



## **Exploding Nuclear Budget: The Just-Released Numbers for New Bombs**

**Posted on Thursday, February 27, 2020**

Posted by Joseph Rodgers, Tri-Valley CAREs' Policy Analyst

### **National Nuclear Security Administration's Fiscal Year 2021 Budget Request:**

The Department of Energy's National Nuclear Security Administration (NNSA) has just released its detailed budget request for Fiscal Year (FY) 2021, which starts on October 1<sup>st</sup> of this year. The NNSA will use the requested funding to "modernize," or redesign, U.S. nuclear warheads. The NNSA request is 20% higher than last year's request and more than 50% higher than the annual funding level when President Trump took office in 2016.

This is the President's funding request, yet the power of the purse ultimately lies with Congress. Therefore, it is important to note that the money request has to be authorized and appropriated. The budget will go through "markups" in the Senate and House Energy and Water Appropriations subcommittees. Then, it will be marked up in the full Senate and House Appropriations committees. The House and the Senate will seek to resolve differences between their two versions of the bill. Then, each chamber will vote on the resultant bill. A similar process happens in the House and Senate Armed Services Committees, which authorize nuclear spending limits. When final bills are passed by both chambers, they will be sent to the President to sign into law.

This process will likely take most of the year, and in some years a stalemate has resulted in a “continuing resolution” to fund the government. Expediently passing a budget during an election year - particularly one in which the President has been impeached – may prove difficult. This also means that the budget request can be altered substantially by Congress before it goes to the President to sign it into law.

Throughout the coming year, Tri-Valley CAREs and allies will be working to curb this dangerous escalation in nuclear weapons spending.

### **Troubling Trends Behind the FY21 Budget Request:**

This budget request represents three dangerous trends in U.S. nuclear weapons policy. First, every nuclear weapon in the U.S. arsenal is undergoing modifications, lifetime extensions, or alterations. The U.S. is also seeking to expand the arsenal by building two novel warheads, unlike anything in the existing stockpile.

Second, NNSA wants to build a new nuclear weapons production infrastructure, including plutonium pit production and a uranium processing facility. The U.S. does not currently possess all of the capabilities required to build wholly new nuclear warheads on a large scale, an activity that we have not done since 1989. Re-establishing these capabilities will enable the U.S. to speed the pace of a new global arms race.

Third, the NNSA is steadily devoting more and more money to nuclear weapons testing capabilities. While the FY21 budget does not state that the NNSA is seeking to resume full scale nuclear explosive testing in Nevada, additional money is being directed toward enhancing hydrodynamic and subcritical explosive testing, and computational modeling of nuclear explosions.

### **Five Nuclear Warhead Development Programs:**

The current scope of the US warhead “modernization” is immense. The NNSA has 5 major warhead programs occurring simultaneously. This workload is unprecedented since the end of the Cold War. In 2019, the NNSA concluded work on two warheads, the W76-1 and the W76-2, which is the “low yield” weapon called for in the Trump nuclear posture review.

The United States nuclear force structure consists of three “legs” - sea, air, and land. The sea leg includes the aforementioned W76-1 and W76-2. These warheads sit atop Trident submarine launched ballistic missiles, launched out of the Navy’s Ohio Class subs.

The 2021 budget request reveals an additional sea based warhead that is in the initial development stages, the W93. This warhead will sit atop a new submarine launched ballistic missile that will replace the Trident. Additionally, the Navy’s W88 “refresh” (alteration) is in the FY21 budget request.

The air leg consists of a new W80-4 and an upgraded B61-12 warhead. The W80-4 warhead, which is presently being designed by the Lawrence Livermore National Laboratory (LLNL), will be launched on a new long-range standoff air-launched cruise missile. The B61-12 is a gravity bomb with new “smart” capabilities, to be dropped out of an airplane.

The land leg of the U.S. nuclear arsenal currently consists of the W87 and the W78. Both of these warheads now sit atop the Minuteman intercontinental ballistic missile. The NNSA plans on building a fully-new warhead to replace the W78, called the W87-1. This W87-1, also being designed by LLNL, will sit atop the next generation intercontinental ballistic missile, called the Ground Based Strategic Deterrent.

