

Nuclear weapons activities in New Mexico

Presentation to Youth United for Climate Crisis Action

Greg Mello and Trish Williams-Mello, Los Alamos Study Group, January 15, 2024

And I knew that America would never invest the necessary funds or energies in rehabilitation of its poor so long as adventures like Vietnam continued to draw men and skills and money like some demonic, destructive suction tube. So I was increasingly compelled to see the war as an enemy of the poor and to attack it as such....

A nation that continues year after year to spend more money on military defense than on programs of social uplift is approaching spiritual death.

Martin Luther King, Beyond Vietnam, April 1967



Los Alamos Study Group, 2901 Summit Place NE, Albuquerque, NM 87106
www.lasg.org, 505-265-1200



To subscribe to the Study Group's main listserv send a blank email to lasg-subscribe@lists.riseup.net

To subscribe to the Study Group's New Mexico listserv, send a blank email to lasg_activist_leaders-subscribe@lists.riseup.net

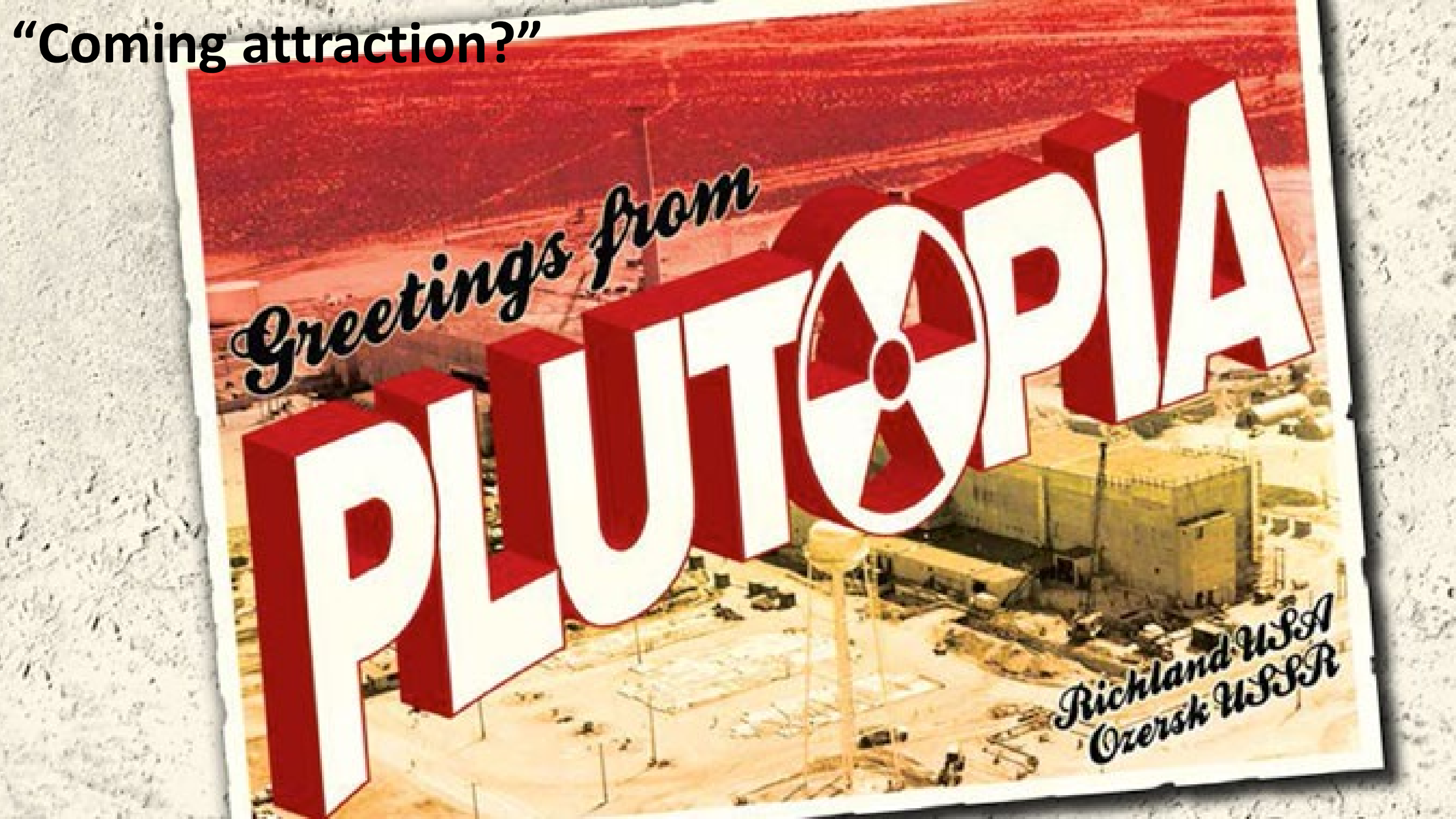
Blog: <https://lasg.org/wordpress/>

“Coming attraction?”

Greetings from

PLUTOPOLIA

*Richland USA
Ozersk USSR*



Nuclear Weapons (NW) Work in New Mexico

- Los Alamos National Laboratory (LANL). Best-funded NW facility in the world. Currently adding thousands of people to build, operate plutonium warhead core (“pit”) factory; start-up cost ~\$20 billion (biggest project in history of NM by far).
- Sandia National Laboratories (SNL). Second to LANL in funding globally.
- Kirtland Underground Munitions Maintenance and Storage Complex (KUMMSC). Most nuclear weapons at one site in the world.
- Defense Nuclear Weapons School (DTRA), KAFB
- National Nuclear Security Administration (NNSA) Albuquerque Complex (1,200 staff). Administrative center for nuclear warheads.
- NNSA Office of Secure Transportation (OST), national headquarters (Mesa del Sol)
- Waste Isolation Pilot Plant (WIPP), disposal of transuranic (TRU) waste from nuclear warhead work

Stockpile Stewardship: How do we sustain the nuclear deterrent




501835
B61 12
SERIAL 020970

B61-12
US Air Force
Strategic Bomb

B61-7
US Air Force
Strategic Bomb



What LANL and SNL design and build: effects



800 kt nuclear blast (e.g. Russian SS-18)

Fireball: 5,774 feet diameter (shown roughly at scale in plane of "Big I")

Center of fireball ~ 3,000 feet above ground zero in this picture

At 6 miles the fireball would appear more than 300 times brighter than the desert sun at noon

Blast wave travels 3 miles in about 13 seconds

Certain mass fires ($\geq 20 \text{ cal/cm}^2$) radius 5.35 miles

Probable mass fires ($\geq 10 \text{ cal/cm}^2$) radius 7.5 miles

Airblast $\geq 5 \text{ psi}$ out to 4.0 miles on the ground; $\geq 1.5 \text{ psi}$ to 9.3 miles

3rd degree burns (11.2 cal/cm^2) with 100% probability to 7.1 miles

Modern thermonuclear warheads have far larger energy yields than the primitive nuclear explosives used at Hiroshima and Nagasaki.

One large nuclear explosion would utterly destroy all of Albuquerque, or Santa Fe.

The purpose: terror (de-terr-ence).





New Mexico

Total Awarded Amount

\$34.8 Billion

from 45,215 prime awards

[View awards to this state](#)

Details ⓘ

Population	2,088,070 (2017 est.)
Awarded Amount Per Capita	\$16,686
Median Household Income	\$46,748 (2016 est.)

From USAspending.gov
Does not include military bases.

Awarding Agencies

Name	Awarded Amount	% of Total
1. Department of Energy (DOE)	\$10.46B	30.03%
2. Social Security Administration (SSA)	\$8.72B	25.01%
3. Department of Health and Human Services (HHS)	\$6.95B	19.94%
4. Department of Agriculture (USDA)	\$1.85B	5.3%
5. Department of Veterans Affairs (VA)	\$1.30B	3.74%

Recipients

Name	Awarded Amount	% of Total
1. MULTIPLE RECIPIENTS	\$10.71B	30.75%
2. DEPARTMENT OF HUMAN SERVICES NEW MEXICO	\$6.07B	17.41%
3. TRIAD NATIONAL SECURITY LLC	\$5.21B	14.95%
4. NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SA...	\$5.10B	14.65%
5. NEW MEXICO DEPARTMENT OF TRANSPORTATION	\$558.86M	1.6%

Site Estimates

(\$K)

Site	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request				
			FSE	WA	DNN	NR	Total
Los Alamos National Laboratory	3,445,510	3,999,598	-	4,053,066	450,997	-	4,504,063
Los Alamos Site Office	19,550	22,947	23,545	27	-	-	23,572

LANL cleanup funding requested for FY24, 287,479 (\$K). @82% WA, 19,307

Other DOE at LANL, 130,223 (\$K); FY22 work for others, 340,00 (\$K), defense

NNSA Albuquerque Complex	1,154,992	1,569,300	660	1,108,508	186,184	-	1,295,352
--------------------------	-----------	-----------	-----	-----------	---------	---	-----------

Total DOE at Albuquerque, 1,305,384 (\$K).

