Nuclear Modernization: Is it needed and can we afford it?

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Let me start by saying I’m grateful for the opportunity to participate here today. And among so many established nuclear experts, I would like to thank CSIS and PONI—the Project on Nuclear Issues—for providing opportunities for an emerging generation of nuclear policy experts to engage in this community. John Hamre, Clark Murdock, and now Rebecca Hersman have done a great service in this regard. The complex challenges surrounding nuclear weapons are not going away any time soon, and this Nation will need well-prepared and deliberate intellectual and policy leaders to help address these challenges in the future.

I believe a broad consensus has emerged on the basic need to modernize U.S. nuclear forces. We continue, however, to face legitimate questions about the necessary scope and timing of this effort, and this dialogue will continue into 2017 and well beyond. After all, nuclear recapitalization will span decades and will cost an estimated $350-$450B. It is our responsibility, as an Administration and as the Department of Defense, along with DOE, to make the general case for nuclear modernization, and for the particular plan we’ve laid out. It is also our responsibility to articulate the continuing need for nuclear deterrence - what Secretary Carter has called the “bedrock of our security”.

Much of the debate focuses on four key questions, each of which I’ll briefly address today. First, why does the deterrence role of U.S. nuclear weapons necessitate the nuclear force we say we need? Second, why do we need to modernize? Third, what is our approach to modernization? And fourth, how does the President’s nuclear modernization plan fit with those other key objectives of his nuclear policy - nonproliferation and disarmament?

Part 1) Why We Need the Force We Say We Need for Deterrence

Nuclear deterrence remains a vital element of U.S. national security. To put it bluntly, there is no other military capability that can threaten the scale and speed of destruction possible with nuclear weapons, and there are no perfect defenses against nuclear attack. That combination of incomparably high potential consequences and imperfect defenses leaves two conceivable courses of action: Disarmament and Deterrence.

Disarmament would eliminate the threat by verifiably and irreversibly eliminating the means of nuclear attack – the weapons themselves. Deterrence requires that while potential adversaries retain the ability to threaten nuclear attack, we retain the clear ability to convince them that such attack would never, under any circumstances, be in their best interest.
So which do we choose? The President laid out what I believe is the best approach in his 2009 Prague Speech: sustaining effective nuclear deterrence along a path towards eventual nuclear disarmament. Disarmament is the gold standard, but as President Obama noted, we might not get there during our lifetime. Along the way, we must ensure our ability to deter.

Given the potential consequences of failure, nuclear deterrence is the highest priority mission of the Department of Defense. Deterrence has to be strong and stable. It has to be effective.

The President’s guidance on nuclear employment says that we must also be prepared to achieve U.S. and allied objectives if deterrence fails. It does not rely on a “minimum deterrence” strategy that would aim to ensure only some minimal ability to retaliate. While some advocate a shift to minimum deterrence, in our view this would impair our ability to effectively extend deterrence, and would likely drive toward a strategy of targeting adversary cities. The President’s guidance explicitly rejects reliance on countervalue strategy and the deliberate targeting of civilian populations, on both moral and strategic grounds.

This does not reflect a nuclear warfighting strategy, but rather the appropriately high bar of effective deterrence and assurance. We aim not for the minimum force we think might plausibly deter, but rather the minimum force at which we can be confident in our ability to deter—confident that we can convince potential adversaries that the United States possesses both the capability and the will to respond purposefully to attack. That confidence must extend to allies as well. It must account for the perceptions of potential adversaries, and our uncertainties regarding those perceptions. Finally, it must hold up against an uncertain future as well as the security environment we know today.

Starting from this foundation, multiple reviews conducted by this Administration reached the same conclusion: that U.S. and allied security remain best served by sustaining a strategic Triad and dual-capable fighter aircraft, or DCA. The combination of land- and sea-based ballistic missiles provides responsiveness and survivability through size and stealth. Our bombers and forward-deployable DCA provide the ability to signal resolve to allies and potential adversaries. When used to signal in this way, these aircraft are a visible representation not of a single platform, but of the entire U.S. deterrent force.

Two examples of nuclear threats our strategy must address illustrate why we need the survivable and flexible posture the Triad is designed to provide.

