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Future Nuclear Posture of the United States

Subcommittee on Strategic Forces, Committee on Armed Services, United States Senate, One Hundred Fourteenth Congress, Second Session

HEARING CONTENTS:

Witnesses

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[View Testimony](#)

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[View Testimony](#)

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Statement of Dr. John R. Harvey
Future Nuclear Posture of the United States
Before the
Subcommittee on Strategic Forces
Committee on Armed Services
U.S. Senate
26 January 2016

Introduction

Chairman Sessions, Ranking Member Donnelly, and members of the Subcommittee: I am pleased to testify before you today along with colleagues and friends—all of whom reflect the highest standards of public service—about the future nuclear posture of the United States.

My statement today reflects 38 years of experience working nuclear weapons and national security issues, first at Lawrence Livermore National Laboratory, then at Stanford University's Center for International Security and Arms Control and in senior positions in the Departments of Defense (twice) and Energy. From 2009-2013, I served as Principal Deputy Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, initially under Ash Carter then serving as Undersecretary for Acquisition, Technology and Logistics. I was his "go to" person for the 2010 Nuclear Posture Review as well as for interactions with the Department of Energy on all aspects of the nuclear stockpile. I provided oversight to DoD acquisition programs to sustain and modernize nuclear delivery systems and systems for their command and control. Today, I consult with several organizations on many of these same issues. My statement today, however, reflects my views and not necessarily those of any organization to which I consult.

Priority One—Bolstering the Fragile Consensus on Modernization

It is worthwhile to take a step back and recall the state of the U.S. nuclear posture in 2009 when President Obama took office. The prospects were grim:

- Funding was insufficient to sustain the R&D base needed for long-term certification of stockpile safety and reliability and, at the same time, recapitalize an aging infrastructure.
- Basic nuclear weapons design, engineering, and production skills and capabilities were increasingly at risk because they were not being exercised.
- Ongoing warhead life extension activities were under funded and constrained in their ability to improve warhead safety, security, and reliability.
- Operations at warhead component production facilities were at increased risk of safety shutdown.
- DoD had yet to step up to its own nuclear modernization needs.
- There was little consensus within Congress, or between the administration and Congress, on the role of nuclear weapons in our national security strategy.
- Many in Congress were concerned that a comprehensive approach to nuclear security had not been clearly articulated, and they were right!

Today, the tide has shifted. Specifically:

- The 2010 NPR was built on a foundation of bipartisan support; in large part, it adopted the recommendations of the Bipartisan Congressional Commission on the Strategic Posture of the United States (aka “the Perry-Schlesinger commission”).
- It was achieved with unprecedented interagency cooperation and White House involvement, and defined an integrated/balanced strategy for reducing nuclear dangers.
- Very importantly, the strategy strongly linked our nuclear deterrent to other elements of nuclear security including arms control, nonproliferation, threat reduction, and nuclear counterterrorism.
- High level support across his administration for increased investments in DOE’s nuclear weapons programs and DoD’s nuclear delivery systems enabled the President to conclude, and convinced the Senate to ratify, the New START Treaty.
- Recent President’s budget requests have further increased investment for modernization. To a very large degree, Congress is funding these programs and, as it should, is holding the administration accountable for sustained progress.

Not everything is “fixed,” but there is a fragile consensus in place regarding the future nuclear posture and a plan (that changes a bit every year) to achieve it.

To what do I attribute this remarkable demonstration of bipartisanship in a political environment that is as corrosive as many of us can remember? I think the answer is two-fold. First, the actions of Vladimir Putin, in essence to reestablish the Soviet Union, have made it clear to most Americans that optimistic assumptions about the future global security environment are not coming to pass. Recent Russian behavior has also muted the voices of those who sought to hijack, and misrepresent, the President’s Prague agenda in calling for unilateral reductions to small numbers now.

Perhaps more importantly, is the commitment of this Committee and its staff (both minority and majority) working together, and together with their House counterparts and with colleagues both inside and outside the Obama administration to do what’s right for our nation’s security. I must add that vocal support for the President’s modernization program from my colleague at the table, Keith Payne, taken at some personal risk, has helped to solidify support of other conservatives not inclined in general to agree with the President.

This decades-long modernization program for all elements of the nation’s deterrent—the nuclear stockpile and supporting infrastructure, nuclear delivery platforms, and command and control systems that link nuclear forces with Presidential authority—faces several challenges. The next few years are critical as we climb the so-called modernization “bow wave” of needed investment that peaks in the mid-2020’s. The greatest challenge, however, is to bolster consensus, and sustain momentum, in the transition over the next year to a new administration. Continued close attention and bipartisan support from Congress will be essential.