Sandia National Laboratories - New Mexico	2,660,172	2,774,322	-	2,681,391	265,181	-	2,946,572
Sandia Site Office	85,250	86,269	27,283	-	61,607	-	88,890

SNL work for others (FY22): 1,396,900 (\$K), all defense more or less @84% WA, 22,918

Waste Isolation Pilot Plant	10,558	9,160	-	-	15,064	-	15,064
-----------------------------	--------	-------	---	---	--------	---	--------

(This is NNSA funding only. Total WIPP spending requested for FY24 is 464,326 (\$K))

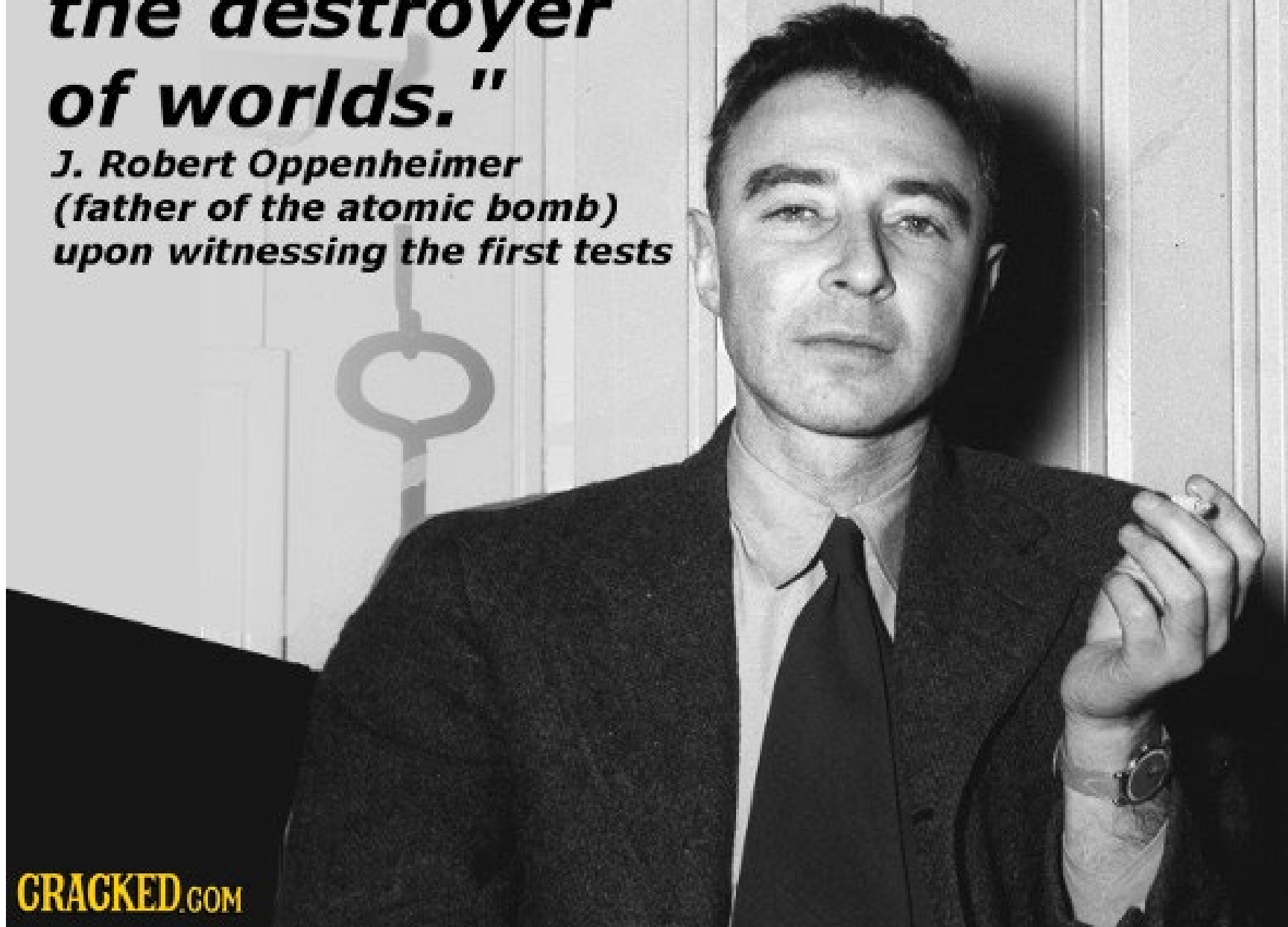
Grand Total	20,656,000	22,162,564	538,994	18,832,947	2,508,959	1,964,100	23,845,000
--------------------	-------------------	-------------------	----------------	-------------------	------------------	------------------	-------------------

So NM hosts 7,885,217 (\$K) (42%) of NNSA nuclear warhead spending this year (if/when finally funded).

Total DOE spending requested in NM for FY24 is 10,043,171 (\$K). Of this, at least 8,637,022 (\$K), or 86%, is nuclear warheads, cleanup, and nuclear waste disposal. This is an understatement because a considerable part of DNN (Defense Nuclear Nonproliferation) deals with the disposal of surplus warhead materials and other nuclear weapons issues.

***"Now I am become Death,
the destroyer
of worlds."***

***J. Robert Oppenheimer
(father of the atomic bomb)
upon witnessing the first tests***



**“Going
over to
another
order”**

Some of the context (I)

- Multidimensional, multinational debt crisis; debt service now >\$1 trillion on an annualized basis, no end of debt service growth in sight
- Multipolar breakdown in Congress
- An “aged out” president mentally incapable of fulfilling presidential duties and who ALSO is guilty of bribery, AND an incompetent VP
- Leading R candidate vehemently hated by half the country and currently subject to “lawfare” attacks in numerous venues;
- Electoral corruption on a vast scale
- WH, CIA, DoD, Treasury which sponsored destruction of major European energy source in terrorist attack
- Widespread censorship and media consolidation and control
- Academic and nonprofit cooptation and control
- Huge investments in failed Ukraine war and its neo-Nazi government
- Lock-step support for Israeli genocide, related new war on Yemen

Some of the context (II)

- Sharp rise of multipolar world, BRICS+, loss of US prestige (“the face of power”) and influence
- Loss of military dominance to both Russia and China in their spheres
- U.S. critical resource and supply chain crises
- U.S. critical de-skilling
- Past the global peak of oil production (2018), EROEI falling
- At, and soon past, the ragged US peak of oil production (2019 to now)
- Climate crisis of growing severity (so-called “drought” in NM) and potential irreversibility; severe weather events increasing
- Famine rising; migrations rising; habitat and species declining; “development” goals receding
- Collapse of arms control (nuclear, biological)
- In U.S., inequality, lack of economic security, homelessness rising
- Across the first world, prosperity is falling.
- Financial systems need “growth” to settle debts. Real growth is past.

Approaches to NM's growing colonial status

First, everybody must stabilize their lives to some degree. This can be a big job and it will be harder and harder to do. This challenge conditions what follows here.

1. Trying to understand it. This is not so easy. Our minds are the primary locus of colonization. We have to work there. We are not free. We think thoughts invented by others to stick to the primitive parts of our brains, i.e. our emotions, fears, and need for belonging. We are brainwashed into believing things which aren't true and fighting against each other and our natural allies, with results that include paralysis, despair, impoverishment.
2. Leaving NM, mental distancing, denial, distraction, escapisms and addictions
3. Whining and careerism; cashing in on colonialism; playing on liberal guilt for personal advancement
4. Joining the colonizers; becoming a comprador, direct employee, or servant
5. Resisting; helping construct and preserve a just, sustainable society at some appropriate scale; embracing others
 - Holding to nonviolence and respect is the definition and basis of success.
 - The "constructive program" is the centerpiece; resistance one of its activities
 - Service is essential for maturity and the acquisition of moral standing and is part of the road and the destination.
 - We should do things which win in the doing as well as the result, and leave everything else aside.
 - We don't have time for fake resistance, which abounds. We need to really stop this process.
 - We need to acquire skills and live by doing useful work in our communities. Get your living by loving, said Thoreau.
 - Be aware of efforts to distract, delay, divide, dissipate, and destroy resistance.
 - We need to organize ourselves to face dramatically falling economic prospects nationwide.
 - We need to lead, including by getting elected to offices.