FY 2021 NNSA Budget Request for Warheads  
(In Thousands of Dollars)

Warhead	B61-12 LEP	W76 LEP	W76-2 Mod	W88 Alt	W80-4 LEP	W87-1 Mod	W93
Requested in FY 2021	\$815,710	0	0	\$256,922	\$1,000,314	\$541,000	\$53,000
Approved in FY 2020	\$792,611	0	\$65,000	\$304,186	\$898,511	\$112,011	0
Approved in FY 2019	\$794,049	\$48,888	\$10,000	\$304,285	\$645,766	\$53,000	0
Corresponding Weapon	B61-12 Gravity bomb	D5 Trident Sea launched ballistic missile	Low-Yield D5 Trident Sea launched ballistic missile	LGM-30 Minuteman Intercontinental ballistic missile	Long Range Standoff Weapon Air launched cruise missile	New warhead for the Ground Based Strategic Deterrent	Follow-on Trident Submarine Launched Ballistic Missile

## **Nuclear Infrastructure – Pits (Primaries) and H-bombs (Secondaries):**

In addition to expanding work on nuclear warheads, the budget request also greatly increases investment in nuclear weapons infrastructure, which is the name NNSA gives to what are, in fact, new bomb plants. The increases for infrastructure development are startling. Plutonium pit operations, the program that is intended to annually produce 80 or more new bomb cores (also called primaries), is pegged at \$1.4 billion, a *twofold* increase from FY2020.

Los Alamos National Laboratory is slated to produce 30 or more plutonium pits annually at its PF4 facility, while the Savannah River Site, which has never made plutonium pits, is supposed to make 50 or more plutonium pits per year by renovating its trouble-plagued, unfinished Mixed Oxide (MOX) Fuel Fabrication Facility. This industrial-scale pit production is supposed to be fully operational at both sites by 2030.

NNSA's uranium operations also get an increase of \$140 million in the request. Much of this money will go to the Uranium Processing Facility at Y12, intended to build new secondaries (the H-bomb component) for U.S. nuclear weapons at essentially the same planned production rate as for the plutonium primaries. If you are picturing these twin capabilities as enabling wholly new U.S. nuclear weapons, you are correct.

These programs are bound to miss deadlines, blow up budget projections and compromise worker and public safety, in part because the goals are unrealistic. A Department of Defense-funded study by the Institute for Defense Analyses on the National Nuclear Security Administration's plutonium pit production plans concluded that "no available option can be expected to provide 80 [plutonium pits per year] by 2030." Yet the NNSA FY 2021 budget request blithely assumes otherwise.

Another alarming addition in the FY 2021 budget is an increase of \$70 million for subcritical experiments. These tests simulate aspects of nuclear explosions using chemical compounds. They involve nuclear material (i.e., plutonium) in an underground chamber but stop just short of producing a nuclear yield. These tests have resulted in radioactive contamination. Last year, a subcritical test in Nevada [cracked](#) a fastener in a containment vessel and blew out plutonium.

Much of the \$215 million that is slated for subcritical nuclear testing will be spent designing and assembling new experimental devices at the Ua1 testing complex in Nevada. These diagnostic materials will help inform future manufacturing choices for nuclear weapons modifications, new designs, and lifetime extension programs.

FY 2021 Energy and Water Appropriations  
(In Thousands of Dollars)

Infrastructure Programs	Plutonium Pit Operations	Uranium Secondary Operations	Expanded Capabilities for Subcritical Experiments
Requested in 2021	\$1,436,647	\$234,502	\$215,579
Approved in 2020	\$712,440	\$94,146	\$145,160
Approved in 2019	\$361,282	\$87,182	\$50,000

**Conclusion:**

In this budget request, NNSA seeks \$15.6 billion in nuclear weapons activities, a \$3.1 billion (25%) increase from the 2020 request. Much of this increase is going toward building new nuclear weapons capabilities, increasing nuclear weapons production infrastructure, and enhancing U.S. ability to conduct subcritical nuclear weapons tests.

The NNSA is establishing pit production capabilities and a uranium processing facility in order to build new types of nuclear weapons. Taken together, these budget figures and trends reveal that the United States is engaging in a global nuclear arms race.

According to the Congressional Budget Office this new arms race will be enormously costly, easily exceeding a trillion dollars over the next decade alone. What is \$1 trillion? Imagine taking \$100 bills and stacking them in a tower that is 631 miles high. (Now imagine doing that again the following decade.)

All U.S. taxpayers should remember that this is their money. Are new nuclear weapons and bomb plants how you would like to see it spent?