

United States House of Representatives  
House Armed Services Subcommittee on Strategic Forces

July 27, 2011

Testimony Prepared By:

Dr. Keith B. Payne  
Professor and Head, Graduate Department of Defense and Strategic Studies  
Missouri State University  
Commissioner, Congressional Strategic Posture Commission

Testimony Prepared By

Dr. Keith B. Payne  
Professor and Head, Graduate Department of Defense and Strategic Studies  
Missouri State University  
Commissioner, Congressional Strategic Posture Commission

The administration recently announced that it will undertake a new review of US nuclear requirements. This examination of “how much is enough?” ultimately should be linked to the key goals served by US nuclear forces and the number and types of forces necessary to support those goals. Measuring US force requirements in this way simply follows the principle that our goals and strategies should drive numbers, not the reverse. If so, it is the combination of requirements needed to support multiple national goals that will set the standards for determining “how much is enough?” Other factors such as budget and technical realities also are important, but we should at least start by recognizing that our goals should drive requirements.

For over five decades there has been a general consensus that the key US national goals pertinent in this regard are: 1) the stable deterrence of attacks; 2) assurance of allies via extended deterrence and the “nuclear umbrella”; 3) dissuasion of competitive challenges; 4) defense in the event of war; and, 5) arms control. The forces linked to these five different goals overlap to some extent, but these goals also have their own individual, unique requirements that may be incompatible and demand trade-offs.

For example, the forces that may be needed to deter attacks may not be adequate to assure allies,<sup>1</sup> or some arms control goals may be incompatible with the requirements for deterrence and assurance. Consequently, no single standard can set the full measure of US nuclear requirements; rather, that full measure demands the balancing of the five different sets of requirements that follow from these five different goals. For decades, Republican and Democratic administrations have balanced these goals and made the necessary trade-offs when identifying US force requirements.

---

<sup>1</sup> The different requirements for deterrence and assurance were best illustrated by Denis Healey, Britain’s Defence Minister in the late 1960s, when he said that, “it takes only five per cent credibility of American retaliation to deter the Russians, but ninety-five per cent credibility to reassure the Europeans.” Denis Healey, *The Time of My Life* (London: Michael Joseph, 1989), p. 243.

The administration has expressed a commitment to effective capabilities for deterrence, assurance and limited defense, and has stated that force reductions must serve the goals of deterrence and assurance.<sup>2</sup> However, the administration also has explicitly elevated non-proliferation and nuclear disarmament to the top of the US nuclear agenda,<sup>3</sup> and emphasized that it sees non-proliferation and nuclear disarmament as “two sides of the same coin.”<sup>4</sup> This prioritization and linkage logically has led to concern that the goal of nuclear reductions will take precedence in the administration’s calculation of “how much is enough?”

This concern was stoked by senior administration officials who announced the administration’s nuclear review in the context of conferences and speeches devoted to the administration’s arms control agenda. These officials stated specifically that this nuclear review is for the purpose of further US nuclear reductions and to facilitate the “journey” to nuclear zero.<sup>5</sup>

As described, this approach to reviewing US nuclear requirements appears to start with the answer that further nuclear reductions are warranted and appropriate. The risk of this approach is that further reductions and a journey to nuclear zero may be out-of-step with the forces necessary to deter, assure, defend and dissuade now and in the future. If, as the administration has stated, nuclear reductions are the top priority on its nuclear agenda and the specific purpose of this review is further reductions, the trade-offs that must be made in the definition of requirements are likely to be at the expense of the forces needed for other purposes.

The administration’s willingness to place top priority on arms reductions and subordinate other goals may be seen in various policies and declarations. For example:

---

<sup>2</sup> Department of Defense, *Nuclear Posture Review Report*, April, 2010, p. xi.

<sup>3</sup> *Nuclear Posture Review Report*, p. vi, see also p. v.

<sup>4</sup> Ellen Tauscher, Under Secretary of State for Arms Control and International Security, *European Contributions to Nuclear Disarmament and Conflict Resolution*, Remarks at the 59<sup>th</sup> Pugwash Conference on Science and World Affairs, Berlin, July 1, 2011, at, <http://www.state.gov/t/us/167985.htm>.

<sup>5</sup> See for example, *National Security Adviser Thomas E. Donilon’s Remarks at the Carnegie International Nuclear Policy Conference, as Prepared for Delivery and Released by the White House*, March 29, 2011. See also, Assistant Secretary Rose Gottemoeller, *Remarks at the United States Naval Academy*, April 20, 2011 (as prepared). See also the remarks by Ellen Tauscher, Under Secretary for Arms Control and International Security, *The Global Zero “GZ/DC Convention,”* The George Washington University, Washington, D.C., April 8, 2011.