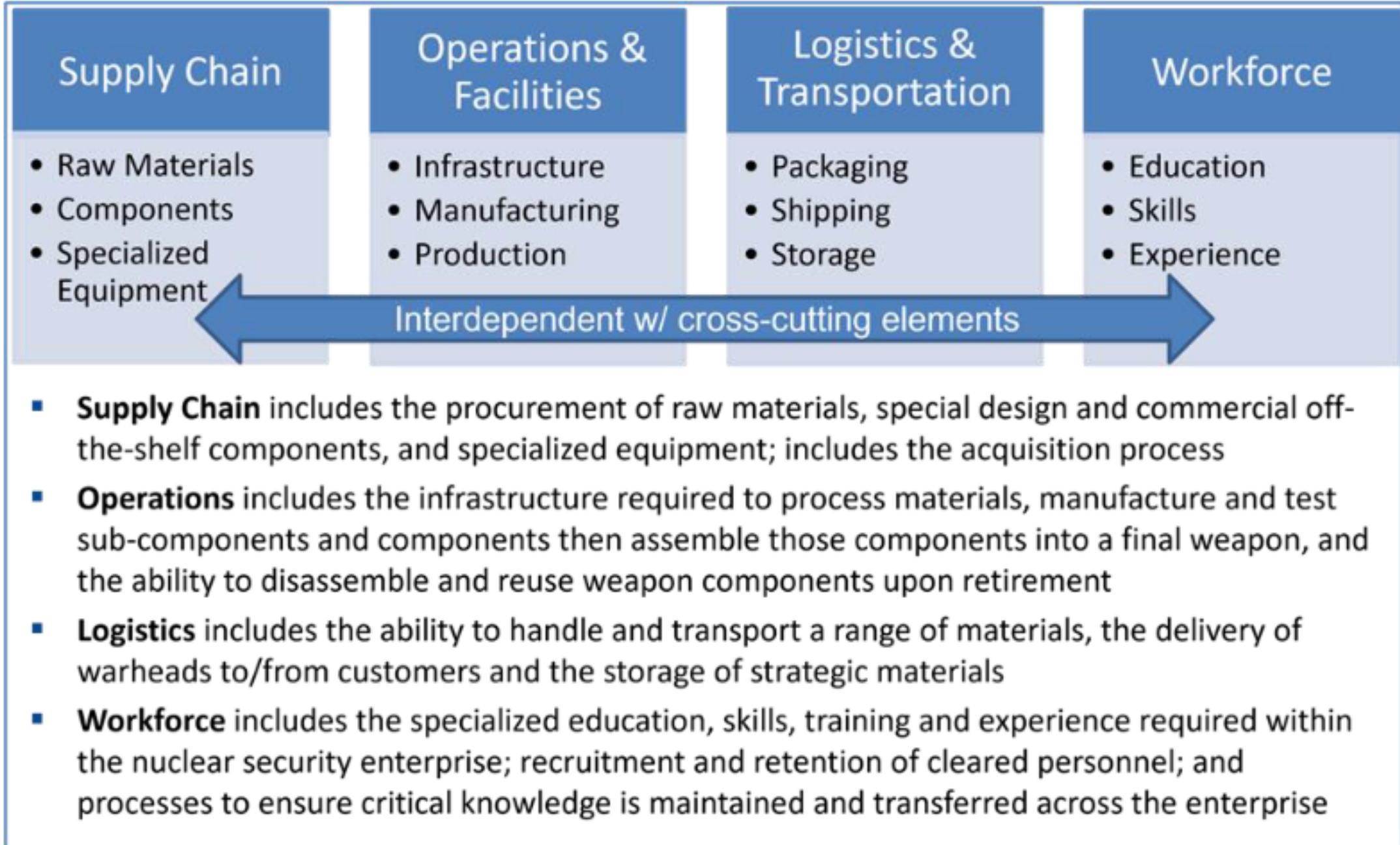


Figure E-1. The nuclear security enterprise industrial base framework

Table E-1. The nuclear security industrial base risk factors

Human Capital Gaps	Industry is unable to hire or retain U.S. workers with the necessary skill sets
Sole Source Vendors	Only one supplier is qualified to provide the required capability and/ or product
Constrained Market	Capacity is unavailable in required quantities or time due to competing market demands
Product Security	Lack of cyber and physical protection results in eroding integrity and confidence
Sunset Technologies	Product or material obsolescence resulting from decline in relevant suppliers
Foreign Dependency	Domestic industry does not produce the product, or does not produce in sufficient quantities
Eroding Infrastructure	Loss of specialized capital equipment needed to integrate, manufacture, or maintain capability
Regulatory Changes	Labor, environmental, transportation, etc., laws outpace industry's ability to develop alternative processes
Inflation	Changes to the global market causing uncertainty in suppliers pricing models thereby increase costs in material, labor, and freight over a short period of time
Global Events	Both manmade and natural events such as the war in Ukraine and the COVID-19 pandemic that negatively impact the supplies of critical goods and services

COVID-19 = Coronavirus Disease 2019

Los Alamos National Laboratory



Los Alamos, NM



Multi-program national
security laboratory



www.lanl.gov



Operated By: Triad National Security, LLC, (Triad) is made up of three members: Battelle Memorial Institute, Texas A&M University, and the University of California



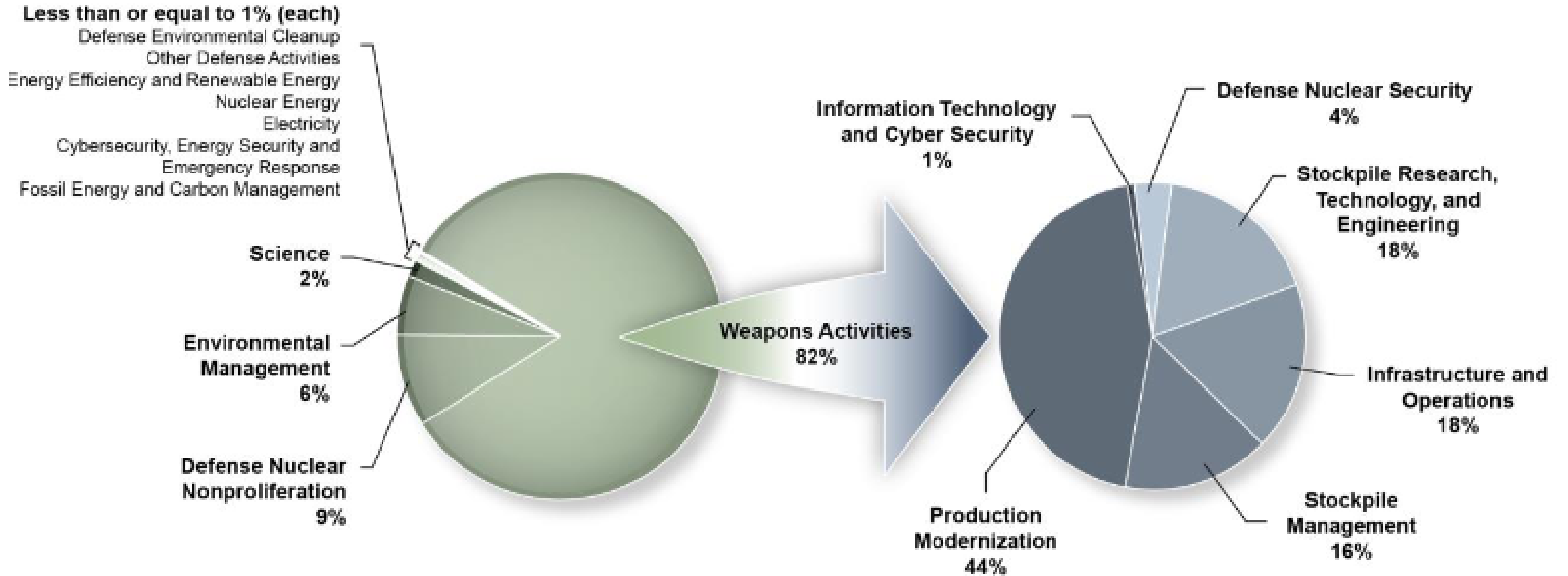
Los Alamos Field Office

- Federally Funded Research and Development Center
- Lead design agency for the B61, W76, W78, and W88 systems
- Leads the B61-12 LEP and the W88 Alt 370 Program
- Nation's Plutonium Center of Excellence for Research and Development
- Manufacture pits, detonators, detonator cables, and radioisotope thermoelectric generators
- Weapons physics (design and analysis), weapons (engineering, energetics, design, analysis, testing, and integration), high energy density physics, materials science and engineering, and high-performance computing



**FY 2024 DOE request – site funding by source
(total LANL FY 2024 request = \$4,922 million)**

**LANL split for the FY 2024 Weapons Activities
President’s Budget Request (\$4,053 million)**



Los Alamos National Laboratory

WORKFORCE AT A GLANCE



11,275
EMPLOYEES

44 AVERAGE AGE
9.7 AVERAGE YEARS OF SERVICE



In 2021 & 2022...

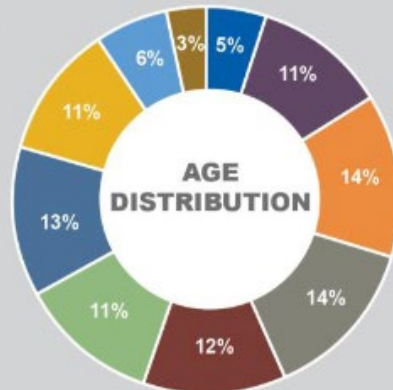
3375 HIRES
1875 SEPARATIONS
1500 NET GAIN



■ Operators/340 ■ Gen Admin/285 ■ Crafts/70

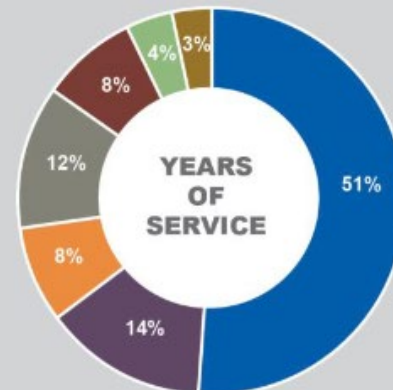
LANL total workforce by Common Occupational Classification System

- Under 25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51-55
- 56-60
- 61-65
- 66+



