

Pentagon Vetting Could Delay

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(Aug. 27) -U.S. W-76 nuclear warheads. Pentagon officials intend to request advance technical vetting of their forthcoming plans for nuclear warhead modernization (Sandia National Laboratories photo).

WASHINGTON -- U.S. Defense Department leaders plan to submit to outside technical review their forthcoming recommendation on how to proceed with nuclear warhead modernization, a process that might delay a decision on the contentious plan until next year, according to a senior official (see [GSN](#), Aug. 18).

Pentagon officials say they are weighing an array of modernization options as part of the congressionally mandated Nuclear Posture Review, a broad assessment of the nation's strategy, forces and readiness due in December.

One alternative could be to continue maintaining the existing stockpile through reuse and refurbishment, officials say. Another might be to replace aging warheads with a newly crafted design aimed at boosting the safety, security and reliability of the stockpile.

Once recommended modernization options have been narrowed down, Pentagon leaders expect to submit them for assessment by outside scientists -- a process that might well extend beyond the due date for the posture review, the defense official said in an interview yesterday. How many months of delay might be involved remains uncertain.

"It's better to understand those considerations in advance, [and] decide if you agree with them or not, rather than to have them come up after the fact," said the senior official, who declined to be identified because of political sensitivities surrounding the posture review.

"It would be preferable if it happens within the NPR" time frame, the senior official told *Global Security Newswire*.

However, "if the technical details aren't sorted by then," the official said, the posture review might indicate instead: "OK, here's what the basic principles are that should guide where we go in the future, and here are the next decisions that need to be taken, and the next research actions or technical analysis actions that need to be considered."

President Barack Obama's national security team remains deeply divided over how best to maintain the viability of an aging arsenal in the absence of explosive testing. The United States has implemented a moratorium on underground tests since the early 1990s.

While serving as President George W. Bush's defense secretary, Robert Gates advocated building a Reliable Replacement Warhead, but Congress twice rejected funding for the effort. Lawmakers argued that an untested RRW design could actually raise doubts about nuclear-weapon reliability -- potentially harming deterrence -- and undermine Washington's efforts at thwarting nuclear proliferation around the globe.

Now serving a new president, Gates has pushed behind the scenes to revive a "replacement" approach to nuclear arms modernization. Despite growing support for warhead replacement among other Cabinet leaders, Vice President Joseph Biden in June rebuffed the idea, saying it could derail Obama's vision for reducing the role nuclear weapons play worldwide, *GSN* reported last week.

During the presidential campaign, Obama **said** he opposed "rushing to produce a new generation of warheads." Once in the Oval Office, the president committed to pursuing the eventual elimination of nuclear weapons. For the foreseeable future, though, the United States will "maintain a safe, secure and effective arsenal," Obama said during a major **address** in Prague.

How the president opts to proceed with nuclear warhead modernization is "an issue of great interest -- not just in DOD and DOE -- but across the government," said the senior Pentagon official, referring to the Defense and Energy departments.

Beyond that, "potential adversaries are likely watching closely to see how the new administration balances its security needs and its alliance commitments with the president's goal of global nuclear elimination," Thomas Scheber, a senior Pentagon official during the Bush administration, said yesterday.

"It is somewhat of a schizophrenic Nuclear Posture Review," Hans Kristensen, who directs the Federation of American Scientists' Nuclear Information Project, said at a press briefing yesterday. "The planners are being asked to do, in a way, two very different things. How do you do that?"

Few observers expect Biden's protest to be the last word on the matter.

In fact, the senior official indicated the Nuclear Posture Review would likely regard "replacement" as at least one facet of any effort aimed at extending the lives of today's nuclear warheads.

"The starting point for analysis is that life extension [is] generally understood to include everything -- all the three R's," said the official, referring to warhead reuse, refurbishment and replacement.

A critical distinction is that any replacement parts or warheads would stop short of improving a weapon's military capabilities against a target, and instead would simply en-

hance its safety, security or reliability, according to the defense official.

"I think warhead replacement ought to be an option available to policy-makers as a last resort in the event of a significant failure in one or more life-extension programs," said Jeffrey Lewis, who directs the New America Foundation's Nuclear Strategy and Nonproliferation Initiative. "That means drawing a bright line" between research aimed at maintaining a replacement option, and "engineering development work to actually exercise it," he said.

The senior defense official noted that the devil is very much in the details of any approach to nuclear modernization.

"I hope we're going to be successful in defining a framework for thinking about the problem," said the official, describing a process of sorting out exactly which initiatives are -- and are not -- technically and politically feasible.

Some "elements" of the modernization framework are in place as the review coalesces, the senior defense official said, but the Pentagon-led assessment has not yet completed its proposal for maintaining the stockpile.

One idea on the table is to introduce "common design elements" across multiple warheads in the arsenal, according to the defense official.