The first has been with us for more than half a century: the threat of a large-scale nuclear attack on the U.S. homeland. To effectively deter large-scale attack, we maintain nuclear forces that are invulnerable to a disarming first-strike.

It must be crystal clear to nuclear-armed potential adversaries, even amid the general uncertainty that might pervade an intense crisis under the nuclear shadow, that they cannot, under any circumstances, take away our ability to impose unacceptable costs in response to an attack. Our
force structure must also make it clear that adversaries will not gain a disarming first-strike capability by building up their arsenals. This requirement for nuclear forces and posture that reinforce nuclear restraint, rather than invite competition or attack, is more commonly called strategic stability. *As long as nuclear weapons exist, our assessment of how much is enough must account for the requirements of deterring large-scale attack and reinforcing strategic stability.*

We must be prepared to deter not only large-scale nuclear attack, but also limited nuclear attack, including deliberate nuclear escalation arising out of conventional regional conflict. It is clear that others are envisioning nuclear first-use options for coercion or gaining operational advantage, and we cannot assume that what deters large-scale attack will effectively deter limited attack as well.

Deterring adversary nuclear first-use is a key objective of our overall deterrence strategy. We cannot know for certain that we will always succeed, but we sustain robust deterrent capabilities and strategy to minimize the likelihood any adversary will ever resort to nuclear weapons.

Deterring first-use cannot, however, be the whole of our strategy because we cannot rule out the possibility that deterrence might fail. If an adversary ever does use nuclear weapons, we must be prepared to minimize the likelihood that the conflict will continue to escalate to the worst possible outcomes. Of course the credible ability to respond and “fight on” in the face of even nuclear aggression is directly linked back to the key objective of deterring first-use.

We are tasked with providing the President with credible options for responding to nuclear threats and nuclear aggression, including responding to limited nuclear use. This includes options for non-nuclear response where consistent with U.S. and allied objectives. But we cannot prejudge what the President will deem necessary. Possessing credible nuclear response options, including a range of explosive yields and means of delivery, both strengthens our ability to deter nuclear attack from ever taking place, and strengthens our ability to limit further escalation if deterrence fails. This protects against an adversary concluding the United States will stand aside because it is constrained by options a President would deem ill-suited to a calibrated attack.

Capabilities and strategy for credible response are necessary for effective extended deterrence and assurance - two pillars of U.S. foreign policy. If potential adversaries question our willingness to respond to limited use against allies and forward-deployed U.S. forces, then we must disabuse them of this dangerous misconception. And it would be irresponsible to extend security commitments to allies without developing the ways and means to honor those commitments if tested.

By the way, this is in part why we disagree with the argument that the nuclear-armed cruise missile is redundant if ballistic missiles or conventional weapons can destroy the same target set. The ability to destroy a target is not the sole metric for judging whether a military capability supports the fundamental deterrence role of nuclear weapons across the full range of possible scenarios. In some instances, the physical and operational effects associated with a nuclear
cruise-missile response may be better suited to convincing an adversary that foregoing additional nuclear attacks is its best option, and that using nuclear weapons again would invite profound costs while offering no commensurate benefits.

We approach the problem of escalation control without hubris, and our understanding that success can never be absolutely guaranteed reinforces our view of deterrence as the fundamental role of nuclear weapons. But just as we must prepare to deter nuclear first-use even though we cannot rule out deterrence failure, we must be prepared to respond with purpose to nuclear attack even though we cannot guarantee that escalation could be successfully limited in a nuclear conflict.

*So as long as nuclear weapons exist, our assessment of “how much is enough” must account for deterring limited nuclear attack and providing the President with sufficient flexibility.*

**Part 2) Why We Need to Modernize**

I promised to address four questions, but have used the bulk of my time on just the first one. Rest assured, I plan on being shorter on the next three, and they flow from our judgement of what we need to sustain effective deterrence.

The need for nuclear modernization is particularly simple. It is clear that other countries will continue to possess nuclear weapons well past the service lives of our existing systems, which have already been in use decades longer than originally planned. Modernization is thus essential to the President’s commitment to sustain a safe, secure, and effective nuclear arsenal for as long as nuclear weapons exist.