LANL workforce distributed by age group

- 0-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26-30
- 31+



LANL workforce distributed by years of service

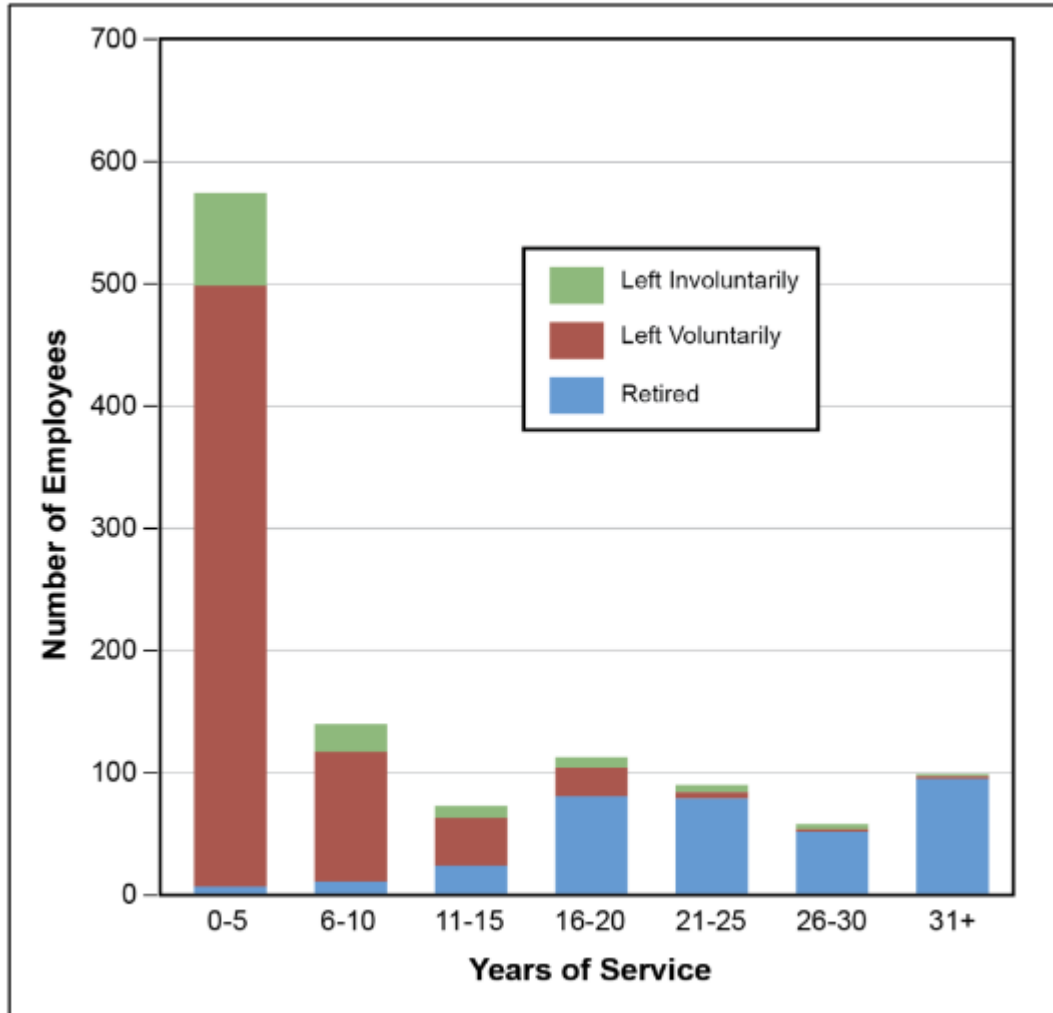


Figure F-9. LANL separations by years of service

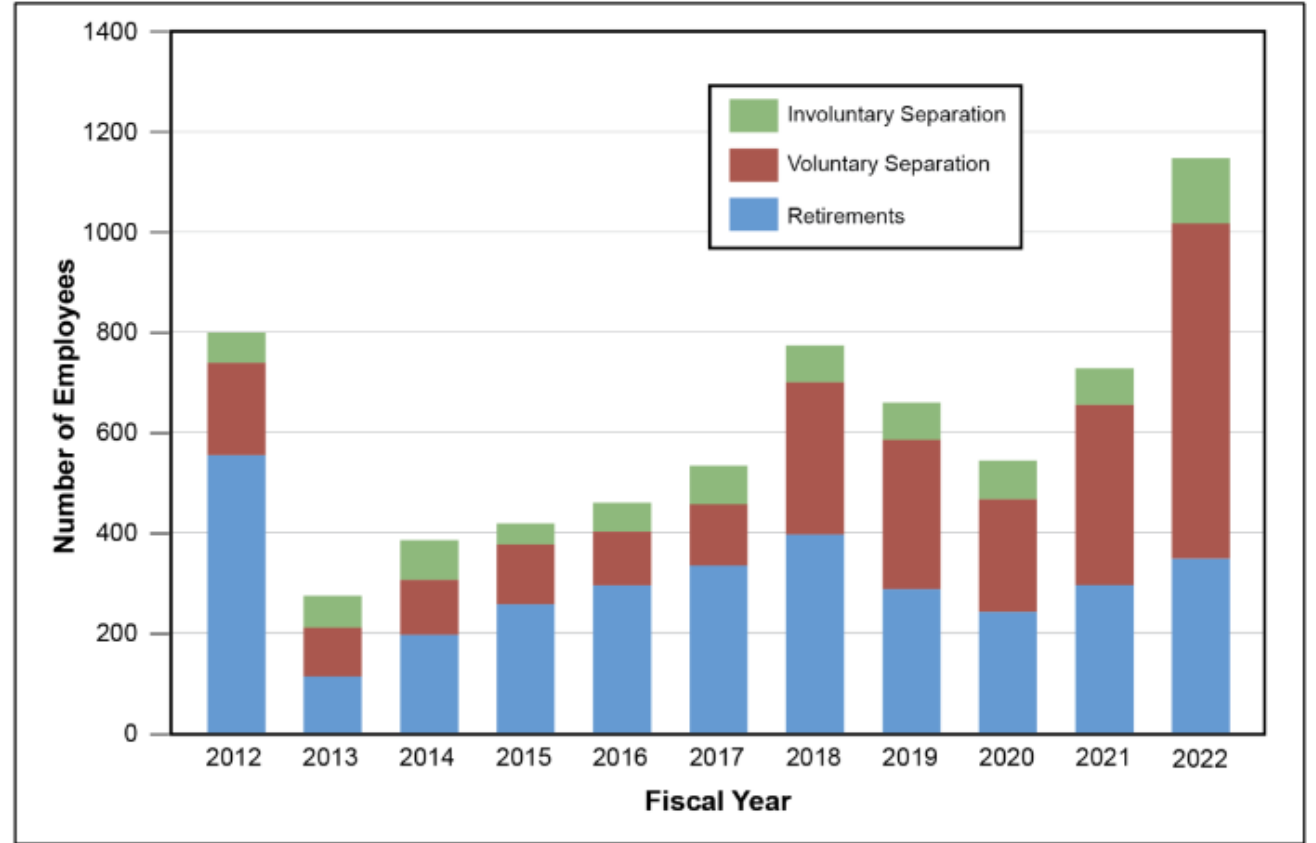


Figure F-11. LANL employee separation trends

A rapidly growing workforce and LANL mission help drive the region's economy



17,244

total employees



61.2%

of FY22 new hires are from New Mexico



\$4.4 billion

total Laboratory budget for fiscal year 2023



\$1.76 billion

Annual salary total YTD for fiscal year 2023

Attachment A

Salary distribution by main counties:

Los Alamos	\$751,243,751
Santa Fe	\$446,376,954
Rio Arriba	\$195,454,037
Bernalillo	\$97,487,279
Sandoval	\$72,918,192
Taos	\$23,019,491
Other NM*	\$30,779,651

Exploring federal off-site campus options

Move work closer to housing

- **Robust main campus in Los Alamos will remain**
- **Possible capabilities for off-site campus**
 - Low hazard, light laboratory space
 - R&D offices
 - Business and support services offices
 - Classified office activities
 - Warehousing
- **Keep hazardous and specialized operations in Los Alamos**
- **Reduces traffic congestion and housing demand in Los Alamos County, more accessible to larger population base**



Acquiring permanent off-site locations focuses on-site investments on specialized operations (nuclear mission, stockpile security, high explosive, LANSCE, magnet lab, etc.)

























© Los Alamos Study Group, White Rock housing development in foreground near LANL's Area G waste storage in background, Apr 2021





Sandia National Laboratories



Albuquerque, NM
Livermore, CA



Multi-mission national security laboratory



www.sandia.gov



Operated By: National Technology and Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International, Inc.



Sandia Field Office

- Warhead system engineering and integration
- Design, development, and qualification of non-nuclear components
- Production of non-nuclear components (power sources, neutron generators, and trusted, strategic radiation hardened microelectronics)
- Development and application of science and technology to solve other national security challenges

