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ACTION

ACTION

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MEMORANDUM FOR THE PRESIDENT

VIA: *BULLETIN OF THE ATOMIC SCIENTISTS*

FROM: MACKENZIE KNIGHT

PURPOSE: CANCEL US AIR FORCE'S SENTINEL ICBM PROGRAM

Mr. President, the extreme cost and schedule overruns of the United States Air Force's new Sentinel intercontinental ballistic missile (ICBM) program highlight the need to address the future of our country's ICBM force and present an opportunity for curtailing wasteful spending.

BACKGROUND

In 2016, an Air Force cost analysis concluded that replacing the existing force of Minuteman III ICBMs would be cheaper than a life-extension program. But the Air Force program to develop the new Sentinel ICBM is vastly over budget and significantly behind schedule. The Air Force notified Congress in January 2024 that the program was in critical breach of the Nunn-McCurdy Act, with a 37 percent cost overrun and a two-year schedule delay.

The situation had worsened as of July 2024 when, upon certifying the Sentinel program to continue after its Nunn-McCurdy breach, the Defense Department announced a new cost estimate of \$140.9 billion—constituting an 81 percent increase since the previous estimate—and a three-year schedule delay. Flawed assumptions, program mismanagement, and the awarding of an unprecedented sole-source contract for a program of this size have worked together to create this problem.

The struggling Sentinel program is on track to become one of the most expensive nuclear modernization programs ever in the United States. But there is still time to put a check on some of this wasteful spending while maintaining strategic security.

OPTIONS

The following options are presented in order of the level they deviate from the current program of record, from lowest to highest.

– Option 1: Life-extend portion of Minuteman force and reopen the Sentinel contract for competitive bids

A primary reason for the massive cost overruns and schedule delays is that Northrop Grumman was awarded a sole-source contract for the Sentinel program after Boeing withdrew from the competitive bid process due to the “inherently unfair ... advantages” held by Northrop Grumman. The consequence of a sole-source contract for the Sentinel program is higher costs for individual program components and the domino effects of staffing shortfalls, IT infrastructure challenges, supply chain disruptions, and other issues plaguing Northrop Grumman. Option 1 would reopen components of the Sentinel contract for competitive bids to identify cheaper options and cut wasteful spending. This option would slightly delay Sentinel’s deployment and would, therefore, require that a portion of the current Minuteman III force be life-extended to maintain deployment levels.

– Option 2: Reduce the maximum number of deployed ICBMs to 300 and procure fewer Sentinel missiles

The current deployment level of 400 intercontinental ballistic missiles was set by arbitrary congressional requirements, not by a review of strategic necessity. Several previous presidential administrations have reduced or considered reducing the ICBM force level. The Pentagon even considered significantly reducing the number of deployed ICBMs after a 2013 interagency review concluded the United States could meet deterrence requirements with a one-third reduction in deployed nuclear forces. In each case, Congress blocked the executive branch from doing so. The president could choose to listen to Pentagon officials—both military strategists and those who operate the US nuclear arsenal—and make an executive decision to lower the number of deployed ICBMs to 300. This would save a significant amount of money by reducing procurement, operation, and maintenance costs.

– Option 3: Cancel the Sentinel ICBM program

This option would reduce the number of deployed ICBMs to 300, life-extend Minuteman III ICBMs, and cancel the Sentinel program. This would save a significant amount of money. In 2012, it was estimated to cost \$7 billion to turn Minuteman III ICBMs into what the Air Force called “basically new missiles except for the shell.” Even if a new life-extension program were more expensive than this estimate, it is

unlikely that the cost would even remotely approach Sentinel's projected \$141 billion—and growing—price tag.

– Option 4: Eliminate ICBMs from the US nuclear arsenal

There is little rationale for ICBMs in the current security environment. Evaluations by the federal government have revealed that ballistic missile submarines (SSBNs) are “almost equal in speed and reliability” and “virtually undetectable.” ICBMs, on the other hand, are vulnerable, sitting-duck targets that practically invite a massive attack on US soil by adversaries. Heavy bombers can be recalled if necessary; ICBMs, however, cannot be stopped or recalled once launched. ICBMs are a poor option against adversaries other than Russia, given that targeting China or North Korea would require the missiles to overfly Russia. The president could enhance the efficiency of the US nuclear arsenal by removing ICBMs entirely and increasing investment in ballistic missile submarines and heavy bombers.

RECOMMENDED COURSE OF ACTION

I recommend Option 3 at this time. Reviews by military officials and experts support a reduction in the number of deployed ICBMs. The Sentinel program's cost and schedule challenges have become untenable and unacceptable for US taxpayers, particularly for a program that is not necessary for national security. We must prioritize government efficiency by slashing wasteful spending, streamlining modernization programs, and not allowing the legislative branch alone to dictate the US nuclear posture. This can best be achieved by reducing ICBM numbers and life-extending the current missile force. Option 1 would further delay ICBM modernization and would not guarantee lower costs. Option 4 is likely politically infeasible at this time and would incur significant costs and logistical requirements to dismantle the entire ICBM infrastructure and warheads.

Mackenzie Knight is a senior research associate for the Nuclear Information Project at the Federation of American Scientists.