# Speaking Notes on the Trump Nuclear Posture Review

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Thank you Rob and Joe for asking me to participate in this years' LANL-Wilson Center Conference. I hope to entertain you today by guessing at some decisions that may arise from the ongoing Nuclear Posture Review being carried out by the Trump team and their associated implications.[1] A related question: Can the fragile political consensus that has supported comprehensive modernization of the U.S. nuclear weapons enterprise, starting in the Obama administration, be sustained under the new NPR? I lead off with my bottom line:

- We are heading down the right path on modernization; let's not screw it up!
- Bipartisan consensus is essential to not screwing it up given that modernization will be carried out over many Congresses and multiple Presidential administrations.
- The Trump NPR, as did his FY18 budget submission, likely will continue the ongoing modernization program.
- At the same time, the administration may offer additional adjustments to the current nuclear posture which I address subsequently.
- So may Congress (and I refer to, among other things, the recent hearing regarding limiting presidential powers in nuclear employment).
- These adjustments create opportunities to tear at the existing consensus.
- Whether they will do so depends on how they are communicated to the Congress and the America public in light of deterrence needs in a worsening global threat environment.

As the Trump team wraps up the 2017 NPR, it is worthwhile to point out that the three previous NPRs—those concluded by Clinton in 1994, Bush in 2001, and Obama in 2010—reflect much more continuity than change. All concluded that:

- A strategic Triad, and European basing of U.S. nuclear bombs carried by NATO dual capable aircraft (DCA), are essential to both strategic deterrence and assurance of allies.

[1] Truth in advertising: I have provided advice to the Trump NPR team but it has been, to date, a one-way conversation; I have not been briefed on any decisions made regarding the review.

- A hedge capability is needed to respond to unanticipated technical problems, or to adverse geopolitical changes requiring force augmentation.

- Deterrence could not be based solely on the existence of nuclear forces. Rather, it depends on the ability of forces to hold at risk assets most valued by an adversary. Thus, force numbers and capabilities mattered and all understood that these could be adjusted as adversary behaviors, target sets and employment doctrines evolved.

These concepts of strategy over decades have garnered broad bipartisan support notwithstanding spirited debate on the details.

Along these lines, the security environment has degraded significantly since the heady days of the 2010 Obama review. There is no reason to assume that the nuclear force that deterred adversaries and assured allies then will automatically do so today.

Russia's evolving "limited nuclear use" strategy—some call it "escalate to win"—is revealed in recent doctrine as well as ongoing modernization programs and military exercises. Russia's leaders are behaving as if they truly believed that nuclear war could be controlled. And what matters in deterrence is not what we believe—after all we are not deterring ourselves—it is what the adversary believes.

To deter limited nuclear use requires flexible nuclear capabilities, a nuclear posture, and declaratory policies that credibly convey a message that no advantage at all, only complete and unacceptable downside consequences, would result.

This may well require new (or different) military capabilities for the force. Indeed, the 2017 NPR should explore and, I believe will advance, a few adjustments to our current posture:

- Modification to an existing warhead to provide a low-yield option for ballistic missiles.
- Restoral of land-attack nuclear SLCMs to attack submarines.
- Increased DCA readiness in NATO, and possible exercise of a capability to deploy DCA to bases in ROK and Japan.
- Restoral of nuclear weapons delivery to aircraft carriers via the F-35 (although I think this last one is a long shot).

**Issue: Low-Yield Nuclear Warheads**

Regarding low yield warheads, opponents argue that they blur the line between conventional and nuclear warfare, undermining deterrence by lowering the nuclear threshold and making nuclear war more likely.

It is also argued that low-yield warheads are for warfighting, not deterrence, and once any nuclear weapon is used, escalation to a global holocaust cannot be controlled.

I take on these arguments in a recent War on the Rocks piece and refer you to it for a more fulsome discussion.[2] Jon Wolfsthal, a friend and colleague (notwithstanding his love for the much-despised N.Y. Yankees!) offered a rebuttal to my piece also in WOTR. Jon argues, among other things, that a small nuke for ballistic missiles will be "new", costly, and destabilizing.

It is none of these. These weapons are not destabilizing because they are not first-strike weapons and hence do not pose a threat to Russia's nuclear deterrent. And not that I have anything against new warheads, but the capability I propose could be achieved with a small, relatively low-cost *modification to existing warheads* and do so, by the way, without requiring underground nuclear tests. This modest and needed adjustment to our existing posture should not upset the modernization applecart.