The 2017 Nuclear Posture Review

Given changes in the security environment since the 2010 NPR, it is almost certain that the next President will direct a review of the current posture, policies, and programs for U.S. nuclear forces and, very likely, will do this whether or not Congress passes legislation requiring it. What should Congress do? There are three primary options to consider:

- Take no action—leave to the discretion of the next President.
- Direct the next administration to conduct a review of U.S. nuclear posture and deliver, by a date certain, an unclassified report (with classified annex, if needed) on the way ahead.
- Establish a new bipartisan commission to inform the nuclear review of the next President.

In considering options, it is noteworthy that previous NPRs—those concluded by Clinton in 1994, by Bush in 2001, and by Obama in 2010 (informed by Perry-Schlesinger)—reflect much more continuity than change. After evaluating alternatives, all concluded that a strategic triad of nuclear forces—consisting of land- and sea-based ballistic missiles, and heavy bombers—and forward basing of B61 nuclear bombs carried by NATO dual capable aircraft were essential to both strategic and extended deterrence. All concluded that a hedge capability, held in reserve, was needed to respond to unanticipated technical problems with a warhead or delivery system, or to adverse geopolitical changes that required augmentation of deployed forces. All agreed that it is insufficient to base deterrence solely on the existence of some level of nuclear forces; rather, it depends on the ability of forces to hold at risk assets and installations most highly valued by an adversary. Thus, force capabilities mattered and all understood that capabilities might need to be adjusted as adversary target sets and employment strategies evolved.

Given the trend of continuity, given the current, if fragile, consensus on modernization and given the intense bipartisan review that was carried out by Perry-Schlesinger in 2008-09, a new bipartisan commission is not needed at this time. Even if the FY17 NDAA were to establish one, and assuming it became law in late Fall 2016, it would take at least another 18-24 months to get the members appointed, the commission up and running, and recommendations developed. The commission would likely be carrying out its work in parallel with the next administration's nuclear review and would thus not be timely.

Rather, the next administration should review and update the conclusions and recommendations of the 2010 NPR based on the global security environment as it has evolved since that review was completed. This review would benefit from the analyses, assessments, and contributions of experts in the think tank community. Examples include work of the National Institute of Public Policy in informing the 2001 NPR, and recent work (i.e. Project Atom) at the Center for Strategic and International Studies addressing options for the future U.S. nuclear posture.

Major Considerations of the Next NPR

The Committee has requested that we provide views of “what should be the major considerations and content of the next NPR.” Most importantly, the next NPR should “open the aperture” on issues and activities that the Obama administration had “put to bed” based on its assessment of the future global security environment. In doing so, we must manage the downside risk that certain recommendations could rupture existing consensus on today's modernization program.

Russia

Deterring a potentially hostile Russia remains the primary focus of U.S. nuclear forces. Mr. Putin believes he has a “responsibility to protect” ethnic Russians wherever they reside. He has used this argument to intervene in the internal affairs of Moldova, Georgia and now Ukraine including the illegal annexation of Crimea. Putin's modus operandi in Ukraine has not been an

all-out armored assault as the Soviets did in Hungary in 1956 and Czechoslovakia in 1968. Rather, he seeks to achieve his political ends by introducing covert forces employing “gray ops” (aka hybrid warfare) to incite, or amplify, instabilities and insurgencies among fringe elements in Eastern Ukraine. He has also given increased prominence to nuclear forces, and to brandishing these forces in seeking to intimidate his perceived adversaries.

What do the events in Ukraine mean for NATO members such as Latvia and Estonia with sizable ethnic Russian populations? Would NATO even recognize that a member state was under such covert assault? How would other members respond under the Article V commitment to defend that member? How should these events be reflected in U.S. and NATO security posture and planning? What does all this mean for the U.S. nuclear posture. These questions are at the top of the list for the next NPR. Ten years ago, few would have imagined the events of the past two years in Ukraine. Today, it must inform our thinking about future conflict.

Russia has an active strategic modernization program underway. Some of it, like ours, involves upgrading older systems at the end of their service lives. Other modernization involves potential qualitative advancements that we must monitor closely so that we are not surprised and, if required, can make a timely (and possibly asymmetric) response. That said, we must be careful not to convey that U.S. modernization is being driven by Russia’s. We must modernize whether or not Russia modernizes if we are to retain basic components of an effective Triad.

More so than its modernization program, I am concerned about Russia’s evolving nuclear strategy. In short, Russia seems to embrace the threat of limited nuclear use to deescalate a conflict, for example, to solidify near-term gains against a conventionally superior adversary. Does Russia really believe that it could escalate its way to victory say in restoring the Baltics to Russian rule? If it does, then we must set Russia straight that no conceivable advantage at all could ever accrue from nuclear use against NATO. The next NPR should determine, among other things, whether existing U.S. declaratory policy needs to be refined or clarified.

