

The New Nuclear Arms Race and U.S. Plutonium Pit Production

Presentation to the
Washington Against Nuclear Weapons Coalition

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Forward

“In a world where millions of children and families live in inhumane conditions, the money that is squandered and the fortunes made through the manufacture, upgrading, maintenance and sale of ever more destructive weapons, are an affront crying out to heaven.” Pope Francis, 2019, in Nagasaki, Japan.

“Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed... Under the cloud of threatening war, it is humanity hanging from a cross of iron.”
President Eisenhower, 1953



Part 1: The New Nuclear Arms Race

- Ukraine Crisis – Putin orders “deterrence forces of the Russian army to a special mode of combat duty...” Any intervening country could face “consequences they have never seen.” Last arms control with U.S. likely dead.
- China, India, North Korea, Pakistan, Russia and United Kingdom all expanding nuclear stockpiles.
- China is building some 600 new ICBM silos.
- New North Korean policy: automatic nuclear retaliation.
- Russia and China will drive major new funding increases to already bloated U.S. nuclear weapons programs.

New Nuclear Arms Race

- The U.S. still has 3,750 active nuclear weapons; dismantles only some 75 warheads a year.
- The U.S. is rebuilding existing nuclear weapons with new military capabilities; will produce new-design warheads as well.
- New production plants expected to be operational until at least 2080.
- New heavy bombers, submarines and ballistic and cruise missiles to deliver new nuclear warheads.

This second nuclear arms race is more dangerous than the first

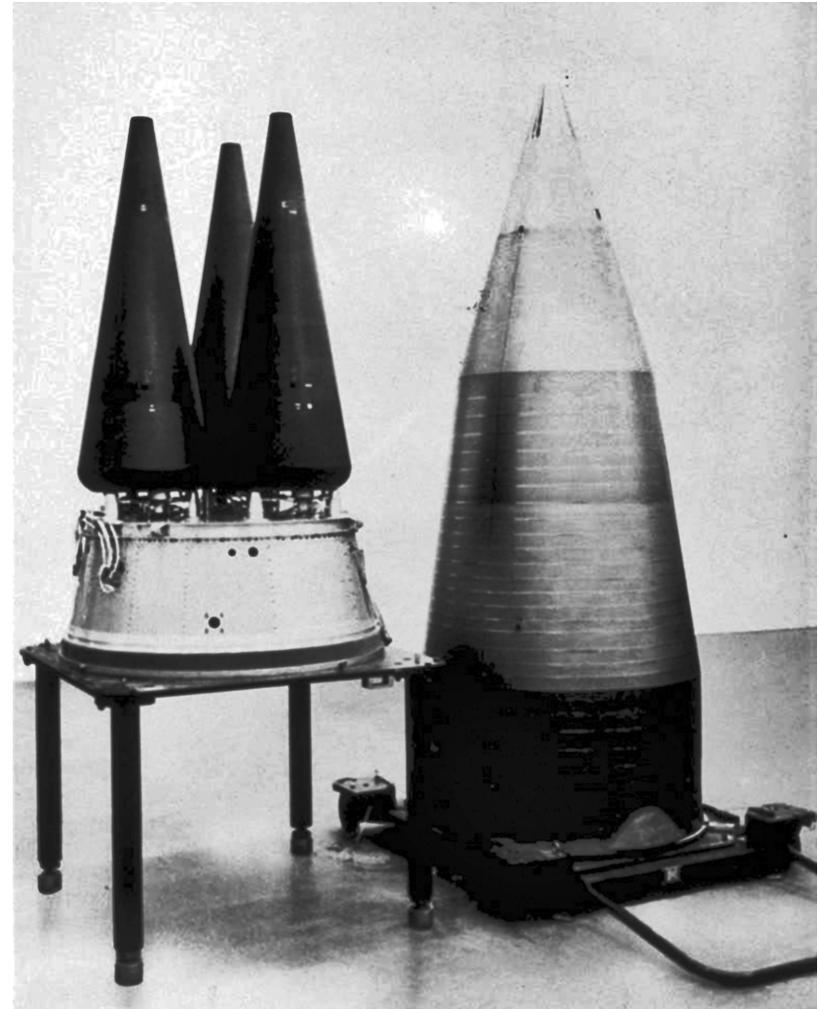
- Bilateral “Mutually Assured Destruction” gone. Now nine nuclear weapons powers with competing interests; complexities that didn’t exist during the Cold War.
- Increased chance of regional nuclear wars. Ex-State Secretary Pompeo: almost nuclear war btw India-Pakistan.
- Terrorists such as Al Qaeda or ISIS could acquire nukes.
- U.S., Russia, China, India, Pakistan, Japan, South Korea, North Korea and Australia developing hypersonic weapons.
- Cyber attacks may not be deterrable and could cripple defenses and/or hijack command of nuclear weapons.
- Artificial intelligence could have unforeseen impacts on the command and control of nuclear weapons.

