



DOE Nuclear Weapons Budget Up 10%, Equals Cold War Record Huge Startup for Nuclear Cruise Missile Warhead \$4 Billion Slated for LANL Plutonium Pit Production Facilities Cleanup and Dismantlement Funding Flat

The National Nuclear Security Administration (NNSA) is the semi-autonomous nuclear weapons agency within the Department of Energy, and has perennially been on the Government Accountability Office's High Risk List for wasting taxpayers' money. Despite that, the Obama Administration is giving NNSA nuclear weapons programs a 10.5% jump in funding to \$8.85 billion.¹ This is statistically equal to the Cold War high point in 1985 under President Reagan's military buildup.² Moreover, with additional Defense Dept. funding the NNSA's nuclear weapons budget is slated to increase to \$9.8 billion by 2020, nearly double that of the Cold War average. All of this is the beginning of the planned one trillion dollar modernization of U.S. nuclear weapons forces over the next 30 years.

The large increases in NNSA budgets are due to 1) aggressive "Life Extension Programs" that seek to indefinitely preserve existing nuclear weapons while giving them new military capabilities; and 2) new production plants for these rebuilt nuclear weapons, expected to be operational until ~2075. As an example of the former, the current \$12 billion B61 Life Extension Program will create the world's first nuclear "smart" bomb, and will soon begin production at existing facilities.

NNSA's FY 2016 budget launches a whole new Life Extension Program for a nuclear warhead for a new air-launched cruise missile.³ Requested FY 2016 funding is \$195 million, a 20-fold increase from \$9 million for conceptual studies in FY 2015. This program is slated to rise to \$459 million in annual appropriations by FY 2020. The nuclear warhead has been scheduled before Pentagon development of the new air-launched cruise missile itself, in effect putting the cart before the horse. This costly program is arguably redundant as well, given that rebuilt B61 nuclear bombs will be delivered on future super-stealthy fighters advertised as capable of penetrating any adversary's air defenses. Finally, a nuclear-armed cruise missile is destabilizing from an arms control perspective because they can fly below radar, delivering the proverbial bolt from the blue.

On the flip side of production, the Obama Administration's funding request for dismantlements is \$48 million, less than 4% of the funding for all Life Extension Programs to rebuild nuclear weapons. Obama's request itself is an improvement from last year, when the Administration asked for only \$30 million, a 45% cut compared to the year before. Congress refused to go along with that, earmarking \$50 million for dismantlements in FY 2015. Besides providing a good example to the rest of the world, nuclear weapons dismantlements give American taxpayers real savings by eliminating otherwise permanent security costs.

Concerning new production facilities, NNSA is asking for a 28% increase to \$430 million for the Uranium Processing Facility (UPF) near Oak Ridge, TN. The UPF is to produce up

to 80 “secondaries” each year, the components that give weapons thermonuclear capabilities capable of killing millions. The previous “big box” design for the UPF was canceled after out-of-control costs rose as high as \$19 billion by one Pentagon estimate. UPF also had a half-billion dollar design mistake for which no one has been held accountable, in which all planned equipment could not fit within the building’s footprint. Because of all this, the UPF’s mission has been downscoped to production only, eliminating dismantlements, in order to help contain costs, currently capped at \$6.5 billion. Again, dismantlements seem dispensable to the Obama Administration.

NNSA also plans to begin spending \$2 billion to upgrade existing facilities for the expanded production of the plutonium pit cores of nuclear weapons at the Los Alamos National Laboratory (LANL), beginning with \$155.6 million in FY 2016. The controversial CMRR “Nuclear Facility” is formally canceled. In its place, up to \$675 million is planned to be spent on additional equipment for the already built Radiological Laboratory to quadruple the amount of plutonium that can be handled there, and up to \$1.4 billion to upgrade PF-4, LANL’s existing main plutonium facility.

In addition, “The third step of the plutonium strategy extends the lifetime of PF-4 and supports increases in pit production capacity beyond 30 pits per year by proposing to build new modular facilities and move selected processes into new space... The NNSA is planning to construct not less than two modular structures that will achieve full operating capability not later than 2027.” Although still far from final design, those modular facilities will likely cost a billion dollars each. Given the usual cost overruns, eventual costs may meet or exceed the CMRR’s estimated cost of \$6.5 billion when it included the Nuclear Facility.