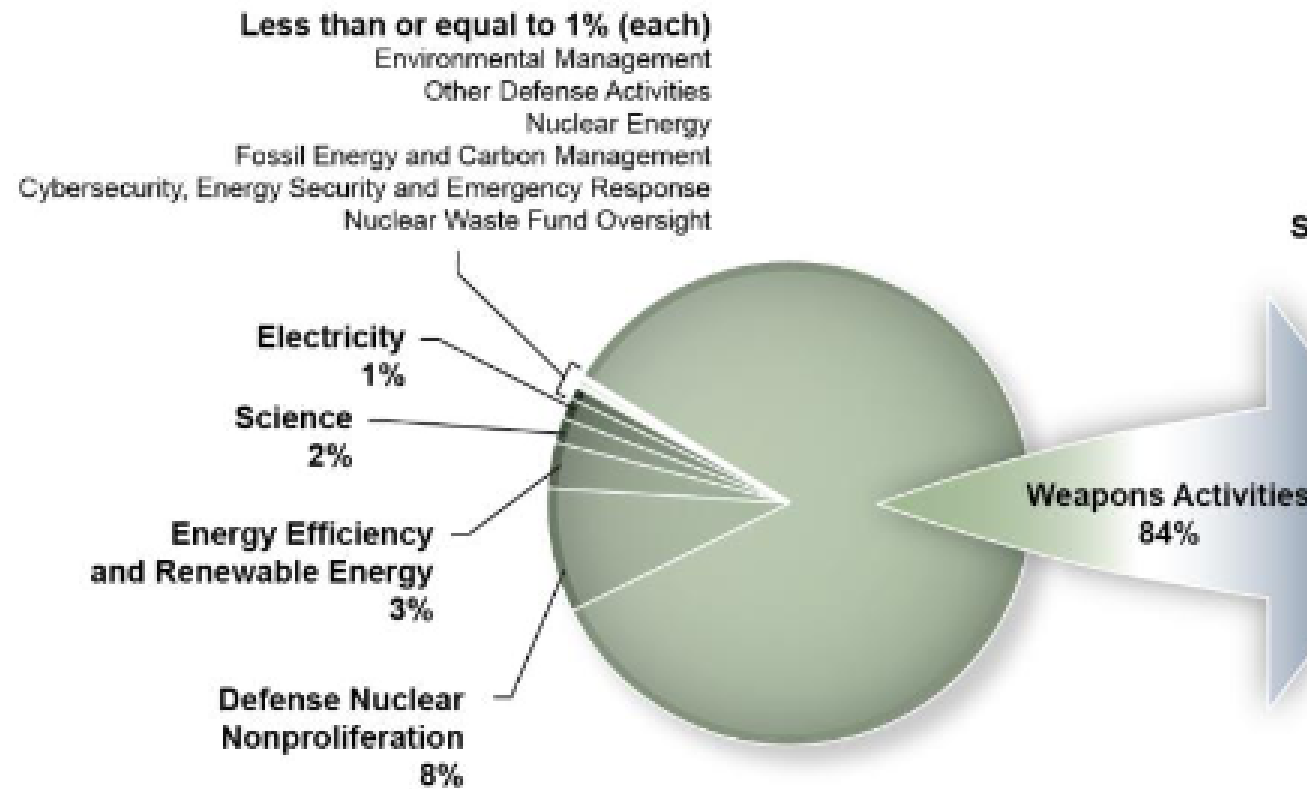


Sandia
National
Laboratories

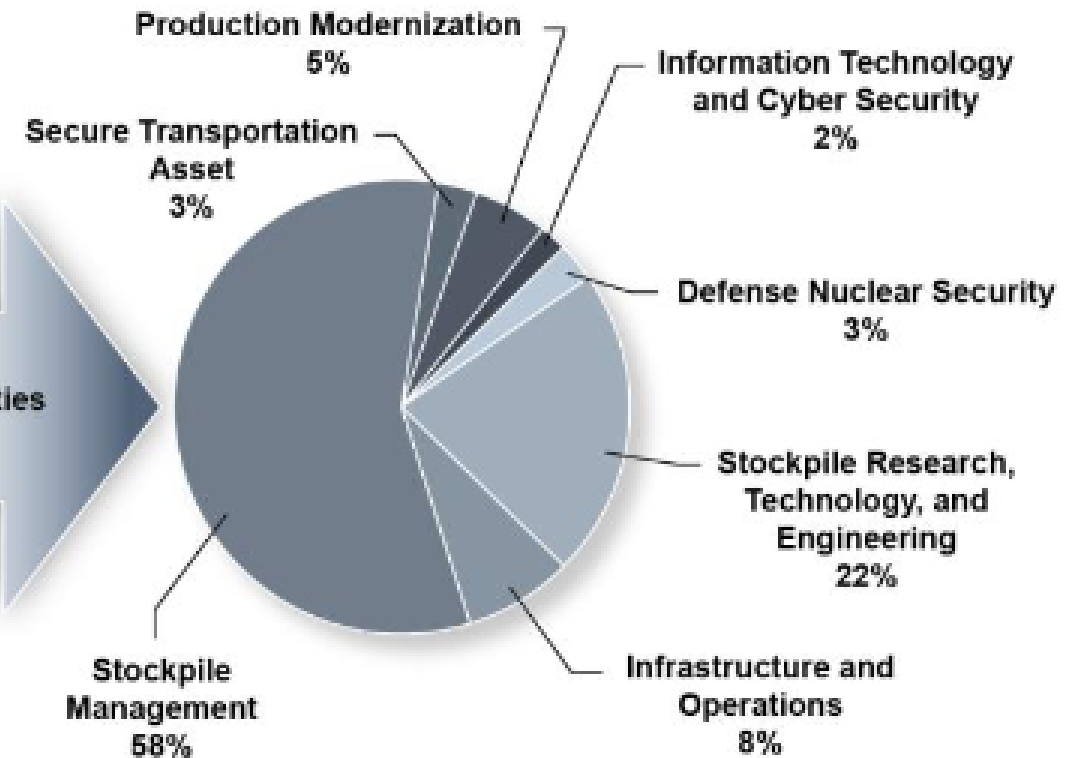
**FY 2024 DOE request – site funding by source
(total SNL FY 2024 request = \$3,188 million)**

**SNL split for the FY 2024 Weapons Activities
President’s Budget Request (\$2,681 million)**

FY 2024 Site Funding by Source



FY 2024 Site Funding for Weapons Activities



Sandia National Laboratories

WORKFORCE AT A GLANCE



14,136
EMPLOYEES

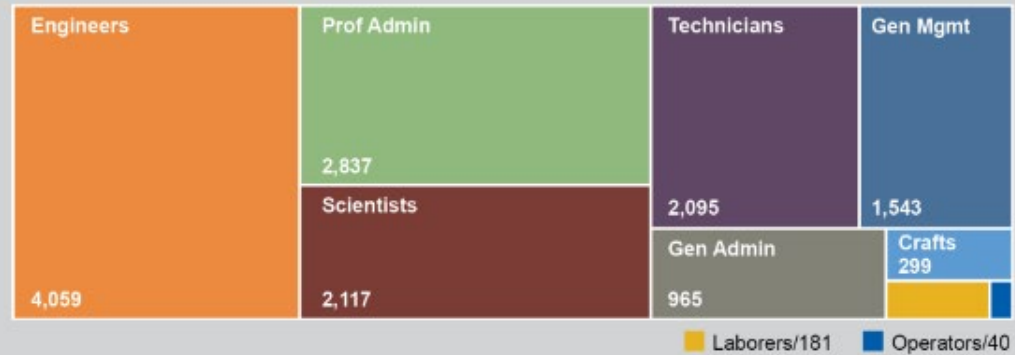
44 AVERAGE AGE

9.7 AVERAGE YEARS OF SERVICE

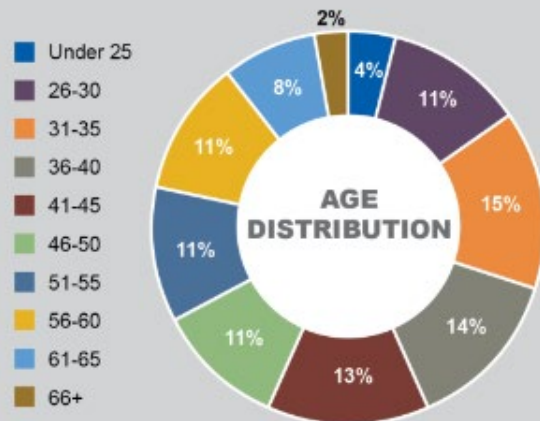


In 2021 & 2022...

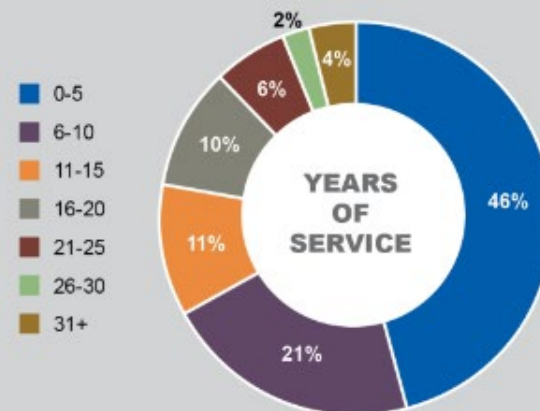
2380 HIRES
2074 SEPARATIONS
306 NET GAIN