**Issue: Additional non-strategic nuclear deployments in Europe and Asia**
Like deterrence, assurance is in the eye of the beholder and allies are ever more mindful of the dynamic threats in their regions.

Some like Japan and the ROK, have reacted strongly to NK nuclear tests and missile launches. Both countries constantly seek assurance, in every form and venue, of the continued U.S. security commitment.

I offer a brief personal illustration. After the Clinton NPR, in 1995, I was asked to go to Tokyo and brief Japanese officials on the President's decisions and their implications for Asian security. This was right after the early-1990s drawdown, under Bush I, of thousands of U.S. land and sea-based short-range nuclear weapons. The discussion started with perfunctory dialog about Japan's long term commitment to a nuclear free world. Shortly, though, it turned. Military officials (from Japan's Self Defense Agency), in light of the Bush I drawdown, wanted to know what specific U.S. nuclear system now provided deterrence for Japan. It was insufficient for me to note that the entire deterrent—the U.S. nuclear triad and remaining tactical nukes—was part and parcel of the forces that established our commitment to Japan's security. Rather, they wanted to point to a specific system deployed to their region. I reminded them that we continued to field the nuclear SLCM on attack submarines that were routinely deployed to Asian waters. That satisfied them (at least until we had to reengage on the issue 15 years later when, as part of the Obama NPR, the U.S. retired the nuclear SLCM!).

Other countries, like South Korea, have shown interest in exploring an increased U.S. regional nuclear presence in their country.

Both countries have "latent" nuclear weapons capabilities characteristic of advanced industrial economies with commercial nuclear power. If they decided to do so, they could design, develop and field their own nuclear forces in a relatively short period.

A failure of US assurance, therefore, could have negative implications for non-proliferation, for regional security generally, and for domestic political support for modernization.

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[22] "Low Yield Nuclear Weapons are Worth a New Look," John R. Harvey, War on the Rocks, 11 November 2017, https://warontherocks.com/2017/11/low-yield-nuclear-weapons-worth-new-look/

To manage any negative impacts, decisions on adjusting regional extended deterrence must involve close consultations with allies. Indeed, the initial impetus should originate with allies and not, in fact or perception, from the United States.

Such decisions must also be accompanied by clear communication to publics of the threat that is being deterred, and of the potential for further degrading the global security environment.

With regard to Japan and the ROK, the U.S. should make clear its willingness to work with them, as appropriate, *to demonstrate a capability* to deploy DCA to bases in ROK and Japan. A further step—actual regional deployments—might be considered in connection with a further worsening of the regional security environment.

In NATO, where the consultation mechanisms are more mature and more fully institutionalized, options could include, and I believe will include, increasing the DCA readiness posture in NATO and demonstrating a capability for interregional deployments of DCA to non-basing countries.

**Issue: Restoring nuclear SLCMs:**
I referred to Japan's sense of assurance back in the day being connected to continued U.S. nuclear SLCM deployments. It is time to restore this capability, not only to bolster allied assurance in a worsening security environment but in response to Russia's INF noncompliance.

Our goals must be to get Russia back into compliance or, failing that, to mitigate the security implications to the U.S. and its allies of continued noncompliance. This could involve an INF compliant or INF non-compliant response. Indeed, the Congress in the FY2018 NDAA, directed that the U.S. begin R&D on a non-compliant land-based intermediate range missile.

Personally, I don't see the security advantages to restoring land-based INF systems (e.g., GLCMs, a new Pershing II) to Europe. The debate on redeploying these systems overseas would be disruptive to publics, and thus would be playing into Russian hands.

Rather, we should be working to restore nuclear SLCMs to U.S. attack submarines, which by the way would be INF compliant.[3] Russian leaders have never liked the short-warning threat that SLCMs posed to the homeland, which suggest that this response poses a security price that just may cause them to rethink their current approach.

**Issue: Sustaining abilities to field new warheads and military capabilities in the future.**
The last three Presidents did not all agree about the need for new nuclear warheads or warheads with new military capabilities. But all agreed that the U.S. must retain skills and infrastructure to develop and field such warheads and associated capabilities when and if needed in the future.

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[33] It may be cost effective to consider re-certifying TLAM/C airframes (still in production for use with conventional warheads) for the nuclear mission. There are two downsides: First, the TLAM airframe is dated and may not be up to the challenge of penetrating sophisticated air defenses. Second, as I understand it, modern digital SSN fire control systems are not back compatible with the analog TLAM/N which would increase cost. An alternative would be to field a sea-launched version of the new cruise missile (LRSO) being developed for the bomber leg of the triad.