Inflation-adjusted funding for cleanup across the nation-wide nuclear weapons complex remains flat at \$5.5 billion, even though estimated cleanup costs of the massive widespread contamination continue to climb. The funding request for cleanup at Los Alamos Lab is flat at \$185 million. It includes repackaging radioactive waste drums stored at LANL that are similar to the one that ruptured and contaminated the Waste Isolation Pilot Plant. It will also fund investigation and corrective measures for the large chromium plume above our groundwater aquifer, with an emphasis on preventing it from crossing the boundary of neighboring San Ildefonso Pueblo. Current contamination maps show the plume stopping at exactly the boundary, which is nearly impossible. *Feb. 11, 2015*

1) As topline numbers, NNSA’s budget category “Total Weapons Activities” increase from \$8.23 billion in FY 2015 to \$8.85 billion in FY 2016, or 7.5%. However, the true increase is masked by the fact that two counterproliferation programs formerly within NNSA’s “Total Weapons Activities” are moved to Defense Nuclear Nonproliferation. Once that is factored in the real increase for NNSA’s nuclear weapons programs is 10.5%.

2) The FY 2016 DOE nuclear weapons request is calculated as statistically equal to the Cold War record using data from *Atomic Audit*, Brookings Institute, 1998, Stephen Schwartz editor, Table A-2. It gives 5.494 billion in 1996 dollars as the cost for DOE nuclear weapons research, production and testing programs in 1985, the height of the Cold War military build up under Ronald Reagan. Adjusted for inflation that is \$8.99 billion in 2015 dollars.

3) Called the Long-Range Stand-Off weapon in the budget because heavy bombers can launch the nuclear-armed cruise missiles at a great distance from their intended targets.

The NNSA’s FY 2016 Congressional Budget Request is available at http://www.energy.gov/sites/prod/files/2015/02/f19/FY2016BudgetVolume1%20_1.pdf

National Nuclear Security Administration FY 2016 Budget Request

(All numbers in thousands of US dollars)

Nuclear Weapons Programs	<i>FY 2014 Enacted</i>	<i>FY 2015 Enacted</i>	<i>FY2016 Request</i>	<i>FY15-FY16 ±%</i>
NNSA Total Weapons Activities (Comparable) (Adjusted for transfer of counterterrorism programs to Nonproliferation)	7,561,676	8,007,737	8,846,948	10.5%
NNSA Total Weapons Activities	7,845,000	8,231,770	8,846,946	7.5%

(As presented in the budget. Planned to increase to \$9.8 billion in FY 2020. In comparison, Cold War annual average was \$5.2 billion.)

Directed Stockpile Work (Tangible work on the nuclear weapons themselves.)	2,442,033	2,692,588	3,187,259	18.4%
Life Extension Programs and Major Alterations (Life extension of existing weapons while giving them new military capabilities, in part through new arming, firing and fuzing sets)	992,985	1,076,986	1,302,532	20.9%
B61 Life Extension Program (World's first nuclear "smart" bomb; soon to begin production)	537,044	643,000	643,300	0.0%
W76 Life Extension Program	248,454	259,168	244,019	-5.8%
W78/88-1 Life Extension Program (AKA "interoperable" warhead)	0	0	0	-
W88 ALT 370 (explosives "refresh" & AF&F)	169,487	165,400	220,176	33.1%
W80-4 Life Extension Program (Nuclear warhead for new air-launched cruise missile)	0	9,418	195,037	1970.9%
Stockpile systems (Nuclear weapons maintenance, including replacement of limited life components)	454,488	531,107	482,426	-9.2%
B61 Stockpile Systems	83,536	109,615	52,247	-52.3%
W76 Stockpile Systems	47,187	45,728	50,921	11.4%
W78 Stockpile Systems	54,381	62,703	64,092	2.2%
W80 Stockpile Systems	50,330	70,610	68,005	-3.7%
B83 Stockpile Systems	54,948	63,136	42,177	-33.2%
W87 Stockpile Systems	101,506	91,255	89,299	-2.1%
W88 Stockpile Systems	62,600	88,060	115,685	31.4%
Weapons Dismantlement and Disposition (As of April 2014, the Obama Administration had dismantled only 309 nuclear warheads. See fas.org/blogs)	54,264	50,000	48,049	-3.9%
Stockpile Services (Provide capabilities and capacity)	735,248	762,442	939,293	23.2%
Production Support	345,000	350,942	447,527	27.5%
Management, Technology, and Production	214,187	226,000	264,994	17.3%