Deterrence?

- After Obama's 2010 Nuclear Posture Review:
“The new guidance requires the United States to maintain significant counterforce capabilities against potential adversaries. The new guidance does not rely on a “counter-value” or “minimum deterrence” strategy.” Report on Nuclear Implementation Strategy of the United States, Department of Defense, June 2013
- That is why we have thousands of weapons for nuclear warfighting rather than the few hundred needed for deterrence-only.
- Today, Putin has turned “deterrence” on its head. Nuclear weapons enabled him to invade Ukraine.

U.S. \$2 Trillion “Modernization”

- New intercontinental ballistic missiles, new cruise missiles, heavy stealth bombers and submarines
- Rebuilt warheads with new military capabilities and completely new-design nuclear weapons.
- Perpetual cycle of “Life Extension Programs.” In short, it’s nuclear weapons forever!



Status of U.S. nuclear warheads

- 100 kiloton W76-1 warhead now hard-target killer with new arming, fuzing and firing set.
- Low-yield W76-2 recently deployed on subs.
- 450 kiloton MIRVed sub-launched W88 to be refreshed with new explosives and arming, fuzing and firing set.
- MIRVed W87-1 warhead for new ICBMs.
- Variable yield B61-12, world's first nuclear "smart" bomb, soon to be deployed in Europe.
- W80-4 Long-Range Stand-Off cruise missile warhead begins production in 2025. Perfect first-strike weapon.
- Funding for new-design W93 sub-launched warhead just quadrupled (mainly for the United Kingdom).

(MIRV = multiple independently targetable reentry vehicle, i.e. multiple warheads)

National Nuclear Security Administration's New Production Plants

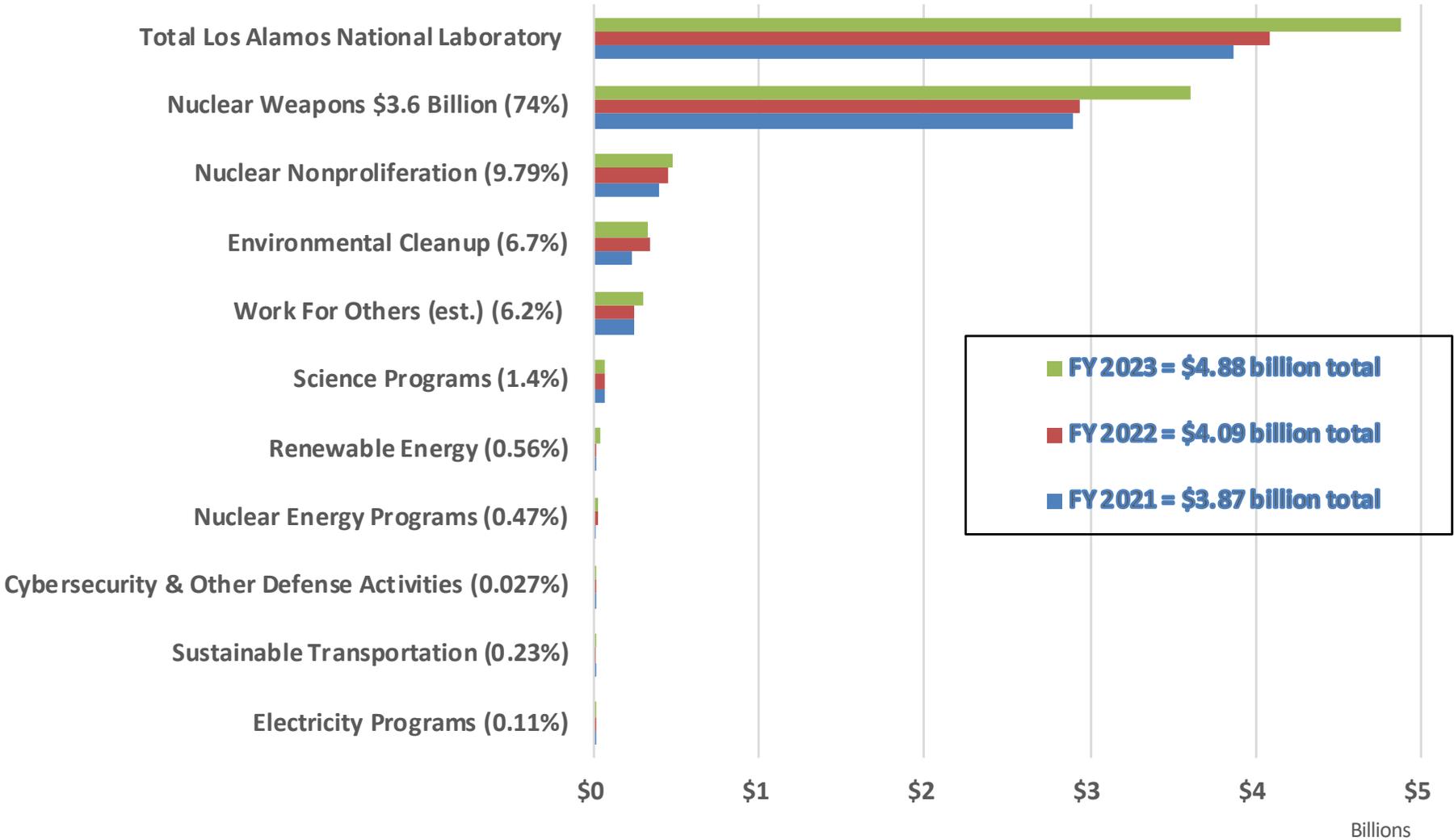
- New Kansas City Plant now producing more than 100,000 nonnuclear components each year. Its factory space increased by 50% through leases.
- New Uranium Processing Facility at the Y-12 Plant near Oak Ridge, Tennessee. Its components put the “H” in H-bomb.
- Around \$15 billion in direct and indirect upgrades for plutonium infrastructure at Los Alamos Lab.
- New plutonium bomb core facility at the Savannah River Site in South Carolina will cost >\$20 billion (new World Trade Center cost \$3.8 billion).