SNL total workforce by Common Occupational Classification System



SNL workforce distributed by age group



SNL workforce distributed by years of service

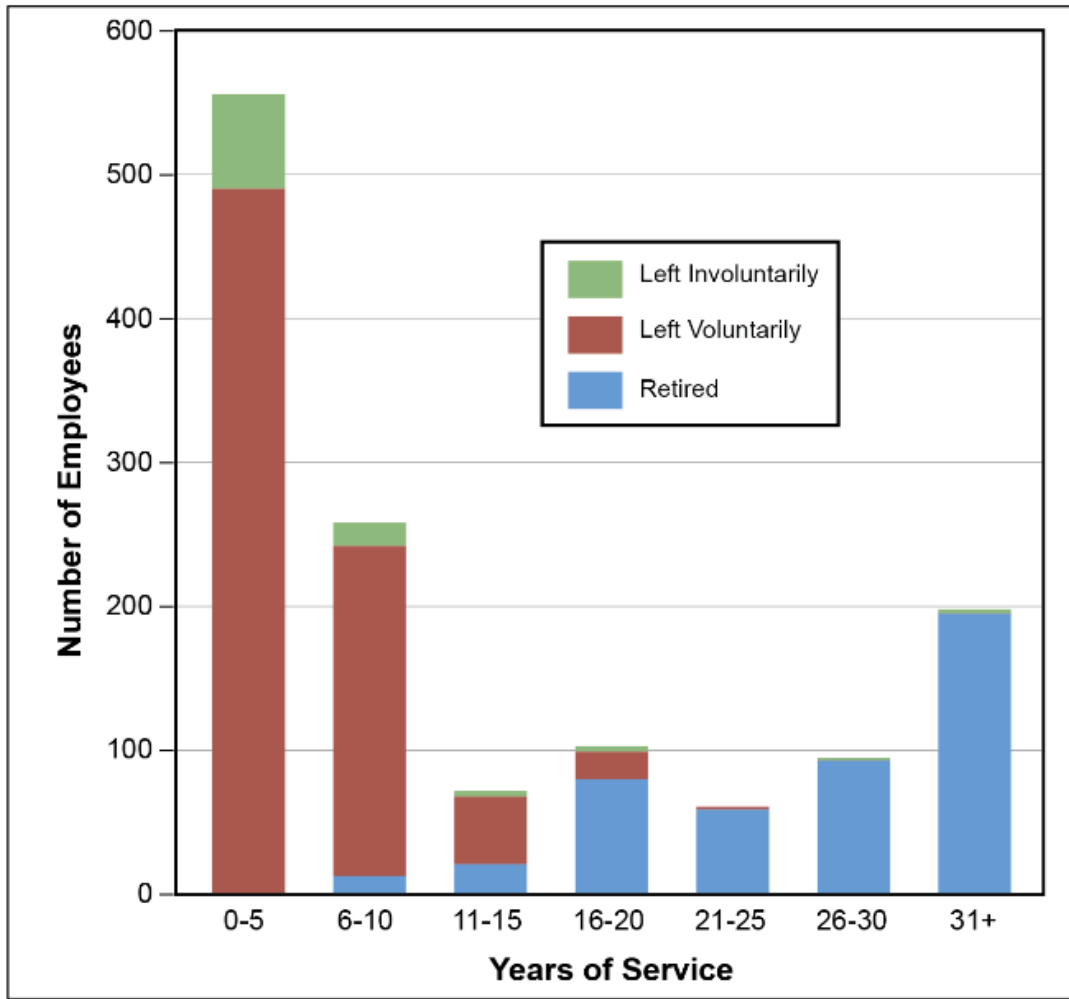


Figure F-13. SNL separations by years of service

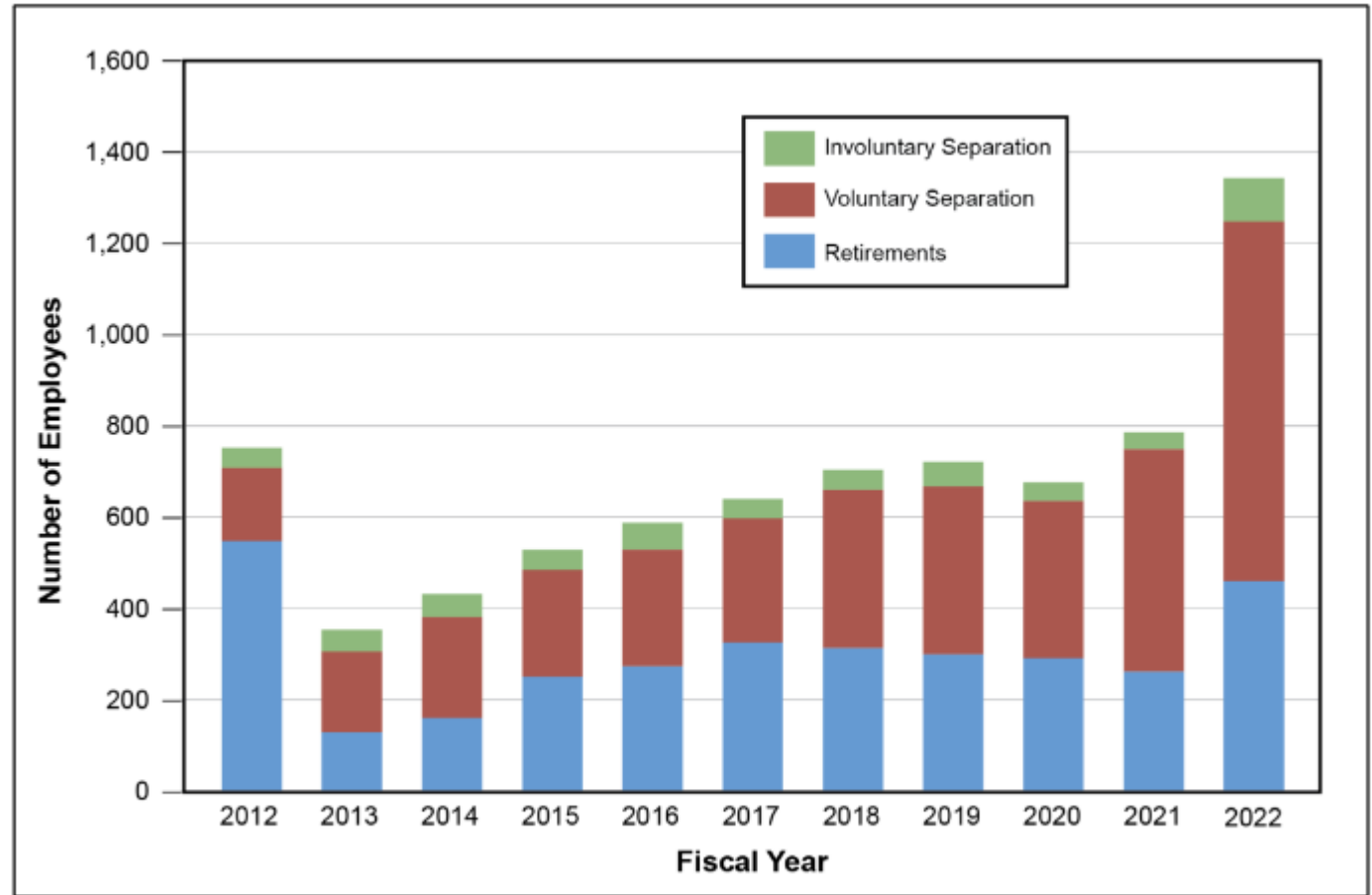


Figure F-15. SNL employee separation trends



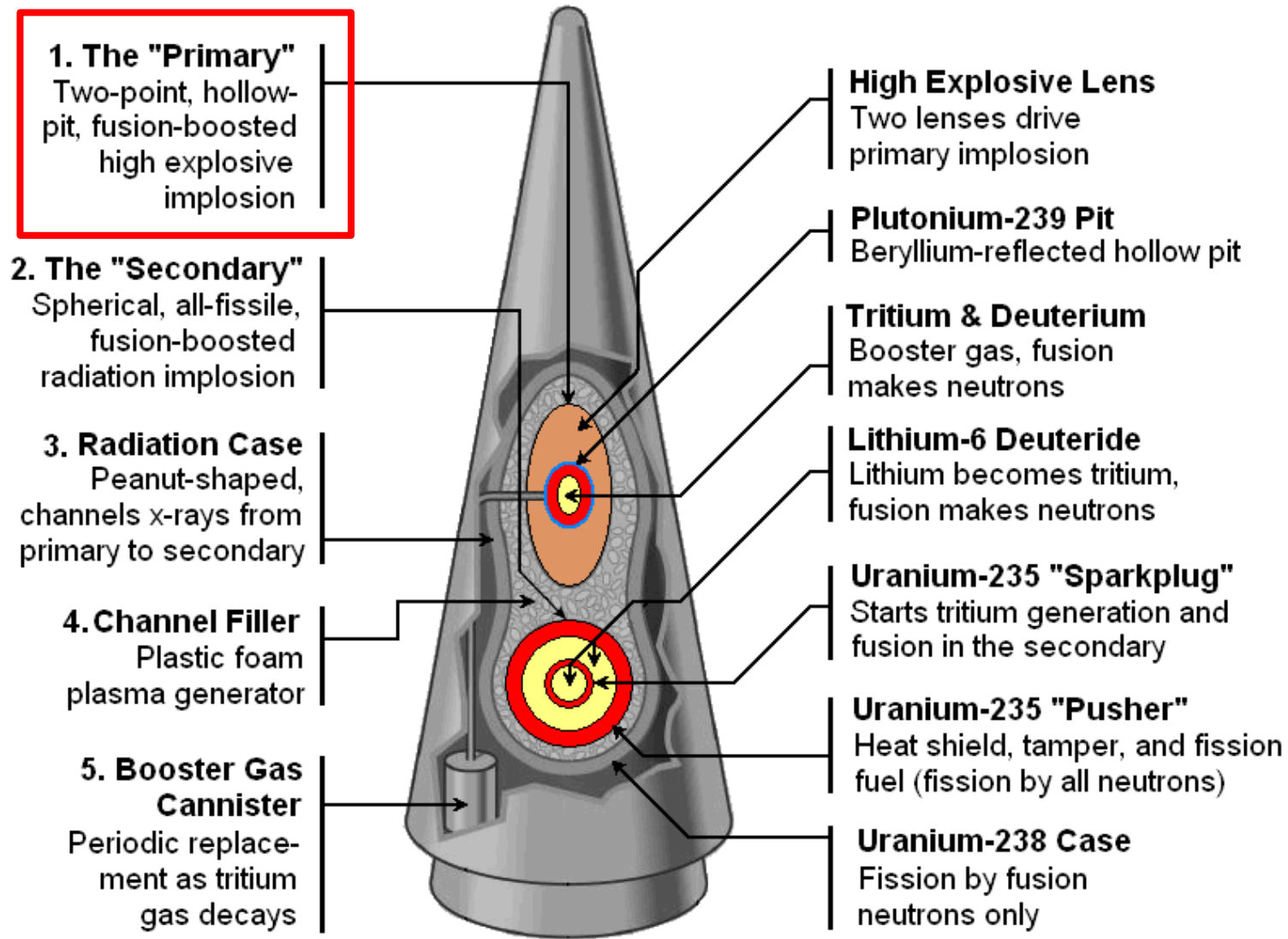
Strategic Partnership Projects (work for others)	
DoD	\$1,102.1 million
DHS	\$86.5 million
Other federal agencies	\$124.7 million
Non-federal entities	\$27.4 million
CRADAs & licences/royalties	\$9.8 million
Inter-Entity Work	\$46.4 million
Total SPP	\$1,396.9 million
Total Sandia revenue	\$4,784 million