Nuclear Delivery Systems and Command and Control

Several issues involving nuclear delivery systems and nuclear command and control (NC2) are timely for consideration in a new NPR:

- How many ICBMs should we deploy (at how many bases) to meet security needs while maintaining a robust cadre and career path for ICBM operations?
- How best can ICBM and SLBM life extension program be leveraged to reduce costs through a smart approach to commonality (e.g., in solid rocket motors, firing systems, guidance and control, and ground components), recognizing that these two systems experience different operating environments?
- What additional modernization is needed to convey credibly an important message for deterrence; that is, U.S. nuclear forces cannot be neutralized by attacks, whether kinetic or cyber, on the NC2 system?
- In light of security developments in East Asia, and the continuing challenge of assuring allies of U.S. security commitments, is it time to revisit options to:

- Establish and exercise, with allied concurrence and support, a capability to deploy U.S. dual capable aircraft, and nuclear weapons, to bases in Japan and the ROK?
- Restore nuclear capability to carrier air via the F-35?
- Develop and deploy on attack submarines a modern, nuclear, land-attack SLCM?

Are New Military Capabilities Needed?

Two looming questions involving stockpile modernization are worthy of debate and discussion:

- Do we need nuclear warheads with new or different military capabilities?
- Do we need to retain capabilities to develop and produce such warheads?

My short answers to these questions are, respectively, “maybe” and “most assuredly.” It is timely to review needed military capabilities in light of the evolution of the global security environment including Russia’s actions upsetting the emerging post Cold War international order and increased focus on the challenge of deterring escalation in a conventional conflict between nuclear-armed states. At least three options may be seen as pertinent:

- Lower yield options for ICBM and SLBM warheads, at least until a viable prompt global conventional strike capability is achieved.
- Capabilities to hold at risk hardened, underground installations.
- Warheads that provide extended service life, greater margin for enhanced reliability, modern safety and security features, and ease and rapidity of manufacture.

These ideas are not new and I do not think it urgent to develop and field such warheads. That said, consideration of these and other such options should be on the agenda of the next NPR.

The second question addresses the challenge of maintaining capabilities of weapons scientists and engineers to develop and field modern warheads if required by a future President. To maintain such readiness, designers and engineers must be provided opportunities to exercise critical capabilities with challenging design problems.

Over the past decade and more, however, challenging warhead design and development opportunities have been few and far between. Most work today involves warhead life extension programs (LEPs) that do not present sufficiently complex design and development challenges to fully exercise skills. The B61-12 LEP offers challenges to the Sandia teams developing non-nuclear warhead components—e.g., a modern warhead electrical system—but not to the design and engineering teams at Los Alamos. Indeed, the bomb’s “physics package” (the warhead primary, secondary, inter-stage and radiation case) is essentially the same as the original bomb.

Today, there are no requirements for new military capabilities. How then can critical skills be exercised? The LEP for an interoperable ICBM/SLBM warhead, called IW1, when compared to today’s refurbishment LEPs, presents a formidable challenge for training young designers. The follow-on interoperable warhead (IW2) presents an even greater challenge. Both programs, however, were delayed by five years in recent budgets and are late to need for retaining critical capabilities. The next NPR should review whether to accelerate the IW1 and IW2 LEPs.

Prototyping is another option to exercise the entire design, development and manufacturing enterprise. Here, a modern warhead design would be taken from initial concept through prototype development and flight testing, up to a point where a few are built but not fielded.

The FY15 and FY16 NDAs have advanced legislation to facilitate retention of capabilities through expanded use of prototype development at the national laboratories, and by establishing a nuclear weapons design responsiveness program as a key component of stockpile stewardship. Absent these initiatives, and possibly within a decade, there is serious risk that the nuclear weapons enterprise will be unable to provide a timely response to unanticipated contingencies. Establishing affordable programs to exploit these opportunities is a challenge for the next NPR.

Nuclear Stockpile and Supporting Infrastructure

Several other issues involving the nuclear stockpile and supporting infrastructure should be addressed with high priority in the next NPR:

Early retirement of the B83 bomb: U.S. hedge strategy seeks to provide two separate, genetically diverse warheads for each leg of the Triad. Sufficient numbers of one warhead are held in reserve to provide backup in the event of an unanticipated technical failure of the other. There are two U.S. gravity bombs—the B61, undergoing life extension, and the B83. Current plans are to retire the B83 well before the end of its service life, and possibly before sufficient experience is gained with the B61-12 LEP to fully assess any “birth defects”, in part to avoid a relatively small investment in B83 warhead surveillance. In light of the increased importance of extended deterrence in our security posture, it makes sense to revisit that decision.