(All numbers in thousands of US dollars)

NNSA Total Weapons Activities (continued)

	<i>FY 2014 Enacted</i>	<i>FY 2015 Enacted</i>	<i>FY2016 Request</i>	<i>FY15-FY16 ±%</i>
Nuclear Material Commodities	273,648	376,653	414,959	10.2%
(Nuclear materials needed to maintain the viability of the enduring stockpile)				
Uranium Sustainment	6,600	7,400	32,916	344.8%
Plutonium Sustainment	125,048	132,000	174,698	32.3%
Tritium Sustainment	80,000	140,053	107,345	-23.4%
Research, Development, Test and Evaluation	1,658,327	1,766,191	1,776,503	0.6%
(Processes needed to support "Science Based Stockpile Stewardship; formerly called "Campaigns")				
Science (Provide assessments of weapon performance)	369,723	412,091	389,614	-5.5%
Advanced Certification	58,747	58,747	50,714	-13.7%
Primary Assessment Technologies	92,000	109,000	98,500	-9.6%
Dynamic Materials Properties	104,000	109,000	109,000	0.0%
Advanced Radiography	29,509	47,000	47,000	0.0%
Secondary Assessment Technologies	85,467	88,344	84,400	-4.5%
Engineering (Tools and capabilities necessary to maintain the stockpile)	149,911	136,005	131,377	-3.4%
Enhanced Surety	51,711	52,003	50,821	-2.3%
Inertial Confinement Fusion Ignition & High Yield	513,957	512,895	502,450	-2.0%
(Validation of nuclear weapons codes)				
Ignition	80,245	77,994	73,334	-6.0%
Support of Other Stockpile Programs	15,001	23,598	22,843	-3.2%
Diagnostics, Cryogenics and Experimental Support	59,897	61,297	58,587	-4.4%
Facility Ops and Target Production (NIF, OMEGA, & Z)	345,592	335,882	333,823	-0.6%
Advanced Simulation and Computing Campaign	569,329	598,000	623,006	4.2%
(Computer simulation of nuclear explosions)				
Advanced Manufacturing Development	57,807	107,200	130,056	39.5%
(Development of new manufacturing and production capabilities)				
Component Manufacturing Development	55,407	7,500	112,256	189.1%
Readiness in Technical Base and Facilities	643,879	687,959	1,054,481	53.3%
Operations Of Facilities	221,759	264,959	394,291	32.8%
Program Readiness	42,259	49,759	75,185	33.8%
Material Recycle and Recovery	122,600	126,000	173,859	27.5%
Recapitalization	28,500	55,800	104,327	46.5%

(All numbers in thousands of US dollars)

NNSA Total Weapons Activities (continued)