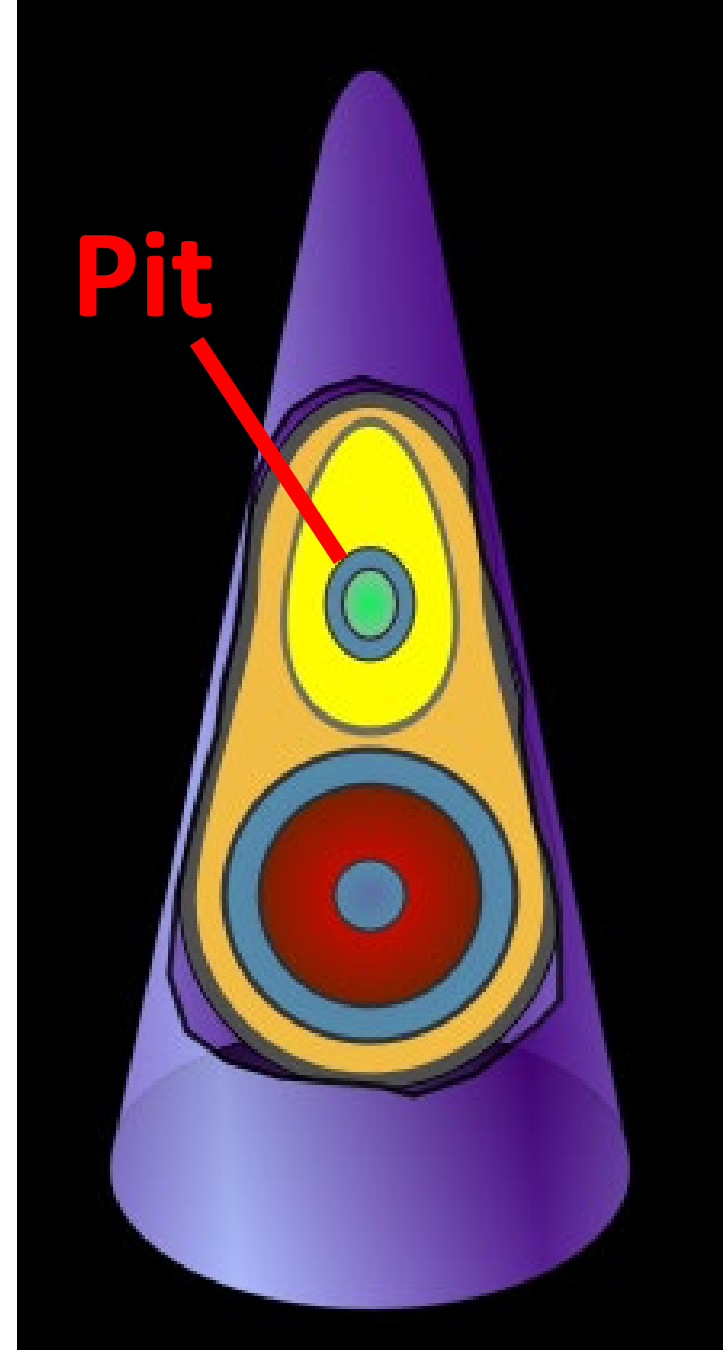


Modern U.S. ballistic missile warhead, late 1980s

W88 Warhead for Trident D-5 Ballistic Missile



Sources for illustrations: Wikipedia





Mark 21/W87 on single RV MM III bus, the present deployment configuration.

This RV is too wide and heavy for MIRVing MM III.

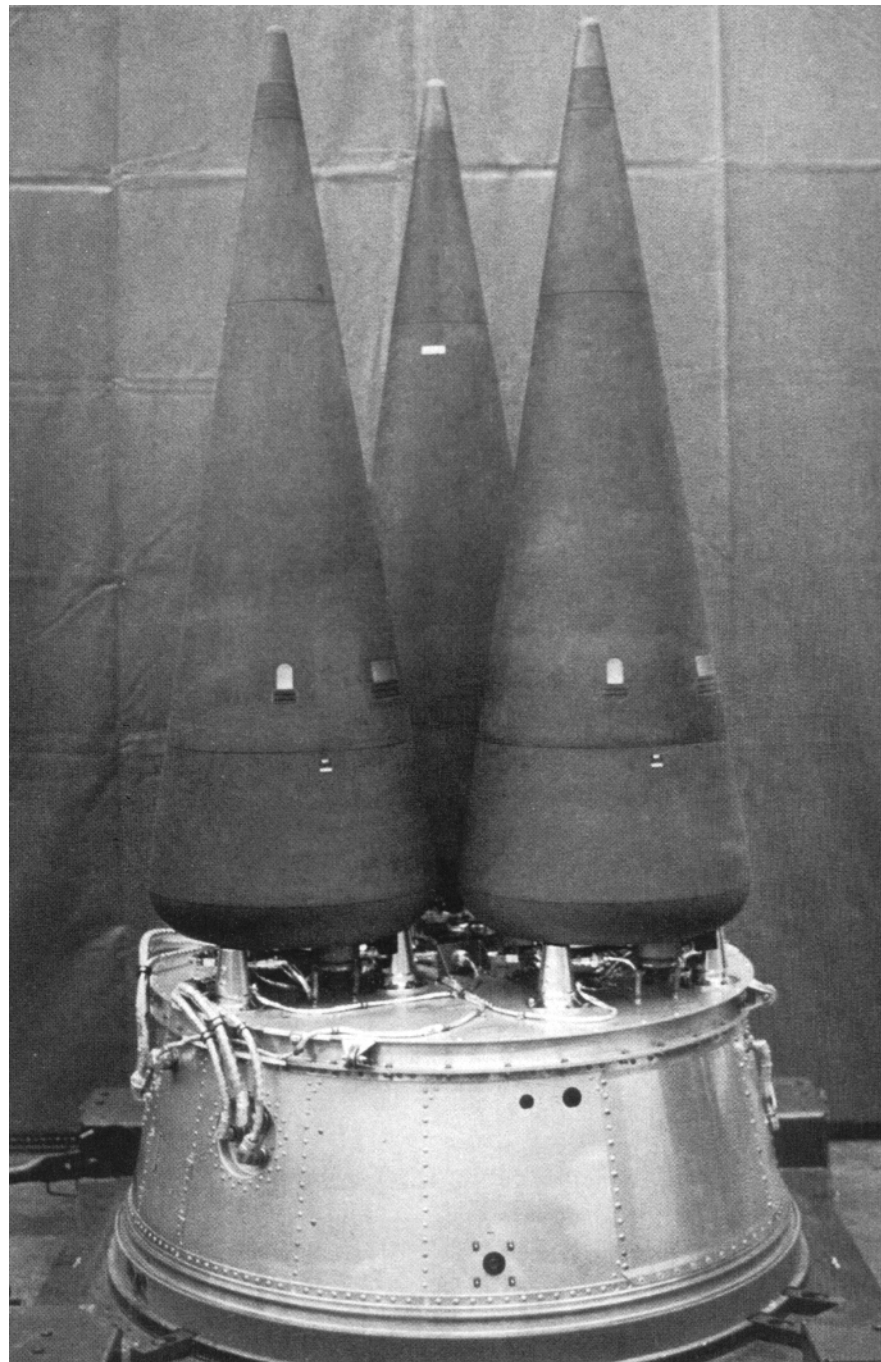
MM III in operation.

Result.

Ground Based Strategic Deterrent (GBSD) “Sentinel” system. Deployment 2030-2037. A \$85-140+ billion program plus warheads, according to DoD’s Cost Analysis and Program Evaluation (CAPE). 400 deployed, MIRV-capable (3 per missile for some fraction of 400, perhaps 200 as at present). To be armed with new W87-1 warheads (W87-0s initially). Some 250-1,500 new-pit W87-1s are desired, starting in 2030.



This is the origin of the 80+ pit per year by 2030 requirement.



**Minuteman III
Mk-12 MIRV
Warheads (W78s),
tested in this
configuration in
the last
administration.**

Some Key Takeaways

- LANL's new production mission is a key enabling program for a hybrid war against now-combined Russia and China. The U.S. has already lost.
- LANL's new mission is absurd, based on poor engineering and management, and is vulnerable to "off-ramps." With help, LANL has failed at this mission four times before and is in the process of failing again, with increasing visibility.
- It will be impossible to meet climate, environmental, or social goals under conditions of empire and a nuclear arms race, for political, fiscal, and social reasons.
- Santa Fe and Northern New Mexico, and NM as a whole, are uniquely placed to make an enormous, material contribution to peace and social development.

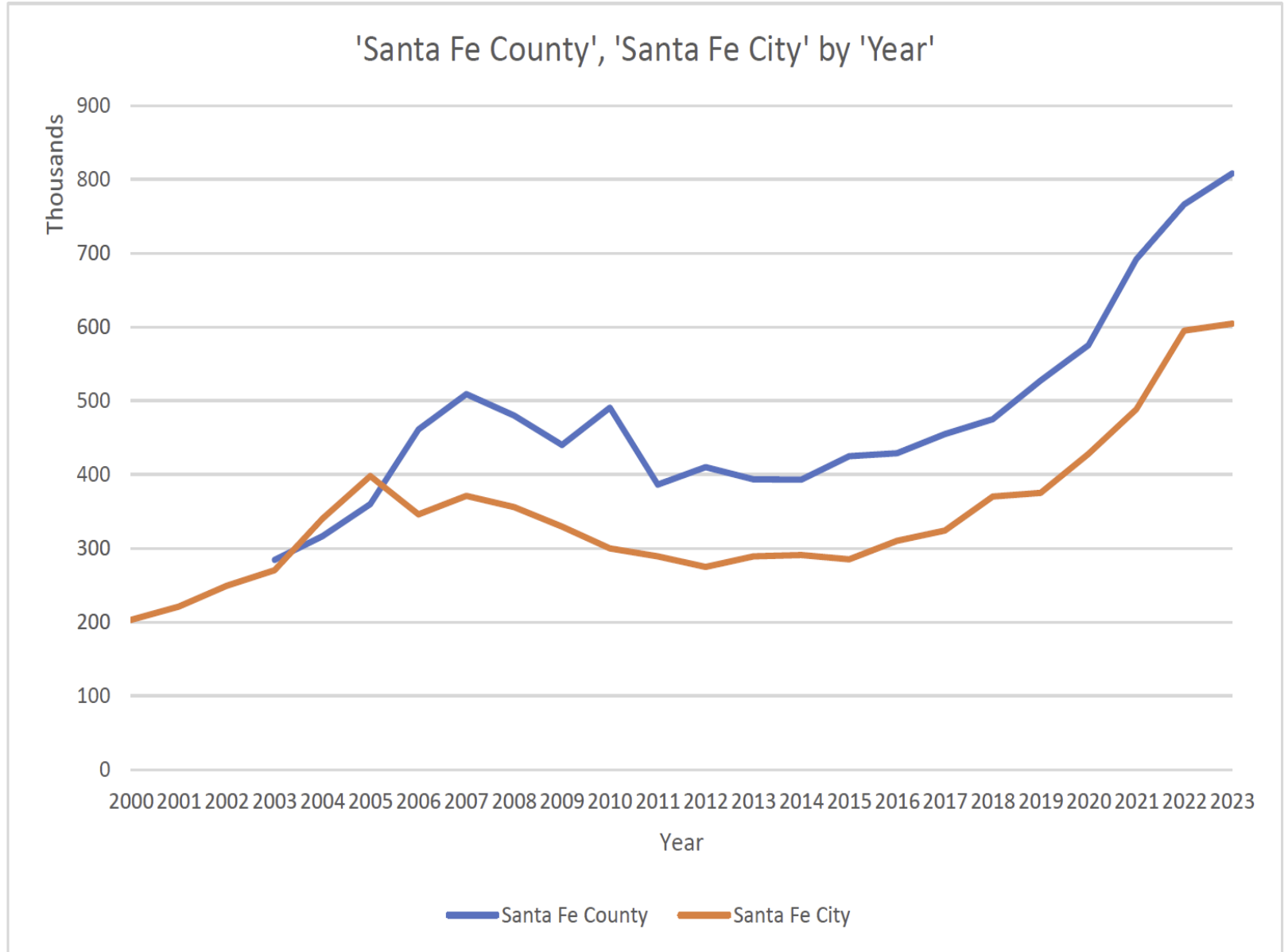
Median Household Income (MHI) for Three New Mexico Counties, 2018-2021

