vehicles.

## Selected references

- Allison, Graham. 2004. *Nuclear Terrorism: The Ultimate Preventable Catastrophe*. New York: Times Books.
- Arms Control Association. 2006. "U.S.-Soviet/Russian Nuclear Arms Control Agreements at a Glance." ([www.armscontrol.org/factsheets/factfilejune07](http://www.armscontrol.org/factsheets/factfilejune07)).
- Arms Control Association. 2002. "Summary of U.S. Implementation of the '13 Practical Steps on Nonproliferation and Disarmament' Agreed to at the 2000 NPT Review Conference." ([www.armscontrol.org/system/files/npt13steps.pdf](http://www.armscontrol.org/system/files/npt13steps.pdf)).
- Braun, Chaim, and Christopher Chyba. 2004. "Proliferation Rings: New Challenges to the Nuclear Nonproliferation Regime." *International Security* 29 (2).
- Bunn, George and Christopher Chyba, eds. 2006. *U.S. Nuclear Weapons Policy: Confronting Today's Threats*. Baltimore: Brookings Institution Press.
- Bunn, Matthew. 2007. "Securing the Bomb 2007." Harvard University/Nuclear Threat Initiative ([www.nti.org/securingthebomb](http://www.nti.org/securingthebomb)).
- Campbell, Kurt M., Robert J. Einhorn, and Mitchell B. Reiss, eds. 2004. *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices*. Washington: Brookings Institution Press.
- Cirincione, Joseph, et. al., 2005. *Deadly Arsenals: Nuclear, Biological, and Chemical Threats*. Washington: Carnegie Endowment for International Peace.
- Cirincione, Joseph, and Andrew Grotto. 2007. "Contain and Engage: A New Strategy for Resolving the Nuclear Crisis with Iran." Washington: Center for American Progress.
- Corera, Gordon. 2006. *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the A.Q. Khan Network*. Oxford: Oxford University Press.
- Deutch, John, et. al. 2004. "Making the World Safe for Nuclear Energy." *Survival* 46 (4): 65–80.
- Deutch, John, and Ernest Moniz, eds. 2003. *The Future of Nuclear Power*. Cambridge: Massachusetts Institute of Technology.
- Drell, Sidney D., and James E. Goodby. 2003. *The Gravest Danger: Nuclear Weapons*. Palo Alto: Hoover Institution Press.
- Dunn, Lewis, et. al. 2006. "Foreign Perspectives on U.S. Nuclear Policy and Posture: Insights, Issues and Implications." Fort Belvoir, VA: Defense Threat Reduction Agency.
- Finlay, Brian D., and Elizabeth Turpen. 2007. "Twenty-Five Steps to Prevent Nuclear Terror: A Guide for Policymakers." Washington: Henry L. Stimson Center.
- Fitzpatrick, Mark, ed. 2008. "Nuclear Programmes in the Middle East: In the Shadow of Iran." London: International Institute for Strategic Studies.
- Fitzpatrick, Mark, ed. 2007. "Nuclear Black Markets: Pakistan, A.Q. Khan and the Rise of Proliferation Networks." London: International Institute for Strategic Studies.
- Gaddis, John Lewis. 1997. *We Now Know: Rethinking Cold War History*. Oxford: Oxford University Press.
- Henry L. Stimson Center. "The 'Next One Hundred' Project: Constructing a Global Toolkit to Support States-at-Risk and Strengthen the International Nonproliferation Regime." ([www.stimson.org/cnp/?SN=CT200608111059](http://www.stimson.org/cnp/?SN=CT200608111059)).

- National Security Advisory Group. 2007. "Reducing Nuclear Threats and Preventing Nuclear Terrorism." Washington.
- Natural Resources Defense Council. 2006. "Global Nuclear Stockpiles, 1945–2006." *The Bulletin of the Atomic Scientists* 62 (4).
- Nolan, Janne E. 1999. *Elusive Consensus: Nuclear Weapons and American Security after the Cold War*. Washington: The Brookings Institution.
- Nolan, Janne E. 1989. *Guardians of the Arsenal: The Politics of Nuclear Strategy*. New York: Basic Books.
- Nolan, Janne E., and James R. Holmes. 2008. "The Bureaucracy of Deterrence." *The Bulletin of the Atomic Scientists* 64 (1).
- Norris, Robert S. 2007. "Pakistan's nuclear forces, 2007." *The Bulletin of the Atomic Scientists* 63 (3).
- Norris, Robert S. and Hans M. Kristensen. 2008a. "French nuclear forces, 2008." *The Bulletin of the Atomic Scientists* 64 (4).
- Norris, Robert S. and Hans M. Kristensen. 2008b. "Chinese nuclear forces, 2008." *The Bulletin of the Atomic Scientists* 64 (3).
- Norris, Robert S. and Hans M. Kristensen. 2008c. "Russian nuclear forces, 2008." *The Bulletin of the Atomic Scientists* 64 (2).
- Norris, Robert S. and Hans M. Kristensen. 2008d. "U.S. nuclear forces, 2008." *The Bulletin of the Atomic Scientists* 64 (1).
- Norris, Robert S. and Hans M. Kristensen. 2007. "India's nuclear forces, 2007." *The Bulletin of the Atomic Scientists* 63 (4).
- Oelrich, Ivan. 2005. "Missions for Nuclear Weapons After the Cold War." Federation of American Scientists Occasional Paper No.3.
- Ogilvie-White, Tanya. 2008. "Facilitating Implementation of Resolution 1540 in South-East Asia and the South Pacific." In Lawrence Scheinman, ed., *Implementing Resolution 1540: The Role of Regional Organizations*. New York: United Nations Institute for Disarmament Research.
- Payne, Keith B. 2001. *The Fallacies of Cold War Deterrence and a New Direction*. Lexington: University of Kentucky Press.
- Perkovich, George, et. al. 2005. *Universal Compliance: A Strategy for Nuclear Security*. Washington: Carnegie Endowment for International Peace.
- Scheinman, Lawrence, ed. 2008. *Implementing Resolution 1540: The Role of Regional Organizations*. New York: United Nations Institute for Disarmament Research.
- Shultz, George P., et. al. 2008. "Toward a Nuclear-Free World." *Wall Street Journal*, January 15.
- Shultz, George P., et. al. 2007. "A World Free of Nuclear Weapons." *The Wall Street Journal*, January 4.