LANL Central Mission

Central Mission of Los Alamos National Laboratory



Los Alamos National Laboratory FY 2023 Congressional Budget Request (In billions of dollars)



Expanded Plutonium “Pit” Bomb Core Production

- Key to nuclear weapons
“modernization” is expanded production of plutonium “pits.” A pit is the radioactive core or “trigger” of modern two-stage thermonuclear weapons.
- A plutonium pit can also be an atomic bomb by itself, as the destruction of Nagasaki showed.
- The U.S. has not had industrial-scale pit production since a 1989 FBI raid investigating environmental crimes shut down the Rocky Flats Plant near Denver.

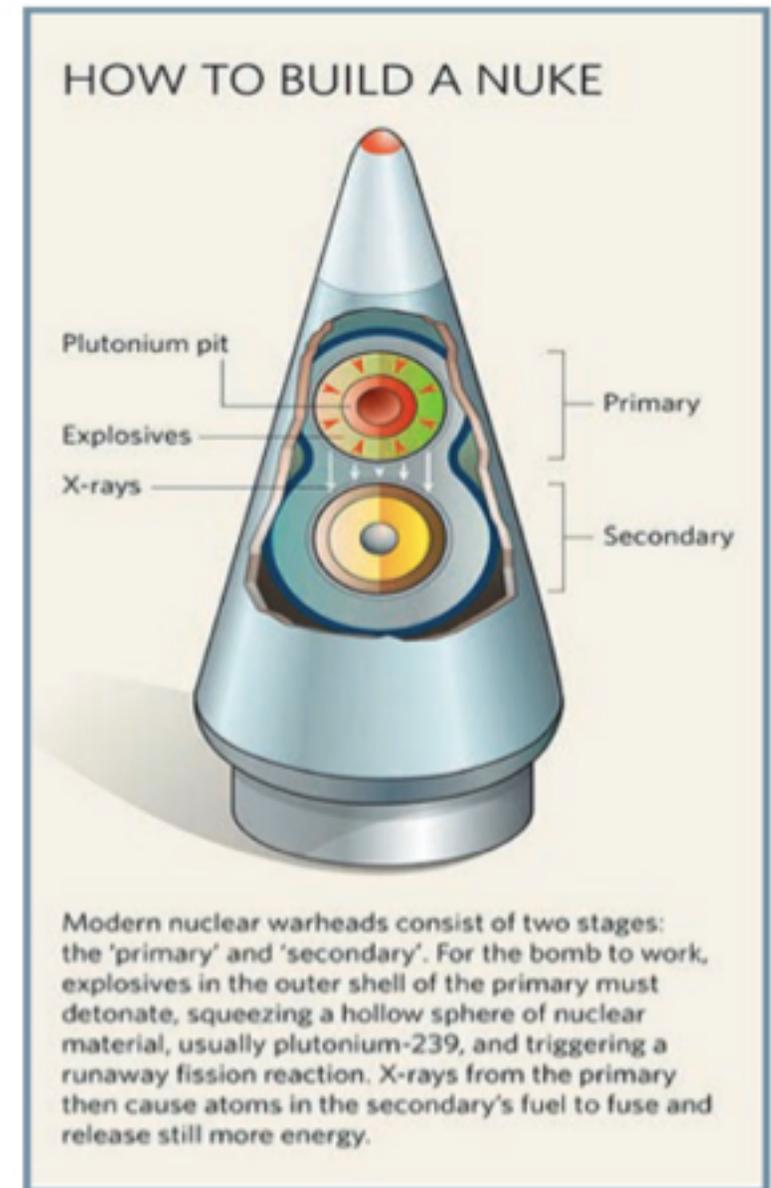


image credit: Nature

National Nuclear Security Administration Plans

- 30 or more plutonium pits per year at the Los Alamos National Laboratory by 2026.
- 50 or more pits per year at the Savannah River Site in South Carolina by 2030 (now delayed).
- Estimated cost >\$60 billion over 30 years.
- Biden's FY 2023 budget increased funding for plutonium pit bomb core production by 40% to \$2.4 billion in 2023 alone. Congress added \$500 million to that!

Expanded Plutonium Pit Production Is Unnecessary

- No production is scheduled to maintain the safety & reliability of *existing* nuclear stockpile. Instead it is for new-design nuclear weapons.
- A 2006 independent study concluded pits last at least a century. Livermore Lab: Pu >150 years.
- At least 15,000 existing pits are stored at the Pantex Plant near Amarillo, Texas.
- Future pits will be heavily modified, possibly raising reliability issues, thereby degrading national security and/or prompting resumed testing.

Part II: What you can do

Motivation:

Why is Nuclear Disarmament Necessary?

- “The indefinite combination of human fallibility and nuclear weapons will destroy nations.”
- “Rationality will not save us. I want to say, and this is very important: at the end we lucked out. It was luck that prevented nuclear war.”
- “There is no way to reduce the risk to acceptable levels, other than to first eliminate the hair-trigger alert policy and later to eliminate or nearly eliminate nuclear weapons.” - Robert McNamara, Defense Secretary under Presidents Kennedy and Johnson, *“Lessons Learned from the Cuban Missile Crisis”*

Motivation continued

Effects of a 300 kiloton ICBM warhead targeting New York City:

- A 3-mile radius blast wave that destroys almost all houses and skyscrapers.