W76 backup: A major goal of the “3+2 strategy” for stockpile modernization is to provide a “backup” for the W76 SLBM warhead—the most prevalent warhead in the future force—in the event of unanticipated technical failure. This was to be achieved by fielding interoperable ICBM/SLBM warheads. That specific approach has been called into question, in part by the more urgent need to extend the life of our other SLBM warhead—the W88. In any case, there are insufficient W88s to back up the W76. A new approach is needed to hedge W76 failure.

Recapitalizing uranium and plutonium manufacturing infrastructure: A responsive nuclear infrastructure to repair or rebuild warheads would relieve the need to maintain a large stockpile of reserve warheads to back up the deployed force. We have not had one since the early 1990s. Progress has been made recently on what seems to be affordable approaches to recapitalization. But the capability being provided, particularly regarding plutonium pit manufacture, may not be in time to meet the needs of future LEPs. It is time to resolve this problem.

Conclusion

Certain issues will be highly controversial and thus pose a risk to maintaining a continued consensus on modernization. That does not mean that the next NPR should not study them. Rather, all of the security implications of alternative courses of action must be understood before moving forward carefully, and with transparency, to any recommended changes in U.S. nuclear posture. This can best be achieved with an NPR that integrates all elements of nuclear security, not just force posture, embraces all agencies with national security equities as well as allies, and communicates clearly with Congress and the American public.

Prepared Remarks

United States Senate

Committee on Armed Services, Subcommittee on Strategic Forces

Hearing: The Future Nuclear Posture of the United States

January 26, 2016

Testimony Prepared By:

The Hon. Franklin C. Miller

Principal, The Scowcroft Group

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UNITED STATES SENATE
COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON STRATEGIC FORCES

Room SR-222 Russell Senate Office Building

Tuesday, January 26, 2016 – 2:30 p.m.

Hon. Franklin C. Miller

Principal, The Scowcroft Group

Committee Tasking: “We would like you to provide an assessment of the continuities and changes in the U.S. nuclear posture since the end of the Cold War, with an eye toward what we’ve gotten right and what policies and/or assumptions have not been borne out by recent events. Most importantly, please provide the committee your thoughts about how the current nuclear posture should be changed to address the strategic environment as you see it evolving over the next 25 years. In other words, what should be the major considerations and content of the next nuclear posture review.”

I am honored to be here and would like to thank the Committee for asking me to join my distinguished colleagues and friends on this panel. I have worked with each of these gentlemen for many many years and I deeply respect them and their contributions to the United States.

The Nuclear Posture of the United States

You asked me to comment on our nuclear posture – which I understand to mean our understanding of the threats we face, our declaratory policy and the state of our forces. Sadly, I must report to you that I am deeply concerned on all counts, and that I believe we have declined in all three areas since the beginning of this century. It should be evident to all, although astonishingly it is not so -- particularly in the Washington-based arms control village -- that the world President Obama called for in his April 2009 Prague speech is not the one he is bequeathing to his successor. Rather than reducing reliance on nuclear weapons, Russia, China, and North Korea have all significantly increased the role those weapons play in their respective national security strategies. North Korea is now a full-fledged nuclear weapons state. China is engaging in a major modernization of its intercontinental land-based and sea-based nuclear missile forces.

And President Putin has increasingly over the last decade, presided over an administration which is:

- Engaged in an across- the-board modernization of both its strategic nuclear triad and its shorter range nuclear forces, in the process violating both the landmark 1987 Intermediate Nuclear Forces (INF) Treaty and the 1991-1992 Presidential Nuclear Initiatives (PNIs). In sharp contrast to our programs, which are with the exception of updating the antiquated B-61 bomb all in the

planning phase, the Russians are deploying their new systems on land and at sea. Last month Russian Defense Minister Shoigu stated that over 50% of Russian nuclear forces are “new”;

- Using strategic bombers to engage in highly dangerous military activities and maneuvers adjacent to the our own airspace and that of our NATO and Pacific allies (in some cases actually endangering civil aviation);
- Carrying out a series of nuclear exercises which explicitly simulate attacks on our NATO allies; and
- Issuing a stream of nuclear saber rattling policy statements and specific threats, including many by Putin himself, the likes of which have not been heard since the days of Nikita Khrushchev.

