What Nuclear Weapons Cost Us

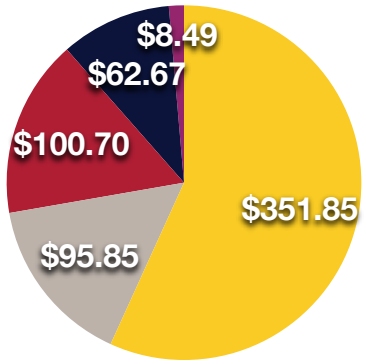
Ploughshares Fund Working Paper | September, 2012

Ploughshares Fund projects that current plans for nuclear weapons and related programs could cost the American taxpayer approximately $640 billion over the next decade.

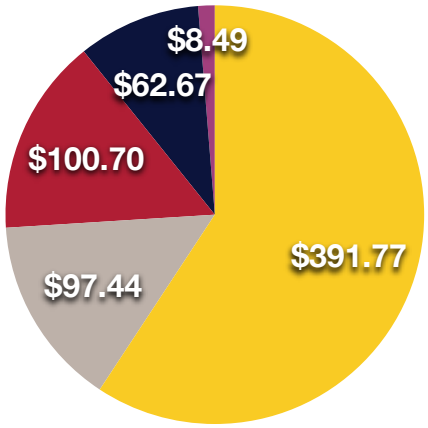
The United States Government is on track to spend approximately $640 billion through fiscal year (FY) 2022 on nuclear weapons and related programs. We include in our estimate all costs associated with nuclear weapons production, operation, maintenance, clean up, and defense, as well as the prevention of nuclear proliferation.[1]

This is a conservative estimate. It does not include relevant costs that are difficult to calculate - including intelligence programs, some missile defense funds, and aerial refueling costs. We do not account for programs that do not yet have official budget estimates - such as a new ICBM. The estimate also does not account for cost growth - an unfortunate reality for acquisition programs. Lastly, we provide a ranged estimate. The low estimate assumes that Defense budgets grow at less than the rate of inflation in keeping with the President's budget plans. The high estimate simply assumes Defense programs grow with inflation. $640 billion is the average of the two estimates.

Projected Total Budget for Nuclear Weapons and Related Programs FY13-FY22 (in $ billions)



$619.56 billion
Low: DoD Budget Growth Below Inflation



$661.08 billion
High: DoD Budget Growth at Inflation

- Nuclear Forces (DoD + DOE)
- Environmental and Health Costs
- Nuclear Incident Management
- Missile Defense
- Nuclear Threat Reduction

Nuclear Forces (DoD + DOE): $351.9 to $391.8 billion

The Department of Defense does not provide a full accounting of what it spends on the nuclear arsenal. A comprehensive Stimson study estimates that DoD will spend between $268.9 and $301.7 billion to sustain, operate, and modernize the U.S. strategic nuclear arsenal over the next ten years. The National Nuclear Security Administration, part of the Department of Energy, is expected to spend between $91.8 and $99.1 billion on the strategic nuclear arsenal over the next ten years. This includes funds for weapons activities, administrative costs, and naval reactors.[2]

Missile Defenses: $95.9 - $97.4 billion

Most policy-makers and analysts intimately link anti-missile programs to nuclear policy. We estimate the U.S. will spend between $95.58 and $97.44 billion on these programs over the next ten years. This estimate uses the Department of Defense projection for missile defense spending from FY13-FY17.[3] Costs are assumed to grow with inflation through FY22.

Environmental and Health Costs: $100.7 billion

We estimate that the U.S. will spend $100.7 billion managing and cleaning up radioactive and toxic waste resulting from nuclear weapons production and testing activities, as well as compensating victims of such contamination.[†]

Nuclear Threat Reduction: $62.7 billion

We estimate that the U.S. will spend $62.7 billion to stop the spread of nuclear weapons. This includes funding for nonproliferation, securing and disposing of fissile materials, the Mixed Oxide Fuel facility, converting HEU-fueled reactors, and other programs.[†]

Nuclear Incident Management: $8.5 billion

We estimate that the U.S. will spend $8.5 billion to prepare for emergency responses for a nuclear or radiological attack against the United States.[†] It does not include relevant expenditures by the National Guard and federal and local agencies that would be involved in nuclear incident response.

[1] This working paper updates Ploughshares Funds earlier estimate for FY12-FY21. It includes the most recent public analysis and data from the FY13 budget request. The total estimate is lower than previously estimated, reflecting the latest research and new downward trends in government spending and inflation projections.

[2] Russell Rumbaugh and Nathan Cohn, "Resolving Ambiguity: Costing Nuclear Weapons," Stimson Center, June 2012. p. 61.

[3] Benjamin Loehrke, "Estimated Missile Defense Spending, FY13-FY17," Ploughshares Fund, August 2012. http://bit.ly/TQhWsL

[†] To derive these costs, we borrow data for FY08 from Schwartz & Choubey then assume those costs to grow with inflation through FY22. Schwartz & Choubey, "Nuclear Security Spending: Assessing Costs, Examining Priorities," Carnegie Endowment, 2009.