You are no doubt familiar with the issues presented by our aging force, so I’ll just touch on a few of them. Our newest delivery system, the B-2 bomber, is more than 30 years old. We are sending sailors out on patrols in strategic submarines with hulls that cannot be sustained beyond the scheduled OHIO-class Replacement. The Air-Launched Cruise Missile is showing increasing reliability problems, and air defense technology will continue to advance and proliferate to the point that the ALCM will no longer viable. The Air Force has sustained the Minuteman III ICBM through a heroic series of life extensions, but in the coming decades that approach will reach its limit.

We cannot sustain effective deterrence with submarines that cannot safely submerge, and missiles that cannot survive air defenses or otherwise reliably perform their assigned missions. To be clear, our choice is not between keeping the current forces or replacing them. Rather, the choice we face is between replacing those forces or watching a slow and unacceptable degradation in our ability to deter. Modernization is essential because national security decisions
and arms control agreements should drive our force structure and capabilities. These decisions must not be made *de facto* by a failure to sustain and modernize.

**Part 3) Our Approach to Modernization**

Our approach to modernization is guided by the principle of retaining only those capabilities we need for stable and effective deterrence. We believe the current U.S. Triad and DCA provide the diverse range of capabilities we need for deterring both large-scale and limited nuclear attacks against the United States and our allies. We also believe that these capabilities enable the United States to achieve U.S. and allied objectives if deterrence fails, without the need to mirror every potential adversary, system-for-system and yield-for-yield.

This allows us to focus on sustaining and modernizing the current force and preserve existing military capabilities in the face of evolving threats, rather than developing new nuclear warheads with new military capabilities.

**Part 4) How Modernization Supports the Prague Agenda**

Finally, our modernization strategy directly supports the Administration’s disarmament and nonproliferation objectives. Our approach is tailored to decrease the likelihood of a future arms race by maintaining a deterrent capability that is robust and stable, rather than one that is necessarily reactionary to every move by potential adversaries. Modernization also protects our continuing ability to convince allies that their security needs will be met without them developing their own nuclear arsenals.

Claims that U.S. modernization signifies a nuclear arms buildup or a renewed arms race are simply incorrect. On the contrary, replacing our legacy warheads will allow further reductions in a nuclear arsenal that is already 85% smaller than at its peak during the Cold War. We have stated our desire to negotiate additional reductions with Russia, but recognize that requires a willing partner and a conducive security environment.

We are reducing warhead types in addition to total numbers. We have reduced from 23 nuclear warhead types in 1990 to 12 today, and the B61-12 Life-Extension Program is on track to allow us to reduce further to 6 warhead types by the mid-2020s. The B61-12 will replace multiple B61 variants that have different explosive yields, and will have lower yield than some of these variants, but it will not expand the range of yield options available in the current stockpile. The B61-12 will also replace the B83 strategic bomb, the last megaton-class weapon in the stockpile.

We are not developing new nuclear warheads, or nuclear warheads with lower explosive yields than we already have.
And I want to clearly address a point I have heard a lot. Retaining diverse nuclear capabilities, including lower-yield options in the current U.S. stockpile, will not lower the nuclear threshold or increase the likelihood of U.S. nuclear use. On the contrary, it helps minimize the likelihood that an adversary will choose nuclear escalation by providing more credible response options, hence increasing deterrence. And this situation is not new; indeed, the United States has long maintained a high threshold for nuclear use together with a diverse range of nuclear forces and response options. To think that the decision of any President to use nuclear weapons would ever be easy, or made easier by any means, I believe is fundamentally flawed.

Conclusion

The Department of Defense has no higher imperative than preventing nuclear war. We share, and I personally share, the President’s ultimate vision of achieving this end through the eventual elimination of all nuclear weapons. Along the way there, we also share the President’s commitment to sustaining effective nuclear deterrence for the United States and our allies. Both the vision and the commitment guide our thinking on force structure and posture; both help set the requirement to modernize our aging deterrent forces; and both support the Department’s role in effective arms control talks, should Russia be willing to meaningfully engage in such discussions.

Thank you again for the opportunity to address this conference. I look forward to hearing the panelists and participating in the discussion.