Regrettably, our declaratory policy, apart from stating that “as long as nuclear weapons exist the United States will maintain a safe, secure and reliable deterrent” has not recognized the threats posed by the developments I have just described. To the extent that our unwillingness to respond is perceived by the Russian leadership as weakness – much as Hitler perceived the failure of Britain and France to respond to his reoccupation of the Rhineland and his annexations of Austria and Czechoslovakia as proof that London and Paris would not defend Poland – then we have left open the door to potential

miscalculations by Mr Putin and his gang, miscalculations which could prove deadly in a crisis.

Moreover, in sharp contrast to both Russia and China, the United States has not deployed a new strategic system in this century. The bomber and ICBM legs of our Triad have significant deficiencies. And yet, the modernization programs for all three legs of the Triad remain in the planning stages, with new systems not expected in the field until the mid-to-late 2020's. Worse yet, the arms control community continues – despite the deal it struck to support Triad modernization in exchange for ratification of New Start – to call for slashing the modernization programs: eliminating the replacement for the air launched cruise missile (thereby taking the B52 out of the Triad and eliminating our ability to use the so-called “bomber discount rule” which then-Strategic Command head General Bob Kehler said was crucial to maintaining sufficient strategic weapons numbers under New Start); eliminating the replacement for the Minuteman ICBM; cancelling the B61 modernization program, thereby ending NATO's forward based nuclear deterrent and its concurrent nuclear risk- and burden- sharing; and cutting back the number of SSBNs (which, in the aggregate, will carry upwards of 70% of our deterrent under New Start).

As a result of all this, I believe a major review of our nuclear posture is required in order to better align us to deter foreign leaders whose policies, pronouncements, and investments in nuclear forces suggest that they might actually believe in military use of such weapons in a crisis.

Reviewing our Nuclear Posture or a holding new Nuclear Posture Review

I believe I have a slightly different take from my colleagues, however, on how that nuclear review should be carried out. Let me say at the outset that I believe it is incumbent on every incoming Administration to review its predecessor's policies. This is certainly true with respect to defense policies and particularly the case with respect to nuclear deterrence policy and the programs and plans which support that policy. Where I believe I may part company with my colleagues, however, is that I believe such a review should be conducted promptly and quietly and in a highly classified manner, within a select group of policy makers and senior military officials in the Pentagon; the results of such a review should be shared with the President and the Vice President. Changes which the review might suggest, if approved by the Secretary of Defense or the President, as appropriate, should then be implemented and announced when appropriate and at a time and in a manner which achieves maximum national security benefit for

the United States and our allies. The relevant Congressional Committees should be consulted where appropriate and kept abreast of decisions which may have been required – and all this well before a public roll-out.

The hype and publicity created by holding “Congressionally-mandated Nuclear Posture Reviews” tends, on the other hand, to create significant and early expectations on the Hill and elsewhere that there will be opportunities for all of the interested parties – Congressional, other Executive branch agencies, and public interest groups -- to comment on the draft changes and to affect their trajectory. In particular, the inclusion in the past of the State Department and the White House staff have led to an over-emphasis on arms control initiatives and non-proliferation policies. While those are important, the basic nuclear posture which the United States requires to deter attack on ourselves and on our allies should be decided on firm national security principles; having decided these, an Administration can expand its focus to where arms control might be able to help support nuclear stability on a regional or global basis – and it is here that the State Department will have a role. Again, however, this would be after the basic deterrent requirements had been established.

There are other good arguments against recreating prior NPRs. Full-blown interagency involvement in Nuclear Posture Reviews also tends to increase significantly the amount of time necessary to reach – and therefore to implement –

conclusions; endless meetings of interagency working groups serve to slow the review process and do not improve its results. Furthermore, holding NPRs on a quadrennial basis also has created the expectation that nuclear policy needs to change with every new Administration. Contrary to changing policy simply because a new Administration has taken office are the facts (1) that the basic tenets of US nuclear deterrence policy (as contrasted to the implementation of those policies) have been remarkably consistent over the decades, and (2) that such consistency has served the nation, and our allies, well.

Those basic tenets include:

- Deterrence rests on the ability to convince an enemy leadership that our retaliation will impose costs which will outweigh any gains he hopes to make through his aggression;
- To be credible, we must have a modern retaliatory force which can clearly impose the costs our policy requires – even under the worst-case conditions of a surprise attack;
- Our retaliation must focus on assets the enemy leadership values – not on what we value; this means we must always study potential enemy leaderships to understand their value structures;