- The administration's 2010 rejection of any new US nuclear weapons to support new military missions or capabilities could easily come at the expense of US capabilities important for future deterrence and assurance goals.<sup>6</sup>
- The administration has initiated a move away from notions of deterrence in favor of a new approach labeled "Mutually Assured Stability" that "is underpinned by formal agreements on the limitation of arms."<sup>7</sup>
- The administration seeks to remove nuclear deterrence from US strategies to prevent biological and chemical attacks, despite the absolute fact that it may be critical to the prevention of some chemical and biological attacks.
- Russia has a large numeric advantage in "operational" nuclear weapons,<sup>8</sup> and the U.S. has important unmet goals with regard to reducing Russian nuclear forces. Nevertheless: the administration's New START Treaty requires *only US reductions* in deployed forces; the administration has decided to reduce U.S. tactical nuclear weapons *unilaterally*; and, senior White House officials have stated explicitly that the United States may pursue additional *unilateral reductions*.<sup>9</sup>
- Senior officials have recently cast doubt on the long-term US sustainment of the nuclear Triad of bombers, sea-based and land-based missiles,<sup>10</sup> despite widespread recognition that the Triad offers force characteristics potentially critical for the goals of deterrence, extended deterrence, and assurance.

There appear to be two competing dynamics within the Obama administration regarding the prioritization of US strategic goals and the related calculation of force requirements. One generally reflected in the 2010 *Nuclear Posture Review* appears committed to balancing arms control goals with the requirements for deterrence, extended deterrence, assurance and limited defense. The other instead places top priority on nuclear reductions and movement towards nuclear zero. Reconciling these two dynamics will be increasingly difficult and ultimately impossible absent the transformation of international relations.<sup>11</sup>

---

<sup>6</sup> *Nuclear Posture Review Report*, p. xiv.

<sup>7</sup> Tauscher, *European Contributions to Nuclear Disarmament and Conflict Resolution*.

<sup>8</sup> William J. Perry and James R. Schlesinger, *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, D.C.: United States Institute of Peace, 2009), p. 111.

<sup>9</sup> As reported in, *Arms Control Today Interviews Gary Samore*, May 4, 2011, at <http://www.armscontrol.org/pressroom/GarySamoreInterview>.

<sup>10</sup> See Julian E. Barnes, "Gates Says Cuts Would Curb Military Capacity," *Politics* (May 19, 2011), at <http://online.wsj.com/article/SB10001424052748704281504576331690389093816.html>; and, Elaine M. Grossman, "Top General: US Needs Fresh Look at Deterrence, Nuclear Triad," *Global Security Newswire*, July 14, 2011, at [http://www.globalsecuritynewswire.org/gsn/nw\\_20110714\\_6177.php](http://www.globalsecuritynewswire.org/gsn/nw_20110714_6177.php).

<sup>11</sup> This point is emphasized in, *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States*, p. xvi.

The fundamental question with regard to the administration's forthcoming nuclear review is which of these two different views of US priorities and requirements will govern its calculation of "how much is enough?" Will this administration continue to place priority on five national goals when it measures the role and value of US forces, or will it give precedence to the goal of nuclear arms reductions?

Based on the historical record, we *know* that US nuclear weapons help to deter war and prevent conflict escalation. We *know* that US nuclear weapons help to assure allies and thereby contribute to nuclear non-proliferation. Finally, we also *know* that deterrence can fail and leave us no alternative but to defend against attack. Consequently, we should be wary of any review that does not place high priority on the goals of deterrence, assurance and defense.

Various commentators who instead place top priority on movement toward nuclear zero advocate continuing deep reductions—down to levels of 300, 500 or 1000 warheads—all well below the New START Treaty's ceiling of 1550 deployed warheads. These much-reduced force levels would be adequate, they claim, because the United States could still maintain a retaliatory deterrence threat.<sup>12</sup>

Perhaps so, but subordinating the requirements for deterrence and assurance to the priority goal of further nuclear reductions entails serious potential risks. Most important, the reduced flexibility and resilience of the US force posture at low numbers could undermine the US capability to adjust to surprising and dangerous political and/or technical developments as may be necessary to deter future wars, assure allies or defend if deterrence fails.

A minimum standard of force adequacy also could make US forces more vulnerable to opponents' covert or deceptive deployments and ease the technical/strategic difficulties for opponents who seek overtly to counter or get around our deterrence strategies—encouraging some to move in these directions. As such, very low numbers could work against US efforts to dissuade future nuclear arms competition with countries such as China or Russia.

