

U.S. Nuclear Arsenal: Costs & Constraints

What are we building: The United States could spend [up to \\$1 trillion](#) to maintain and overhaul its nuclear arsenal by rebuilding each leg of the [nuclear triad](#) and its accompanying infrastructure. The plans include, but are not limited to, a new nuclear cruise missile, a modified gravity bomb, a new long range strike bomber, a new set of ballistic missile submarines, a revitalized set of ground-based intercontinental ballistic missiles, and accompanying warheads for each delivery system.

Costs: Plans to maintain and update the US nuclear arsenal are expected to cost the National Nuclear Security Administration (NNSA) [\\$9.2 billion in 2017](#). This money is specifically geared for weapons activities, including modifications and life extension programs for nuclear warheads. The Pentagon also requested more than [\\$3 billion](#) to strengthen the triad's delivery systems, including warplanes and submarines.

Deputy Secretary of Defense Robert Work has asserted that it will cost about \$18 billion a year between 2021 and 2035 to maintain and modernize the nuclear arsenal. Based on standard Pentagon estimates, these numbers do not account for cost overruns and are likely too low. Many analysts expect the full price of nuclear modernization and maintenance to near \$700 billion by 2039 and total up to \$1 trillion over 30 years.

Leg of the Triad	Weapon	Plan	Estimated Request	FY17 Request	Overall Cost Estimate
Air	Long Range Standoff Weapon (Cruise Missile)	New	1,000-1,100	\$95.6 million	\$20-30 billion
	B-21 (Long Range Strike Bomber)	New	80-100	\$1.35 billion	\$60-80 billion
	B61-12 (Gravity Bomb)	Modification	400-500	\$137.9 million	\$7-10 billion
	W80-4 (Warhead)	Life Extension	N/A	\$220.3 million	\$7-10 billion
Sea	SSBN-X (Nuclear Submarine)	New	12	\$1.86 billion	\$139 billion
	Trident II (Missile)	Modification	N/A	\$1.22 billion	\$6 billion
	W88 (Warhead)	Life Extension	N/A	\$281.3 million	\$3-4 billion
	W76-1 (Warhead)	Life Extension	N/A	\$222.9 million	\$3-4 billion
Land + Sea	Interoperable Warheads (IW 1-3)	Modification	N/A	N/A	\$45-67 billion
Ground	Ground Based Strategic Deterrent (GBSD)	New	642 (400 deployed)	\$113.9 million	\$62-85 billion

*Selected major portions of nuclear weapons modernization

Budget Constraints: Pentagon acquisitions chief Frank Kendall has cited a [“huge affordability problem”](#) across all three legs of the nuclear triad. According to the National Defense Panel's Quadrennial Defense Review, concurrent improvements may come [at the cost of conventional forces](#).

Meanwhile, Principal Deputy Under Secretary of Defense for Policy, [Brian McKeon, has stated](#), “We’re looking at that big bow wave and wondering how the heck we’re going to pay for it, and probably thanking our stars we won’t be here to have to answer the question.”

Sources: National Defense Panel, National Nuclear Security Administration, Center for Non-Proliferation Studies, Defense News, U.S. Air Force, U.S. Navy