My views are based on my own experiences in the Department of Defense. Beginning in October 1981, I became the senior most official in OSD/Policy, tasked on a day-to-day basis with managing US nuclear deterrence policy (with the exception of actual nuclear target planning). In 1985, I also assumed responsibility for nuclear target planning. As I advanced in my career, rising to be a Deputy Assistant Secretary, a Principal Deputy Assistant Secretary, and an Assistant Secretary, I maintained control of the nuclear portfolio. This continued through January 2001, at which point I was seconded to the White House as Senior Director for Defense Policy and Arms Control. During the period 1981-2001, we in OSD, working with the Joint Staff and the nuclear staff in Omaha, and with the strong support of several Secretaries of Defense:

- corrected the perception that the Reagan Administration believed in nuclear war-fighting,
- reconfigured US declaratory policy,
- weathered the nuclear freeze and nuclear winter movements while maintaining support for our deterrent,
- maintained the vast majority of the strategic Triad modernization efforts on track,

- completely overhauled the nation's nuclear war plans twice (once during the period 1989-1991, and then again as the USSR was beginning to disintegrate in 1991)
- and, based on a firm understanding of our deterrent needs, developed proposals which formed the basis of the 1991-1992 Presidential Nuclear Initiatives with Russia and of the START 2 Treaty.

Most of this was done within the Defense establishment, and public mention was made by the then-Secretary of Defense when the final decisions had been approved either by himself or by the President. Some of the major changes, particularly those relating to the war plans, were never announced. We did not raise public expectations that change was necessary nor, in both Democrat and Republican Administrations, did we ask for public comment on what we proposed to do. Neither did we involve the other Executive Branch departments and agencies (with the exception of coordinating with the Department of Energy on developing and fielding new nuclear warheads.) The one NPR in which I was involved, that of 1993-1994, proved a disappointment in that it raised many expectations about radical changes in our posture which were not fulfilled because the international situation made such changes imprudent at best and dangerous at worst. Accordingly, I would urge

Congress not to mandate that the incoming Administration conduct yet another Nuclear Posture Review.

Mr. Chairman, I again thank the Committee for asking me to testify and I look forward to answering any questions the Committee might have for me.

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Prepared Remarks

United States Senate
Committee on Armed Services, Subcommittee on Strategic Forces

Hearing: The Future Nuclear Posture of the United States

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Testimony Prepared By:

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

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Prepared Remarks

Testimony Prepared By:
Dr. Keith B. Payne
Professor and Head, Graduate Department of Defense and Strategic Studies
Missouri State University

I greatly appreciate the honor of participating in today's hearing.

I would like to start by noting that there has been a near-overwhelming bipartisan consensus on US nuclear policies over the past five decades. Despite the occasional flare ups, our nuclear debates typically have *not* been over fundamentals.

For example, there is a long-standing agreement that two primary roles for US nuclear weapons are to deter enemies and to help assure our allies of their security.

From the broad agreement on these two goals follow many points of consensus regarding what we should do and say about our nuclear capabilities. For example, because a variety of plausible nuclear attacks must be deterred, and no one knows the minimum US capabilities necessary and credible to deter them, there is a long-standing bipartisan consensus in support of *hedging, flexibility, diversity and overlapping US deterrence capabilities*.

Every Republican and Democratic administration for five decades, including the Obama administration, ultimately has understood the value of these attributes and ultimately rejected a minimalist deterrence as inadequate and incredible. From this consensus has followed our long-standing consensus in favor of sustaining a diverse nuclear triad of bombers, land-based and sea-based missiles.

Similarly, from the fundamental nuclear policy goal of assuring allies follows the continuing consensus behind sustaining some US nuclear forces that are forward deployed, such as our DCA in Europe, or forward-deployable—depending on local conditions and history.

These points of fundamental consensus remain with us today.

There are, nevertheless, some recent and unprecedented developments that justify a contemporary DOD review of US deterrence policy and requirements.

For example, we need to recognize that the optimistic post-Cold War expectations about Russia that dominated earlier thinking do not reflect contemporary reality, and review US policies accordingly: to be specific, the Putin regime's strategic vision for Russia is highly revisionist and destabilizing. It includes the reestablishment of Russian dominance of the near abroad via "Russification" and the use of force if needed. Most disturbing in this regard is that Moscow seeks to prevent any significant *collective* Western military opposition to its offensive military operations by threatening local nuclear first use. The underlying Russian presumption appears to be the expectation that the US and NATO will concede territory rather than face the possibility of

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Russian nuclear first use. This Russian strategy is not the Cold War notion of a mutual balance of terror: it is a fundamentally new, coercive use of nuclear weapons and threats.

Russian military officials speak openly of the preemptive employment of nuclear weapons in a conventional war. And according to open Russian sources, Russia has pursued specialized, low-yield nuclear weapons to make its first-use threats credible and its weapons locally employable.

If Russian planning now follows this apparent policy (and I have no reason to believe it does not), it tells me that US and NATO deterrence policy is now failing in a fundamental way, and the consequences of that failure could be catastrophic.