Today, we are at great risk of losing critical human skills. The warhead LEPs, while important, do not exercise all of the skills needed to sustain a responsive nuclear enterprise.

Development of the modern W88 SLBM warhead *did* exercise the full suite of essential skills. But this took place over 30 years ago. Skills not routinely exercised inevitably degrade. To maintain skills, young weapons scientists and engineers must be provided opportunities to work on challenging, and potentially new nuclear designs.

Prototyping, involving design/development of a modern warhead for the express purpose of exercising skills, is a means to achieve this. A few warheads could be developed, produced and put on the shelf, but not necessarily deployed to the stockpile.

Over the past two years, Congress created the Stockpile Responsiveness Program to encourage innovative prototyping. It asked the NNSA to provide a report on its plans for the program. For reasons that I do not understand, that report has been delayed.

As a further action along these lines, Section 3118 of the FY18 NDAA[4] has asked the NNSA to sponsor a nuclear warhead design competition between the nuclear weapons labs. Details about this competition are in the Conference Report, but such an initiative—if it can generate the same enthusiasm and innovative thinking among lab weapons design teams that the RRW completion engendered during the mid-2000s—would serve the nation well.

**Issue: Plutonium Infrastructure**

NNSA has been criticized about its management of large capital construction projects. The effort to recapitalized plutonium pit production infrastructure is the poster child for this critique.

To strengthen project management, NNSA has instituted an AOA process for all new major construction projects, which in general is a good idea. It is being applied to the ongoing effort to restore pit production capacity which, in this specific case, is not a good idea.

Why do I believe this? The answer is that we have already done the AOA in real life over the past 15 years—first we had the Modern Pit Facility, and following that the CMRR. Both went down in flames for a number of reasons.

We finally got the right approach: First, avoid the cost of CMRR by accepting some additional (material at) risk at the LANL radiation lab (the so-called RUELOB) to increase capacity to carry out the analytical chemistry and materials characterization work that supports pit production. Second, isolate actual pit production and storage—i.e., the operations involving the highest safety and security risks—to TA-55 and additional "modules" that could be built to provide required capacity.

My fear is that the AOA will be distorted by politics—the need to find something (i.e., pit manufacture) to offset the lost jobs from the imminent (and correct) decision to shut down MOX facility construction in South Carolina.

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[4] Signed into law by President Trump on 12 December 2017.

I am certain as I can be that such an approach would both increase cost and significantly delay achieving the capacity we need for the nation.[5] Rather, we must get on with the recapitalization of plutonium facilities at LANL and do the right thing technically rather than play (more) politics with such an urgent need.

**Issue: Early retirement of the B83 bomb**

In January 2016, I was asked, in testimony before the Strategic Forces Subcommittee of the Senate Armed Services Committee, to provide my perspective on the nuclear review to be carried out by a new presidential administration. Several of the items I discuss with you today were touched on in that hearing. One other item in my testimony then is worth repeating.

For at least two decades, U.S. hedge strategy has sought 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. As part of a review held late in his second term, Mr. Obama decided to retire the B83 well before the end of its anticipated service life, in part to save money, in part to convey a continued commitment to nonproliferation by removing what was then (and is now) the highest yield bomb in the U.S. inventory.

The first B61 life-extended bomb—the so called B61-12—will not come off the production line for another two years. Before retiring the B83, it is prudent to gain several years of operational experience with the B61-12, including extensive surveillance tests, to assess fully any "birth defects" resulting from the LEP that could degrade performance. A similar approach was taken in the W76-1 SLBM warhead LEP, in which substantial numbers of non-life extended W76-0 warheads are being kept in service long enough for us to gain full confidence in the LEP.

In light of the confidence to be achieved, the relatively small annual cost to continue to field the B83, and the totally uncertain impact of continued deployment, if any, on nonproliferation (even the sign of the impact can be debated), it is prudent to reverse the decision to retire it early.

Let me end there and I am happy to try to answer your questions.

[5] I made this comment based on the understanding that an option under consideration in the AOA is to transfer all pit production operations from Los Alamos to Savannah River. I have since learned that the plan is to achieve a capacity of 30 pits per year at LANL, and to consider two alternatives for the remaining 50 pits per year—LANL or SRP—to achieve the required 80 pits per year capacity. While my sense is that this will not change my bottom line; I need to hear more on the AOA before I would make an assessment as definitive as I did in the talk.