	<i>FY 2014</i> <i>Enacted</i>	<i>FY 2015</i> <i>Enacted</i>	<i>FY2016</i> <i>Request</i>	<i>FY15-FY16</i> <i>±%</i>
Construction	422,120	423,000	660,190	56.1%
LANL TA-55 Reinvestment Phase III	0	16,062	18,195	13.3%
LANL TRU Waste Facilities	26,722	6,938	0	-100.0%
LANL TA-55 Reinvestment Phase II	30,679	10,000	2,903	-71.0%
LANL Radioactive Liquid Waste Treatment Facility	45,114	0	11,533	-
LANL TRU Liquid Waste Facility	10,605	7,500	40,494	439.9%
Y-12 Uranium Processing Facility (Will produce up to 80 new thermonuclear "secondaries" each year)	309,000	335,000	430,000	28.4%
LANL CMRR Facility (Will expand production of the plutonium pit "primaries" of nuclear weapons)	0	35,700	155,610	335.9%
Secure Transportation Asset	210,000	219,000	251,610	14.9%
Operations and Equipment	112,882	121,882	146,272	20.0%
Program Direction	97,118	97,118	105,338	8.5%
Infrastructure and Safety	1,465,547	1,386,741	1,466,134	5.7%
Operations of Facilities	984,455	896,000	830,790	-7.8%
Kansas City Plant	135,834	125,000	100,250	-24.7%
Lawrence Livermore National Laboratory	77,287	71,000	70,671	-0.5%
Los Alamos National Laboratory (LANL) Los Alamos Pueblo Project	213,707	198,000	196,469	-0.8%
800	800	800	0.0%	
Nevada National Security Site	100,929	89,000	89,000	0.0%
Pantex	81,420	75,000	58,201	-28.9%
Sandia National Laboratory	115,000	106,000	115,300	8.1%
Savannah River Site	90,236	81,000	80,463	-0.7%
Y-12 National Security Complex	170,042	151,000	120,625	-25.2%
Construction	-	2,000	17,919	796.0%
LANL Substation Replacement at TA-3	-	-	25,000	-
Emergency Operations Center, Y-12	-	2,000	42,919	2046.0%
Nuclear Counterterrorism Incident Response (Moved to Nonproliferation)	228,243	177,940	-	-
Counterterrorism and Counterproliferation Programs (Moved to Nonproliferation)	0	46,093	-	-
Site Stewardship	36,325	27,831	36,595	31.5%
Defense Nuclear Security	664,981	636,123	632,891	-0.5%
IT & Cybersecurity	145,068	179,646	157,588	-12.3%
Legacy Contractor Pensions	279,597	307,058	283,887	-7.5%

(All numbers in thousands of US dollars)

	<i>FY 2014 Enacted</i>	<i>FY 2015 Enacted</i>	<i>FY2016 Request</i>	<i>FY15-FY16 ±%</i>
Defense Nuclear Nonproliferation	2,009,000	1,664,332	1,958,378	17.7%
(Reflects transfer of counterterrorism programs from Total Weapons Activities)				
Defense Nuclear Nonproliferation (Comparable)	2,237,243	1,888,365	1,958,378	3.7%
(Amount of increase before transfer of counterterrorism programs)				
Global Material Security	572,358	424,244	426,751	0.6%
Material Management and Minimization	422,159	272,919	311,584	14.2%
Nonproliferation and Arms Control	118,442	125,859	126,703	0.7%
Nonproliferation Construction	403,500	345,000	345,000	0.0%
MOX Fuel Fabrication Facility at the Savannah River Site	345,000	345,000	345,000	0.0%
Nuclear Counterterrorism and Incident Response	228,243	224,521	234,390	4.4%
Legacy Contractor Pensions	93,703	102,909	94,617	-8.1%
Naval Reactors	1,095,000	1,233,840	1,375,496	11.5%
(Reactors in nuclear-powered submarines and aircraft carriers)				
Federal Salaries and Expenses	377,000	370,500	370,000	-0.1%
Total NNSA	11,271,000	11,399,034	12,565,400	10.2%

Note: Columns do not add up to totals because not all budget subcategories are included here, including Use of Prior Year Balances

Department Of Defense Funding For NNSA Activities

	(in millions)		
	Future Funds from DOD	Total Weapons Activities including DOD funds	NNSA Total Weapons Activities w/o DOD funds
DoD funding for NNSA's Total Weapons Activities, which funds future large increases. There is no DoD support for nonproliferation programs.			
	FY 2016	0	8,847
	FY 2017	1,603	9,282
	FY 2018	1,665	9,485
	FY 2019	1,698	9,718
	FY 2020	1,735	9,830

February 11, 2015

Source: <http://energy.gov/cfo/downloads/fy-2016-budget-justification>

A PDF of this compilation is available for download at:
<http://nukewatch.org/economics/NukeWatch-FY16-NNSA-Budget-Analysis.pdf>

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