Consequently, the unprecedented question to be considered in a new review is how the alliance can effectively deter this combined arms threat to our allies and partners: What deterrence concepts may be applicable? And, what are the corresponding metrics for Western conventional and nuclear force adequacy? What are the gaps perceived by Moscow in US will and capabilities, and how might those gaps be filled? Does the United States need “new” nuclear capabilities for deterrence and assurance, or are the existing options in the stockpile adequate? In addition, according to numerous reports, the US nuclear infrastructure no longer is able to respond in a timely way to the possibility of new requirements for deterrence and assurance. That capability has been lost. If true, what level of readiness should be deemed adequate and what needs to be done to achieve that goal?

We also need to reconsider the prioritization of our nuclear policy goals. The 2010 NPR explicitly placed nonproliferation as the top policy goal, and stated that reducing the number of and reliance on US nuclear weapons was a key to realizing that top goal. The “take away” from that position is that the US must further reduce its nuclear arsenal to serve its highest nuclear policy goal. This point is repeated often by critics of the administration’s nuclear modernization programs.

Yet, at this point, the goal of nonproliferation should no longer be used as the policy rationale to further hammer US nuclear deterrence capabilities. After two decades of reducing our nuclear deterrent and focusing elsewhere, and the emergence of unprecedented nuclear threats to us and our allies, the deterrence rationale for reviewing our nuclear policy priorities and the adequacy of our nuclear deterrence forces is overwhelming.

Finally, since the end of the Cold War, the study of Russia and the Russian language has declined dramatically in our educational system in general, and the U.S. intelligence community reportedly has largely divested itself of the capacity to understand Russian nuclear-weapons policy, programs, and war planning. This is a dangerous inadequacy: deterrence strategies depend fundamentally on our understanding of an adversary’s thinking and planning. If we hope to deter effectively, we must review the intellectual resources necessary to perform this vital task, and begin it again.

There are many additional points that could be made on this subject, but in deference to the time, I will stop here.

Looking Ahead to a Possible 2017 Nuclear Posture Review

Brad Roberts

Introductory Remarks to a hearing of the Armed Services Committee,
United States Senate, January 26, 2016

Thank you for the opportunity to participate in this preliminary discussion of a possible 2017 Nuclear Posture Review. I would like to underscore that the views I am presenting here are my personal views, following on my service as Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy from 2009 to 2014 (in which capacity I was co-director of the 2009-10 NPR) and on my authorship of a recently published book on U.S. nuclear policy (*The Case for U.S. Nuclear Weapons in the 21st Century*, Stanford University Press, December 2015). Please do not attribute my views to my new employer as of last spring, Lawrence Livermore National Laboratory.

You have asked us to highlight elements of continuity and change in U.S. nuclear policy. Surveying the nuclear policies of all four post-cold war administrations, the continuities are striking. Every president has wanted to move away from Cold War approaches, to reduce nuclear arsenals, and to reduce the role and salience of nuclear weapons in U.S. deterrence strategies. Every president has also wanted to ensure that nuclear deterrence would be effective for the problems for which it is relevant in a changed and changing security environment. Each administration has decided to maintain the Triad. Each has worked to ensure stable strategic relationships with Russia, China, and U.S. allies. Each has rejected mutual vulnerability as the basis of the strategic relationship with new nuclear-armed or arming regional challengers.

Let me also highlight two conspicuous changes over the three nuclear posture reviews. One is the rising salience of extended deterrence and the assurance of our allies—which has returned to as central a place in our nuclear strategy as it had at the height of the Cold War. The other change relates to the scope of the reviews. The 1994 review was the narrowest of the set, focused largely on force structure decisions. The 2001 review was broader, linking strategies for modernizing deterrence to a changing defense strategy. The 2009 review was the broadest. As mandated by Congress, it was DoD-led but interagency in character and fully elaborated the “balanced approach” recommended by the Perry-Schlesinger Strategic Posture Commission (balancing political means to reduce threats with military means to deter them so long as they exist). Such a broad review helped to ensure leadership focus, leadership “ownership” of main messages, and effective interagency implementation. These are important benefits of continuing value.

From the vantage point of January 2016, what are the key elements of change and continuity bearing on the U.S. nuclear posture? I will briefly highlight here four key changes.