"In the future, we may not always have different warheads for our ICBMs and our SLBMs, in particular," the official told *GSN*. However, he did not elaborate on the cost or technical reasons for introducing more warhead commonality into the arsenal, or the modernization benefits to be achieved.

The official did say that such an approach "would involve mixing and matching primaries and secondaries" -- the two explosive stages of a thermonuclear weapon -- that were proven functional in past experiments, prior to the moratorium.

"I think everybody agrees that even if you add some safety features and if you improve reliability and take other steps, [and] if you're using existing primaries and secondaries, that would be not a replacement but a reuse," said the official, suggesting this might be a politically palatable approach.

Not everyone would agree.

If one or more components common to warheads across the arsenal were at some point found to be defective, the reliability of a sizable portion of the stockpile might be thrown into question overnight, Kristensen noted. For that reason, the Bush administration emphasized the importance of maintaining "warhead diversity" across the sea, land and air legs of the nuclear triad.

"An untested, modernized warhead would seem to compound the risks of [a common-warhead] strategy," Kristensen told *GSN* yesterday in an e-mailed response to questions.

The senior defense official conceded "it's possible" that some scientists would raise a red flag on the idea of increasing warhead commonality. However, he said some other initiatives might be undertaken to mitigate the risks of warhead failure in the absence of explosive testing.

One approach might be to mix and match only those parts that have been extensively tested in the past, the official said. Another could be to increase the design margins in modernized warheads, making them less sensitive to small defects and less likely to fail.

The idea of vetting the Nuclear Posture Review's near-final modernization options with the scientific community reflects a lesson learned from the Pentagon's experience in pursuing the Reliable Replacement Warhead, the official said.

"People involved in this [review] have seen what happened with RRW and the fact that, at one moment, there appeared to be a technical consensus that this was the right approach," the official said. "And the next thing you know, you have it picked apart by JA-

SONs and others. And the consensus behind it came apart and it came to be seen as an unnecessary and potentially 'new' weapon."

The JASON group -- an independent panel that frequently advises the U.S. government on scientific and technical matters -- in 2007 raised questions about whether the replacement warhead might run a higher risk of failure than existing designs in today's stockpile. Panel members voiced concerns that the RRW design combined warhead parts that had never been explosively tested in this new configuration (see [GSN](#), Oct. 1, 2007).

The scientific community's worries -- though not universally shared -- led lawmakers to demand further study before they would appropriate funds to develop the new warhead.

"That history is not lost on us," the senior defense official said. "So as we go through and develop an approach and plan -- before we go public with it -- we want to be sure that it will sustain rigorous technical analysis. ... That means getting a second and a third opinion."

"It reaffirms how badly the previous administration got burned on the RRW that [Obama administration officials] are still uncertain about how to approach the modernization question," Kristensen said.

The senior defense official also said it might be impossible to identify a single, proposed modernization solution for each type of warhead in the arsenal before year's end. In such a case, further studies -- apart from the external technical vetting -- might be warranted.

It is "possible" the "NPR will recommend moving forward with a study of different options" for modernization affecting one or more warheads in today's stockpile, the senior defense official said.

Further study "could be as narrow as [considering] how to deal with issues associated with a specific warhead or couple of warheads, or it could be more fundamental," the offi-

cial added. "If we don't have it all tied up in a bow -- which is very possible -- I think it's more likely to be a somewhat narrow set of questions."

The objective, the official said, would be to winnow down the potential recommendations undergoing further study "as much as possible," while offering "a very firm technical basis for what the NPR is recommending" when it debuts in December, the official said.

Scheber, now vice president of the National Institute for Public Policy, counseled against any significant delays on modernization.

"The can has already been kicked down a long road," he told *GSN*.

However, one advantage to further putting off a decision on potential replacement options could be "that in a few years, we will have a much better sense of how well the ongoing life-extension programs are going," Lewis said.

The Energy Department, its semiautonomous National Nuclear Security Administration and the national laboratories are providing scientific and technical support for the posture review. These organizations have supported an RRW-type approach in the past, though Kristensen asserted they have used their responsibility to maintain the nuclear stockpile "as an excuse for modernization."

The senior official would not say whether the JASON panel or others would be tapped to perform the external scientific study.

"Given the extremely technical nature of some of the issues that come up, there is not a very large community to which we're going to reach out," said the official.

Kristensen welcomed the concept of an external study, provided that reviewers are given adequate access to nuclear weapon information and data.

However, he argued that the postponement might help advance a replacement-warhead approach by allowing Pentagon officials to unveil the plan after national attention on the Nuclear Posture Review results diminishes, thereby minimizing the potential for renewed controversy.

"The risk is that this is really RRW through the back door," Kristensen said. The Pentagon might build "gradual support for incremental enhancements to individual systems without confronting the Obama pledge [not to build new weapons] head-on," he said.

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About

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