# Endnotes

- 1 George P. Shultz et. al., "A World Free of Nuclear Weapons." *The Wall Street Journal*, January 4, 2007, available at <http://online.wsj.com/article/SB116787515251566636.html>; George P. Shultz et. al., "Toward a Nuclear-Free World," *The Wall Street Journal*, January 15, 2008, available at [http://online.wsj.com/article/SB120036422673589947.html?mod=opinion\\_main\\_commentaries](http://online.wsj.com/article/SB120036422673589947.html?mod=opinion_main_commentaries).
- 2 Shultz et. al., "Toward a Nuclear-Free World."
- 3 National Security Advisory Group, "Reducing Nuclear Threats and Preventing Nuclear Terrorism" (2007).
- 4 Matthew Bunn, "Securing the Bomb 2007" (Cambridge: Harvard University/ Nuclear Threat Initiative, 2007), available at [www.nti.org/securingthebomb](http://www.nti.org/securingthebomb).
- 5 Tanya Ogilvie-White, "Facilitating Implementation of Resolution 1540 in South-East Asia and the South Pacific." In Lawrence Scheinman, ed., *Implementing Resolution 1540: The Role of Regional Organizations* (New York: United Nations Institute for Disarmament Research, 2008).
- 6 Ibid.

---

## About the authors

### ANDREW J. GROTTTO

Andrew J. Grotto is a Senior National Security Analyst at the Center for American Progress, where he specializes in U.S. nuclear weapons strategy, nuclear nonproliferation policy, and nuclear energy.

His work has appeared in a variety of scholarly and popular publications, and he is a frequent guest lecturer on nuclear nonproliferation at the Foreign Service Institute, the U.S. State Department's post-graduate school. He is also a regular guest commentator on nonproliferation and U.S. national security strategy for major international and national media outlets, including BBC, CNN, MSNBC, Al Jazeera, Fox, Sky Channel, National Public Radio, and Air America. In addition to his writings on defense policy, Grotto has also published scholarly works on international trade and intellectual property.

Grotto received his J.D. from the University of California at Berkeley, where he served as an editor of the *Berkeley Journal of International Law*. He received his master's degree from Harvard University's John F. Kennedy School of Government and his bachelor's degree from the University of Kentucky, where he was a Gaines Fellow.

---

## About the authors

### JOSEPH CIRINCIONE

Joseph Cirincione joined Ploughshares Fund as president in March 2008. He is author of *Bomb Scare: The History and Future of Nuclear Weapons* and served previously as senior vice president for national security and international policy at the Center for American Progress and as director for nonproliferation at the Carnegie Endowment for International Peace for eight years. He worked for nine years in the U.S. House of Representatives as a professional staff member of the Committee on Armed Services and the Committee on Government Operations, and served as staff director of the bipartisan Military Reform Caucus. He teaches at the Georgetown University Graduate School of Foreign Service and is a member of the Council on Foreign Relations.

His previous books include two editions of *Deadly Arsenals: Nuclear, Biological and Chemical Threats*, (2005 and 2002), and previous reports include *Universal Compliance: A Strategy for Nuclear Security* (co-author, March 2005) and *WMD in Iraq* (co-author, January 2004). He is the author of over 200 articles on defense issues, the producer of two DVDs on proliferation, the former publisher of the comprehensive proliferation website, Proliferation News, and is a frequent commentator in the media. In the past two years has delivered over 150 speeches around the world and appeared in the 2006 award-winning documentary, *Why We Fight*.

Cirincione is an expert advisor to the Congressional Commission on the Strategic Posture of the United States, chaired by former Secretary of Defense William J. Perry and former Secretary of Energy and Secretary of Defense James R. Schlesinger. He also serves as a member of the Advisory Committee to the Commission on the Prevention of WMD Proliferation and Terrorism, headed by former Senator Bob Graham (D-FL) and former Senator Jim Talent (R-MO).

Cirincione is an honors graduate of Boston College and holds a Masters of Science from the Georgetown School of Foreign Service.









---

The Center for American Progress is a nonpartisan research and educational institute dedicated to promoting a strong, just and free America that ensures opportunity for all. We believe that Americans are bound together by a common commitment to these values and we aspire to ensure that our national policies reflect these values. We work to find progressive and pragmatic solutions to significant domestic and international problems and develop policy proposals that foster a government that is “of the people, by the people, and for the people.”

---

Center for American Progress