1. With the abrupt turn in Russian security policy in spring 2014, it is no longer possible, as it was in 2009, to characterize the relationship with Russia as improving and presenting minimum risks of armed conflict. But as the new threat is principally to our NATO allies, our national response needs to focus on adapting and strengthening deterrence in Europe. This process began with the 2013 Wales summit and will be accelerated at the upcoming Warsaw summit. Does this require a change in U.S. nuclear policy or posture, separate and apart from NATO's posture? The current posture is sized and structured to maintain strategic stability with Russia. The Obama administration, like its predecessors, has maintained "second to none" as a guiding principle and has maintained the resilience of the force so that it is not vulnerable to a preemptive strike. The argument has been made that Russia's nuclear assertiveness requires a parallel nuclear assertiveness by the United States and that its large and diverse theater nuclear force requires a symmetric NATO nuclear force, along with a new generation of ultra low-yield weapons. The deficiencies in NATO's nuclear posture are not in its hardware, however, which is robust for the deterrence of Russian de-escalation strikes. The deficiencies are in its software—in the ways in which the Alliance expresses its convictions about the role of nuclear deterrence (and which will be addressed in Warsaw).
2. In the period since 2009, we have learned that the conditions do not now exist—and are not proximate—that would allow us to take additional substantial steps to reduce the role and number of U.S. nuclear weapons. The Obama administration set out a practical agenda for seeking cooperation with other nuclear-armed states to move in this direction. What are the results? Russia has proven unwilling to take an additional one-third reduction. China has proven unwilling to embrace new transparency measures—or even to discuss strategic stability. North Korea has continued its nuclear build up. Our allies are unwilling to abandon the U.S. nuclear capabilities uniquely associated with extended deterrence (i.e., non-strategic nuclear weapons forward-deployed or deployable). This does not mean that the United States should abandon the arms control, nonproliferation, and disarmament projects. Doing so would only further aggravate the problem. We should not abandon the "balanced approach." But the United States should temper its expectations. And it should refrain from unilateral steps that supposedly put pressure on others to join us. If it made no sense in 2009 to take unilateral action to eliminate a leg of the triad, it makes even less sense today.
3. In the period since 2009, the more multidimensional nature of strategic conflict has come more clearly into focus. Nuclear weapons, missile defense, cyber, and space may be separate domains, but they are all part of the same strategic landscape. This puts a focus on the challenge of ensuring the

- needed degree of integration in policy, strategy, and execution. This invites an important question about the scope of a possible 2017 review. The Obama administration conducted a set of separate but linked reviews of these different posture elements. Might an alternative approach enable more effective integration? Possibly. But a single, comprehensive strategic review would be difficult to do on an interagency basis, whereas the 2009 NPR benefited significantly from that interagency aspect.
4. A final key difference is in the political context. In the lead up to the Obama administration, executive-legislative gridlock had prevented any modernization decisions. The Strategic Posture Commission (SPC) helped to remedy that problem, with its bipartisan advice to the Obama administration to pursue modernization by life extension, which the administration accepted. In the interim, we have not recovered a broad and deep bipartisan consensus on nuclear modernization. But we have achieved sufficient agreement within and across the parties to enable a series of positive decisions to support modernization with steadily increasing investments. This needs to be preserved and nurtured. Repeating the SPC would not be useful or necessary toward that end. A private bi-partisan initiative could, however, help set the right context and provide the right markers for the journey ahead.

Let me round out my introductory remarks by highlighting three key elements of continuity since 2009.

1. Asia is as relevant to the U.S. nuclear posture as is Europe. China's nuclear future has nearly as many large question marks as does Russia's. Our pursuit of strategic stability with both needs to continue to adapt. Our Northeast Asian allies are as anxious about extended deterrence in a changing security environment as are our Central and Northern European allies. Don't let the Russia problem distract us from this strategic truth
2. We still don't have the hedge we say we want. Each administration since the Cold War has wanted to ensure that we have a strong national capacity to respond to both geopolitical and technical surprises. Each has wanted to reduce reliance on a large and expensive-to-maintain stockpile of aging nuclear weapons as a hedge against uncertainty by increasing reliance on a responsive and adaptive nuclear weapons complex. The Strategic Posture Commission put special emphasis on this point. Fixing this problem with the proper investment and governance strategies should be a key priority. I know of no one who thinks that the risks of geopolitical and technical surprise are declining.
3. Each administration has debated whether new nuclear weapons are needed—and we are certain to have this debate again. The George W. Bush administration's pursuit of new weapons came to a political dead end. The Obama administration's pursuit of a modern arsenal through the life extension of existing capabilities has been more successful. There are two arguments for new weapons—that we need them for deterrence and that we

need them to sustain our national design competence. Both arguments have some merit. But there is no good reason to think that a new effort to build new weapons for new military purposes would not too come to a political dead end. Moreover, there are other means to strengthen deterrence and sustain design competence.

Thank you for the opportunity to join in this discussion. I look forward to your questions.