- Direct radiation (gamma rays and neutrons) lethal within a one-mile radius.
- Lethal radioactive fallout drifting thousands of square miles downwind.
- Mass fire within a radius of at least 3 miles.
- Over one million people dead and twice as many injuries in the first 24 hours.

All-out nuclear war between US and Russia:

- At least 360 million quick deaths.
- Utter collapse of international economic systems.
- Medical infrastructure incapable of addressing the scale of suffering.
- More than 5 billion people could starve to death because of nuclear winter.

Source: Nowhere to hide, How a nuclear war would kill you, François Diaz-Maurin, October 20, 2022, <https://thebulletin.org/2022/10/nowhere-to-hide-how-a-nuclear-war-would-kill-you-and-almost-everyone-else/>

What Activists Have Done

- The National Nuclear Security Administration (NNSA) has tried four times through National Environmental Policy Act processes to expand plutonium pit production. We beat them each time.
- This fifth time is by far the most serious attempt. NNSA refuses to complete a nation-wide programmatic environmental impact statement (PEIS).
- In June 2021 Nuclear Watch New Mexico, Savannah River Site Watch and Tri-Valley CAREs sued for a PEIS.
- Two days ago the court rejected NNSA's Motion to Dismiss. Game on!

To-do

- Don't underestimate the mundane: talk to your neighbors and families, LTEs, op-eds, radio talk shows, etc.
- Support the Treaty on the Prohibition of Nuclear Weapons (TPNW), which the Vatican was the first to sign and ratify.
- Support H. Res 77 (Rep. McGovern (D-MA) and Rep. Blumenauer (D-OR)), which calls on the United States to embrace the goals and provisions of the TPNW.
- Recommended reading: *The Doomsday Machine* by Daniel Ellsberg and *The Bomb* by Fred Kaplan.

To-do continued

- Alliance for Nuclear Accountability's DC Days April 23-26.
- Take part in National Environmental Policy Act processes.
 - Los Alamos Lab site-wide environmental impact study this Spring.
 - If lawsuit is successful, programmatic environmental impact study on expanded pit production.
- Link up with Seattle Archbishop Paul Etienne.
- Work on Kitsap sub base, most deployed nuclear weapons in U.S.
- Work on Congress, but in particular:
 - Sen. Patty Murray, chair Senate Appropriation Committee.
 - Rep. Adam Smith (WA-9). He may be chair of House Armed Services Committee again.
 - Rep. Pramila Jayapal (WA-7), chair Congressional Progressive Caucus.

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