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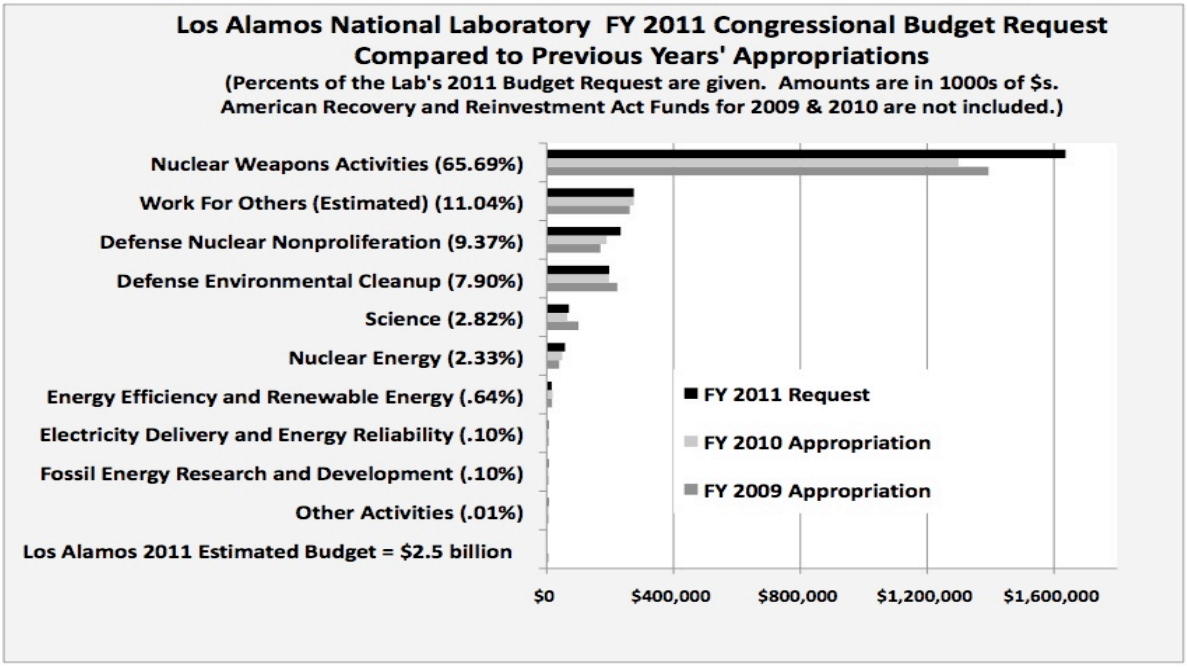
A Primer on Nuclear Weapons Programs at Los Alamos

Background: The Los Alamos National Laboratory (LANL) in north central New Mexico was originally founded as "Site Y" during World War II as the secret atomic weapons lab for the Manhattan Project. This wartime effort culminated in the "Trinity Test," the first atomic explosive device, detonated near Alamogordo, New Mexico on July 16, 1945, which was followed by the bombs dropped on Hiroshima and Nagasaki, Japan on August 6 and 9, 1945. After the war Los Alamos developed nuclear weapons, the modern "H-bombs."

Currently, five of the seven warhead types in the planned enduring stockpile, the B61 gravity bomb, sub-launched W76, W78 for ICBMs, W80 for sea-launched cruise missiles and the sub-launched W88, are LANL designs. The other two warheads, the B83 strategic bomb and W87 for ICBMs, were designed at Los Alamos' competing lab, Lawrence Livermore in California.

The Business of Bombs: The University of California (UC) has managed Los Alamos since the Lab's inception in 1942. However, in June of 2006 management of the Lab was taken over by Los Alamos National Security, LLC; a for-profit corporation of partners that includes UC, Bechtel Corporation, Washington Group International, and BWX Technologies.

Despite popular rhetoric about mission diversification at Los Alamos, funding for its nuclear weapons programs continues to increase. The DOE has requested $2.2 billion for LANL for fiscal year 2011, of which $1.64 billion is for nuclear weapons research and production. There will be an estimated $300 million in funding from non-DOE sources, bringing the Lab's total institutional budget to around $2.5 billion. Of that, a full two-thirds is for core research, testing and production programs for nuclear weapons.



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Current Nuclear Weapons Missions at LANL:

- Research, design, development and simulated testing of nuclear weapons;
- Limited production of plutonium pits (currently approved for up to 20 per year);
- Manufacture of nuclear weapon detonators for the stockpile;
- Capabilities for R&D and fabrication of components containing enriched uranium, depleted uranium, and other uranium isotope mixtures;
- Assessment and certification of stockpiled weapons;
- Tritium (radioactive hydrogen used to boost nuclear weapons) and high explosives R&D;
- Explosive hydrodynamic testing of surrogate plutonium pits.

LANL's Plutonium Complex: LANL's Technical Area 55 hosts Plutonium Facility-4 (PF-4), the only fully functioning plutonium facility in the US for pit manufacturing. These fissile pits are themselves atomic bombs, now used as the first stage or "primary" to trigger fusion in the "secondaries" of modern thermonuclear weapons.

Capabilities at PF-4 include plutonium casting and fabrication of new pits; analytical chemistry involving special nuclear materials; destructive and nondestructive analysis of pits in support of stockpile surveillance and certification of continued functionality of the existing pits. Within TA-55 and contiguous to PF-4 is the newly built first phase of the Chemistry and Metallurgy Research Replacement (CMRR) Project, the "Radiological Lab," and the future and highly controversial CMRR "Nuclear Facility."

The CMRR-Nuclear Facility controversy is ultimately about future mission diversification (or not) at LANL. Build a new $4 billion-plus facility that is being sized to directly support production levels of up to 125 pits per year and "they will use it." Los Alamos should be diversifying its missions rather than further investing in the shrinking nuclear weapons business. Then perhaps the Lab could help better meet today's national security challenges, such as nuclear weapons proliferation, global climate change and energy dependence. In contrast, building the Nuclear Facility will further mortgage LANL's future to the receding nuclear weapons industry.

Some Brief Socioeconomics: According to 2004 Census Bureau data Los Alamos County's population is 82.1% "white persons, not of Hispanic/Latino origin," while New Mexico is the only state with a "minority" majority (54.6% of the state's population). Out of 3,141 counties in the country, Los Alamos County had the 37th highest per capita income in 2001, up from 68th in 1997, while overall New Mexico has the highest percentage (26%) of children living in poverty. Of 50 states NM ranked 48th in per capita income in 1999, down from 37th in 1959, despite the vaunted economic presence of the nuclear weapons industry in New Mexico.

For more Nuclear Watch NM resources please see:

- "Costly Plutonium "Nuclear Facility" at Los Alamos Conflicts With New National Security Goals" http://www.nukewatch.org/facts/nwd/CMRR_NF.pdf
- "Background Paper: Plutonium Operations Space Requirements and Availability at LANL" http://www.nukewatch.org/facts/nwd/PF-4_SpaceRequirements.pdf
- "Your Tax Dollars at Work: Privileged Los Alamos Lifestyle Paid for by Weapons of Mass Destruction" http://www.nukewatch.org/facts/nwd/LANLEcoFS.pdf
- Plus much, much more on the budget and nuclear weapons programs at www.nukewatch.org

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