---

<sup>12</sup> See the discussion of such claims in, Keith B. Payne, "Maintaining Flexible and Resilient Capabilities for Nuclear Deterrence," *Strategic Studies Quarterly*, Vol. 5, No. 2 (Summer 2011), pp. 13-29.

In addition, at minimal force levels the reduced credibility of our extended deterrent would motivate some allies to seek their own independent nuclear capabilities; i.e., it would contribute to incentives for nuclear proliferation among some allies and friends and thus be at odds with the administration's stated top priority of non-proliferation. Secretary of Defense Gates has rightly emphasized that allied confidence in US credibility can be critical to their willingness to remain non-nuclear.<sup>13</sup>

Finally, minimal nuclear force standards almost inevitably lead to inflexible, minimal deterrence concepts that seek deterrent effect from narrow targeting options, often including threats to kill large numbers of civilians.<sup>14</sup> This is because very low numbers of nuclear weapons allow only narrow targeting options. Successive US administrations, however, have rightly rejected such concepts of deterrence as incredible, immoral and illegal.

These are the primary reasons why, for five decades, Democratic and Republican administrations have rejected minimalist standards for US force requirements and Minimum Deterrence policies—despite their possible attraction if nuclear reductions is deemed the top priority. These reasons remain sound.

Is there room for further reductions in US deployed nuclear forces below New START levels because some claim that a basic retaliatory deterrence threat could be maintained at 300, 500 or 1000 warheads? The answer *must be no* for three reasons.

First, no estimate of “how much is enough?” *for deterrence alone* is an adequate measure of US strategic force requirements. Recall that US forces also serve the purposes of extended deterrence, assurance, dissuasion and if necessary defense. Consequently, no calculation of basic

---

<sup>13</sup> Robert Gates, “The Defense Secretary’s Exit Interview,” *The Daily Beast*, June 21, 2011.

<sup>14</sup>“Likewise, the United States needs relatively few warheads to deter China. A limited and highly accurate U.S. nuclear attack on China’s 20 long-range ballistic missile silos would result in as many as 11 million casualties and scatter radioactive fallout across three Chinese provinces...” *Pentagon is Exaggerating China’s Nuclear Capability to Justify Buying New Generation of U.S. Weapons, Report Finds*, Natural Resources Defense Council, Press Release, November 30, 2006. See also, Hans M. Kristensen, et al., *From Counterforce to Minimal Deterrence: A Nuclear Policy Toward Eliminating Nuclear Weapons*, Federation of American Scientists and The Natural Resources Defense Council, *Occasion Paper*, No. 7 (April 2009), pp. 2, 31.

deterrence requirements—however sophisticated--can define the adequacy of US strategic forces.

Second, the *credibility* of US strategies of deterrence and assurance is as important as is the capability of US forces. Simply because a low number of nuclear warheads might provide a narrow retaliatory capability does not mean that related deterrence or assurance strategies would be *credible*. If those strategies are incredible, they will not work. Some close US allies already are expressing concerns about the potential loss of US credibility at lower force levels.<sup>15</sup>

Third, future threats to us and our allies remain inherently unpredictable in important ways.<sup>16</sup> As Secretary Gates recently observed, “When it comes to predicting the nature and location of our next military engagements, since Vietnam, our record has been perfect. We have never once gotten it right.”<sup>17</sup> We surely will be confronted with unexpected threats. Consequently, there is much more to the requirements for deterrence and assurance than simply having the number of warheads deemed adequate for a retaliatory threat at some point in time. Deterrence and assurance requirements can shift rapidly across time, place and opponent, and thus particularly important is the flexibility and resilience of our force posture to adapt to shifting and unforeseen threats and circumstances.<sup>18</sup> These *qualitative* requirements for deterrence and assurance move the calculation of “how much is enough?” well beyond simply maintaining the number of weapons necessary to meet some retaliatory targeting plan.

---

<sup>15</sup> See Kurt Guthe and Thomas Scheber, *Assuring South Korea and Japan as the Role and Number of U.S. Nuclear Weapons are Reduced* (Fairfax, VA: National Institute for Public Policy, January 2011).

<sup>16</sup>As noted recently by both James Clapper and Leon Panetta. See, Leon Panetta, testimony before the House Permanent Select Committee on Intelligence, *World Wide Threats Hearing*, February 10, 2011; and, James Clapper, testimony before the Senate Select Committee on Intelligence, Hearing, *The Worldwide Threat*, February 16, 2011. And, as former CIA Director, George Tenet said, “What we believe to be implausible often has nothing to do with how a foreign culture might act.” George Tenet (with Bill Harlow), *At the Center of the Storm: My Years at the CIA* (New York: HarperCollins, 2007), p. 46.

