



Forum for American Leadership

What to Know: The Cost of U.S. Nuclear Forces

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In recent weeks, opponents of nuclear modernization seized on [analysis](#) from the Congressional Budget Office on the projected cost of U.S. nuclear forces, falsely suggesting a sudden increase over previous cost estimates. These opponents are pushing for cuts or delays to nuclear modernization programs, even as the Biden Administration's fiscal year 2022 budget request fully supports funding for key programs such as the B-21 bomber, the Columbia-class submarine, Ground-Based Strategic Deterrent (GBSD), and the Long-Range Stand Off Weapon (LRSO). Here are some key facts to understand the true cost and value of U.S. nuclear forces.

The Latest Attempt to Undermine Nuclear Modernization: Twisting CBO Analysis

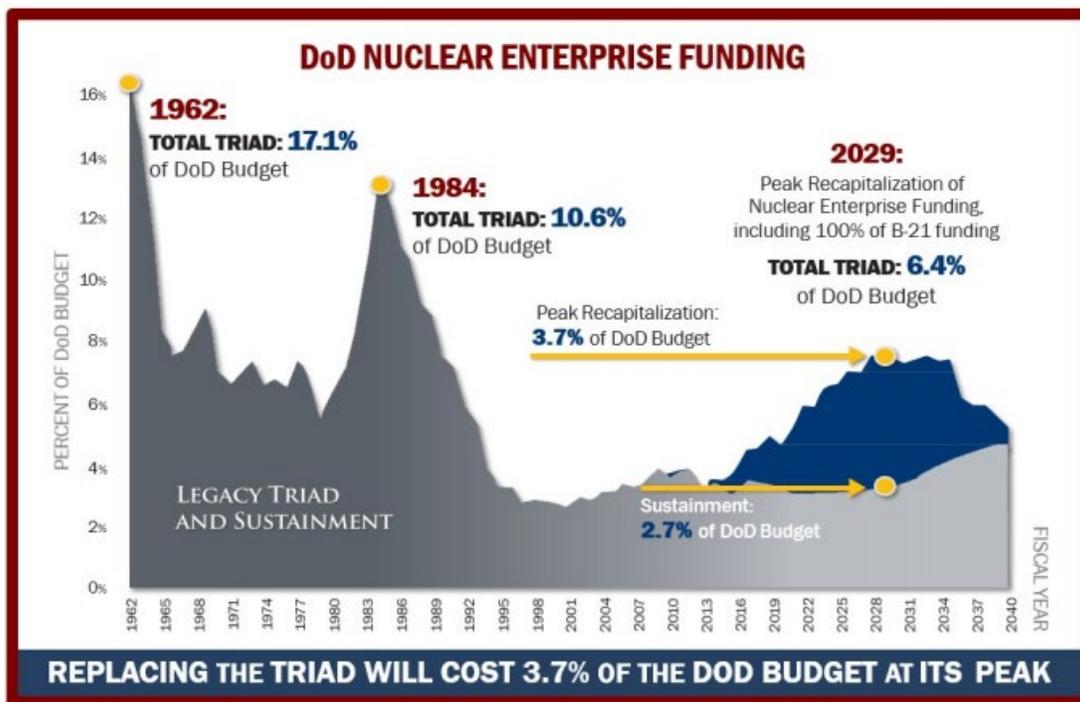
- **The cost of nuclear modernization has not jumped by 28% or \$140 billion.** Critics will cite the recent Congressional Budget Office (CBO) report on the cost of U.S. nuclear modernization that purports to show a rise in costs over what has been projected. However, the report says, “the higher estimates in this report do not necessarily signal an increase in the programs’ total lifetime costs.”
- **The vast majority of the “rise” in costs in this report (49% or \$68.6 billion) are due to the timeline CBO studied,** which reviews costs in the most expensive years of nuclear modernization. Two years ago, CBO conducted the same study, for the years 2019-2028; but this year’s study examined the years 2021-2030 – which essentially added two of the more costly years (2029 and 2030) that include 10 years of accumulated inflation and subtracted two of the least costly years (2019 and 2020) in its analysis.
- **An additional 36% or \$50 billion in the adjustment from the previous estimate is due to new plans to modernize the Department of Energy (DOE)’s nuclear weapons facilities as well as DOD nuclear modernization programs moving into full production.** The report found that the percentage increase in costs is significant for DOE at 36% over the previous report’s estimate. The majority of this increase is for modernizing strategic materials production facilities, but can also be attributed to accelerated funding schedules for warhead life-extension programs.
- **Increased costs can be also attributed, at least in part, to procurement of the dual-use B-21 Raider bomber program.** The CBO attributes 25% of the B-21’s cost to the nuclear mission, while the actual cost is likely near 5%.
- **The full cost to replace early-warning satellites utilized by nuclear command, control and communications is also taken into account in the CBO estimate.** Thus a \$17 billion difference in the estimates can be attributed to replacing the Space-Based Infrared System with the Next-Generation Overhead Persistent Infrared system that will provide more precise detection of ballistic missile launches, as well as a new ground system to communicate with these satellites.