Year	US	New Mexico	Rio Arriba	Santa Fe	Los Alamos	LA/RA	LA/SF
2018	\$73,030	\$48,280	\$41,511	\$60,187	\$124,947	3.01	2.08
2019	\$78,250	\$53,110	\$44,579	\$61,791	\$122,001	2.74	1.97
2020	\$76,660	\$50,910	\$47,400	\$58,898	\$111,724	2.36	1.90
2021	\$76,330	\$53,460	\$47,042	\$67,311	\$134,050	2.85	1.99

From 2020 to 2021, MHI in Los Alamos and Santa Fe counties jumped by 20% and 14%, respectively; MHI in Rio Arriba declined by 1%. Data from 2022 is not yet available.

Median Home Prices, Santa Fe County and City

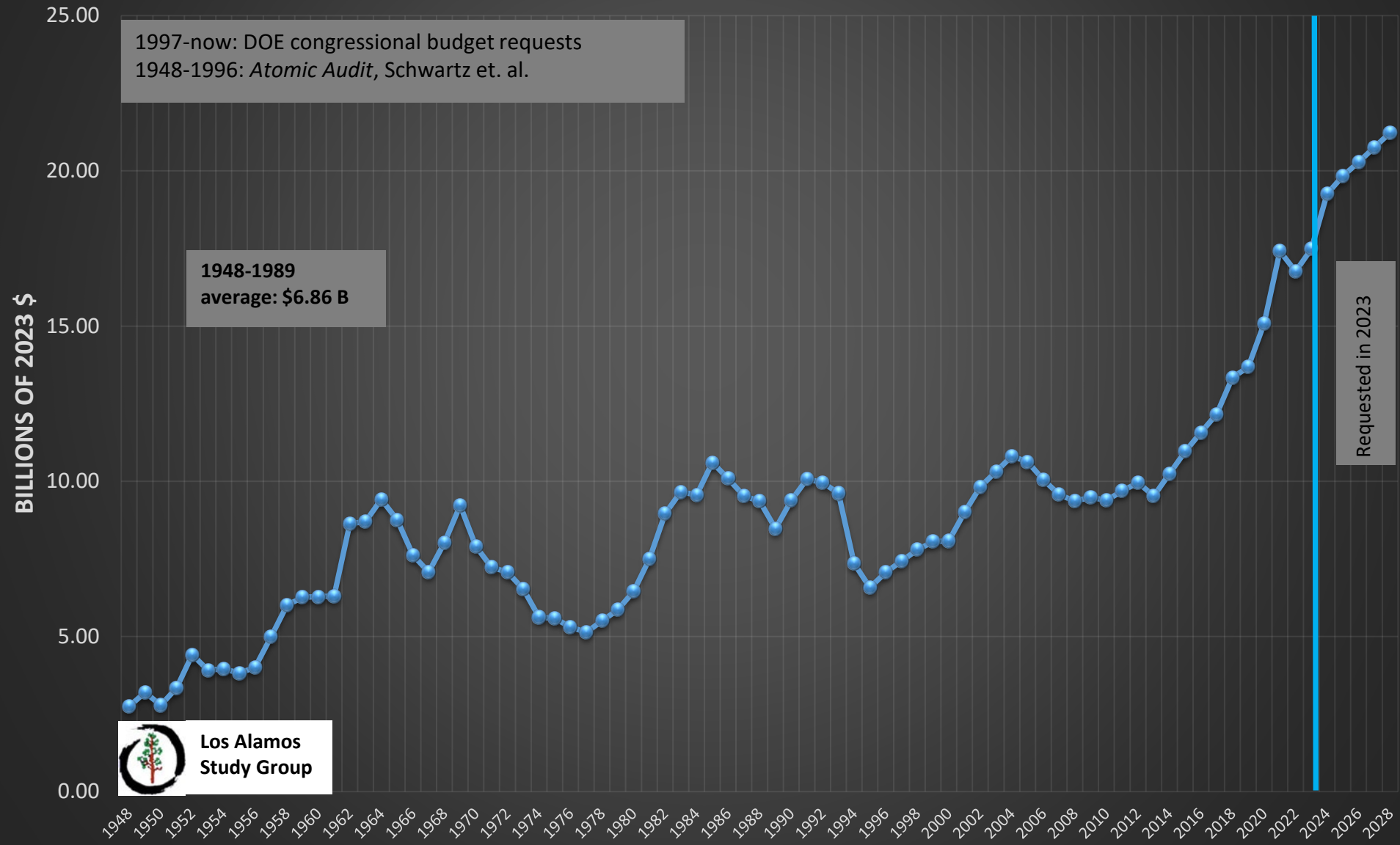
Year	Santa Fe County	Santa Fe City
2000		\$203,000.00
2001		\$221,000.00
2002		\$249,450.00
2003	\$284,313.00	\$270,475.00
2004	\$316,661.00	\$340,000.00
2005	\$360,000.00	\$398,000.00
2006	\$461,313.00	\$346,125.00
2007	\$508,900.00	\$371,000.00
2008	\$480,000.00	\$355,688.00
2009	\$440,000.00	\$329,500.00
2010	\$490,500.00	\$300,000.00
2011	\$386,250.00	\$289,000.00
2012	\$410,000.00	\$274,855.00
2013	\$393,500.00	\$289,000.00
2014	\$393,000.00	\$291,000.00
2015	\$425,000.00	\$285,000.00
2016	\$428,875.00	\$310,000.00
2017	\$454,816.00	\$324,000.00
2018	\$475,000.00	\$370,000.00
2019	\$527,500.00	\$375,000.00
2020	\$575,153.00	\$428,000.00
2021	\$691,803.00	\$488,500.00
2022	\$765,950.00	\$595,000.00
2023	\$808,050.00	\$604,500.00



One way NNSA's nuclear weapons "program of record" has evolved is in its cost, which has risen relentlessly in constant dollars since its inception.

Spending to the right of the 2023 line is that requested. No inflation estimates have been applied to these requests.

AEC/ERDA/DOE/NNSA Annual Spending for Nuclear Weapons Research, Development, Testing, and Production: NNSA Weapons Activities with administrative costs included; constant 2023\$; ≥FY24 requested, in then-year \$. Updated 11/16/23.

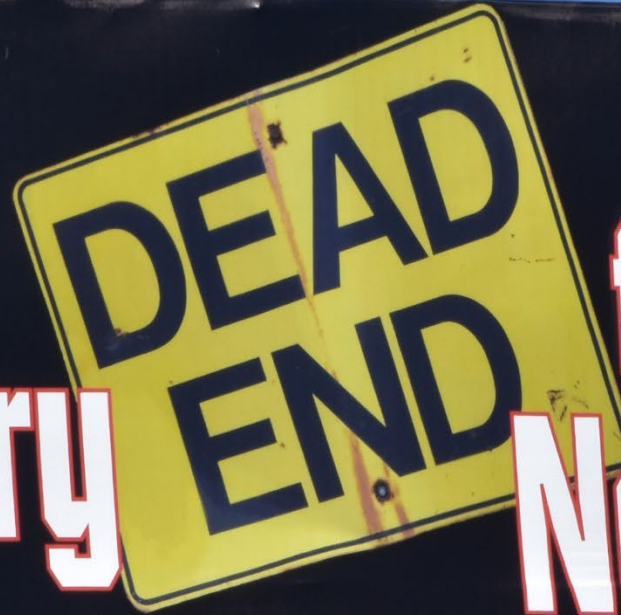


1997-now: DOE congressional budget requests
1948-1996: Atomic Audit, Schwartz et. al.

1948-1989
average: \$6.86 B

Requested in 2023

**Plutonium
bomb factory**



**for
New Mexico**

lasg.org



LAMAR

COMO

It is for him that is lonely or in prison to dream of fellowship, but for him that is of a fellowship to do and not to dream.

Forsooth, brethren, fellowship is heaven and lack of fellowship is hell; fellowship is life and lack of fellowship is death; and the deeds that ye do upon the earth, it is for fellowship's sake that ye do them.

William Morris, *A Dream of John Ball*, (concerning the Peasants Revolt of 1381)

SLIDES END HERE