<sup>17</sup> Quoted in, “Defense Secretary Warns Against Fighting More Ground Wars,” February, 26, 2011, CNN.com, at <http://www.cnn.com/2011/US/02/25/gates.westpoint/index.html>.

<sup>18</sup> *Flexibility* meaning US possession of a spectrum of possible threat response options suitable for a wide range of opponents and contingencies, and *resilience* meaning the capability to adapt deterrence to changes in threats and contexts, including rapid and unanticipated changes. See, Payne, “Maintaining Flexible and Resilient Capabilities for Nuclear Deterrence,” p. 13.

No one can legitimately claim to know that a much smaller nuclear force would be adequate to deter or assure in the future. Precisely because threats and the related requirements for deterrence and assurance can change so rapidly, it is critical to sustain the flexibility and resilience of our strategic forces necessary to adapt to future, surprising circumstances. Correspondingly, we must sustain the number and diversity of our force posture necessary for its flexibility and resilience—moving to lower force levels than necessary for this purpose would carry real risk.

If we posit that existing US force levels are adequate for deterrence, assurance and defense, the burden of proof must be on those who claim that moving to a dramatically different, lower level of US nuclear forces would continue to provide adequate support now and in the future for deterrence, assurance and defense. This proof, however, is nowhere to be found; such claims are inherently speculative and typically based on optimistic assumptions about future threats. The inconvenient truth is that no one knows with any level of confidence how many of what types of nuclear forces will be adequate to deter or assure in coming years because threat conditions and opponents can change rapidly. This again is why sustaining the level of US forces compatible with their flexibility and resilience is so critical

Is there room in this regard for further reductions? Following comprehensive analyses, the former Commander of STRATCOM, Gen. Kevin Chilton, recently concluded that the New START force levels would provide adequate force flexibility for deterrence under specific assumed conditions.<sup>19</sup> But, even with optimistic assumptions about the future, Gen. Chilton explicitly cautioned against further reductions below New START force levels.<sup>20</sup> It is reasonable to question how further US nuclear reductions could be deemed appropriate today when the administration's own recent nuclear review apparently determined New START numbers to be compatible with the necessary flexibility, but no lower.

---

<sup>19</sup> Gen. Kevin Chilton, Senate Armed Services Committee, *Hearing to Receive Testimony on the Nuclear Posture Review*, April 22, 2010, pp. 8, 13, 14; and Gen. Kevin Chilton, House Armed Services Committee, *Hearing, U.S. Nuclear Weapons Policy and Force Structure*, April 15, 2010, p. 11.

<sup>20</sup> Gen. Kevin Chilton, Senate Foreign Relations Committee, *Hearing, The New START Treaty: Views from the Pentagon*, June 16, 2010, Federal News Service.

Nothing has changed over the past months to suggest that Gen. Chilton's caution no longer is valid. To the contrary, some recent threat developments are troubling: North Korea and Iran show no sign of moving away from nuclear weapons, with North Korea posing a direct threat to us and moving toward mobile ICBMs;<sup>21</sup> China shows no apparent interest in cooling its nuclear modernization programs or providing transparency into those programs; and, Russia lists the United States and NATO as its greatest threat, frequently resorts to crude nuclear threats to US allies, and places highest investment priority on the modernization of its nuclear forces,<sup>22</sup> reportedly including a new Heavy ICBM capable of carrying 10-15 nuclear warheads each.<sup>23</sup> This context hardly seems ripe for further reductions that could degrade the flexibility and resilience of the US nuclear force posture.

In sum, the administration has voiced commitments to US strategic forces and the goals of deterrence, assurance, and limited defense. But other recent administration policies and statements, particularly those regarding the intent behind its nuclear review, cast some doubt on those commitments. If the reduction of nuclear forces en route to zero is the operative top goal of "the US nuclear agenda," then the administration's nuclear review undoubtedly will find room for further reductions. Further deep reductions, however, could entail significant potential risks, which is why Democratic and Republican administrations for five decades have rightly rejected minimalist standards of force adequacy and related minimalist notions of deterrence as the basis for calculating US force requirements. These low standards may seem attractive if the "journey" to nuclear zero is the priority that dominates all other calculations of "how much is enough?"—but not otherwise.

---

<sup>21</sup> Gates, "The Defense Secretary's Exit Interview."

<sup>22</sup> Aleksey Arbatov, "Arbatov on Need to Balance Army With Available Resources, Clearer Foreign Policy," *Voyenno-Promyshlennyy Kuryer Online*, March 30, 2011, CEP20110330358006.

<sup>23</sup> Denis Telmanov, "The Successor to the Satan Will Acquire 15 nuclear warheads," *Izvestiya Online*, July 18, 2011, at <http://www.izvestia.ru/>.