- The remaining 15% or \$21 billion is attributed to CBO's estimates of additional costs based on historical growth - not changes to the program of record that have caused costs to increase. This wedge accounts for the unknowns and uncertainties that CBO claims in the report: undetermined plans for full production and fielding and uncertain costs for operating replacement systems, particularly during the time period when the nuclear triad will contain a mix of old and new systems.
- Consistent with previous estimates, at its height the CBO projects the entire operation and modernization of the U.S. nuclear arsenal to cost approximately 7% of DoD's annual budget at its peak years in the late 2020s. Thus, the assertion that there is a "jump" in costs of the nuclear modernization program of record over this 10-year time period studied is false. The overall cost remains the same.

ADDITIONAL BACKGROUND:

The FY22 Budget Request

The Biden Administration's Fiscal Year 2022 budget request continues full support for [modernization of the nuclear triad](#). Nuclear modernization is identified in the Department of Defense's budget documentation as the "number one priority," with a request of \$27.7 billion. This amount includes full funding for the B-21, Columbia, GBSD, and LRSO.



Source: Department of Defense 2018 Nuclear Posture Review

Modernization History of Existing Triad Platforms

The United States last modernized its entire nuclear triad of bombers, submarines, and intercontinental ballistic missiles (ICBMs) in the late 1970s through the 1980s. Operating and life-extending the current nuclear arsenal has cost an average of about 2% of the Department of Defense annual budget post-Cold War, and replacing the triad has been projected to cost approximately 3.7% of the DoD budget at its peak, while the total nuclear enterprise funding will still be lower than as a percentage of the DoD budget than during most of the Cold War.

Today, the United States can no longer afford to continue life-extending its nuclear forces due to increased operational risk of failure, such as the [recent Minuteman III launch abort](#).

- For example, it will cost \$38 billion more to life-extend the current Minuteman III ICBMs rather than procuring a modernized replacement platform, the Ground-based Strategic Deterrent (GBSD).
- Additionally, the CBO report in question found that the operation costs for the Ohio-class submarine have increased from their 2019 projection, showing that these aging systems are no longer cost-effective to maintain.

The United States can no longer count on nuclear platforms that were designed in the 1960s to deter 21st century threats.

- Meanwhile, potential adversaries are currently modernizing and expanding their nuclear arsenals, requiring the United States to have modern nuclear capabilities to maintain effective deterrence.
- Replacement systems like the GBSD are necessary to overcome advances in potential adversaries' missile defense systems, simple life-extension will not address the threat.

Importantly, GBSD and Columbia SSBNs will serve in the force into the 2070s and 2080s respectively, providing exceptional lifetime value for the dollars spent. For context, this year's President's Budget requests approximately \$27 billion to both sustain and begin modernizing the U.S. nuclear triad, about the same amount that Americans spend every year on pet food. As Secretary of Defense Mattis stated, "America can afford survival."

Background on Current Modernization Plans

The U.S. nuclear modernization program began under President Obama and has enjoyed a bipartisan majority of support in Congress.

- [Across the aisle](#), policymakers have recognized the need to replace all legs of the nuclear triad and its delivery systems with modern technologies. The program of record has always included the replacement ICBM (the GBSD), the replacement strategic submarine (the Columbia class), the dual-capable bomber (the B-21 Raider), the replacement air-launched cruise missile (LRSO), and a number of other systems.
- Secretary Austin and his four predecessors have all declared that U.S. nuclear deterrence is the highest priority mission of the Department of Defense. Thus, when it comes to tough budgetary decisions, U.S. nuclear modernization remains the highest priority as it has been over the past decade.
- There is no margin for error or delay - modernized programs are scheduled to come online as the programs they are replacing age out. Incredibly, there have been no major schedule delays in any of these programs, with the initial operational capability dates that the Obama administration provided remaining accurate even today.

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