

Analyzing the Department of Energy's Fiscal Year 2012 Budget Request

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B-61 nuclear warheads

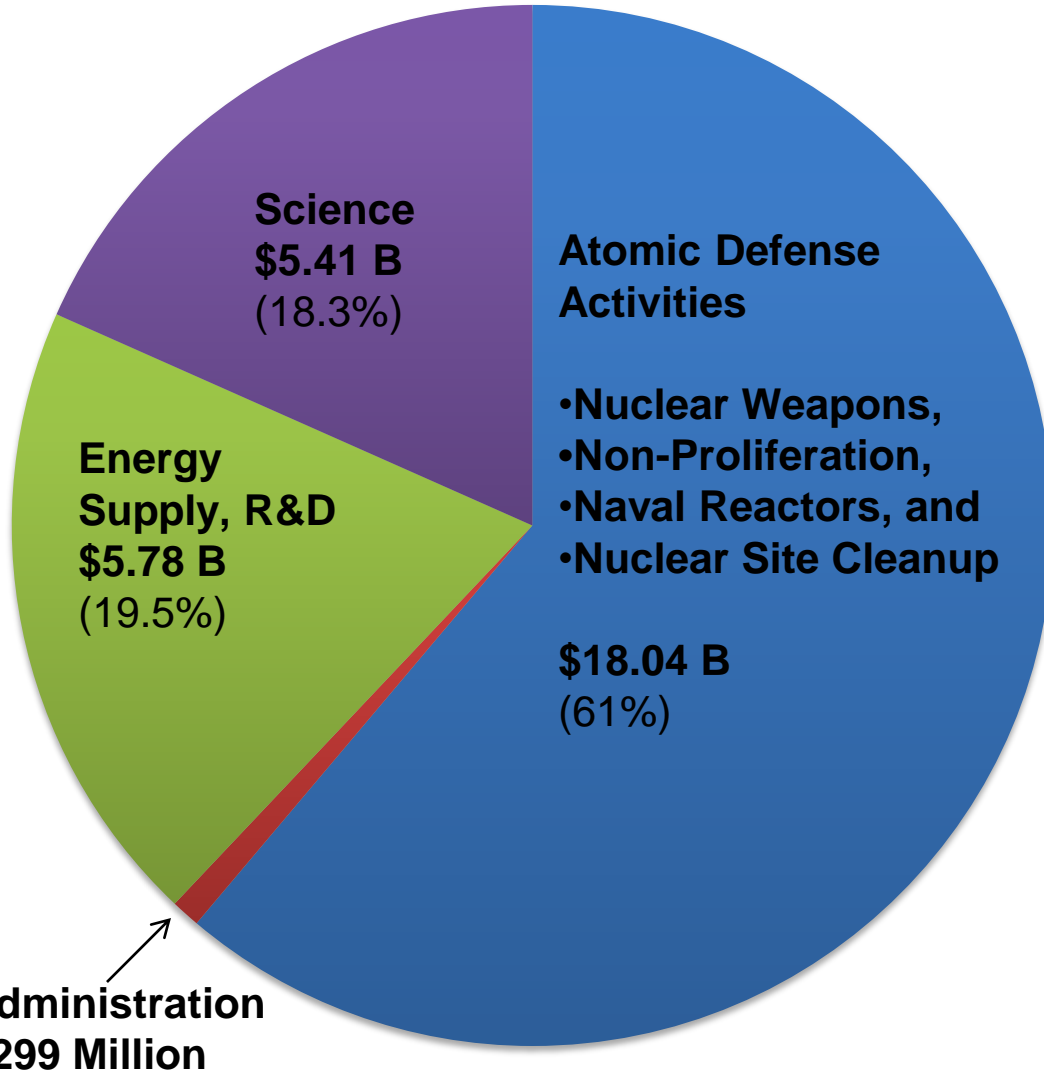


Radioactive waste container



Solar panels

U.S. Department FY 2012 Budget Request



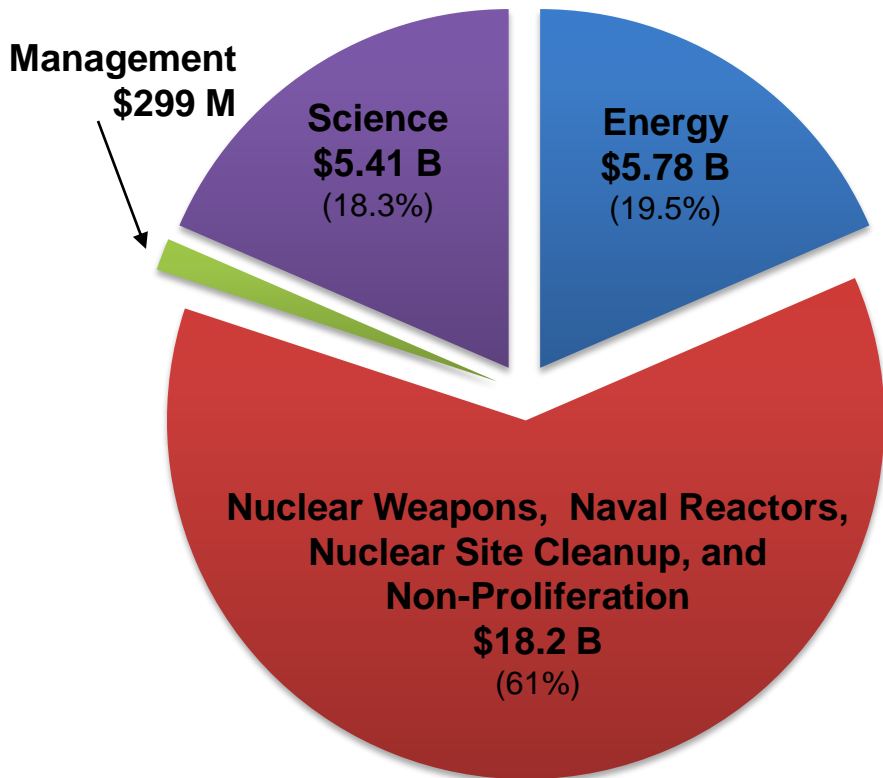
Energy Activities Include:

- Energy Efficiency and Renewable Energy: \$3.2 Billion
- Fossil Energy: \$520 Million
- Nuclear Energy (fission): \$754 Million
- Electric Transmission: \$123 Million
- Energy Information Administration: \$123 Million
- Power Marketing Administrations: \$85 Million
- Energy Loan Guarantees (subsidy costs): \$305 Million

DOE Total Request= \$29.5 Billion

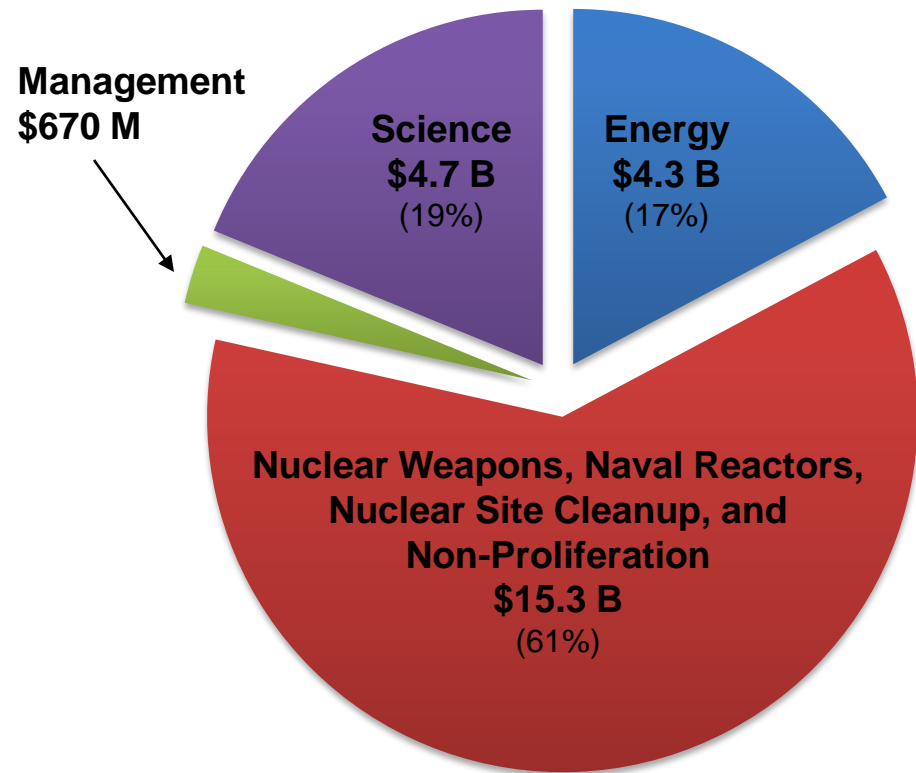
DOE spends 10 times more on military nuclear activities than for energy conservation.

Spending in the FY 2012 Budget is Similar to George W. Bush's FY 2009 Budget



Obama Administration
Energy Department
FY2012 Budget Request

Bush Administration
Energy Department
FY2009 Budget Request



More Money for Nuclear Weapons



About 46 percent of the Energy department's budget is for military nuclear activities.

Even though the DOE has not made a new nuclear weapon for 20 years, its weapons complex is spending at a rate comparable to that at the height of the nuclear arms race in the late 1950s.

Military nuclear spending has increased by more than \$1 billion since 2010.

Nuclear Weapons Modernization



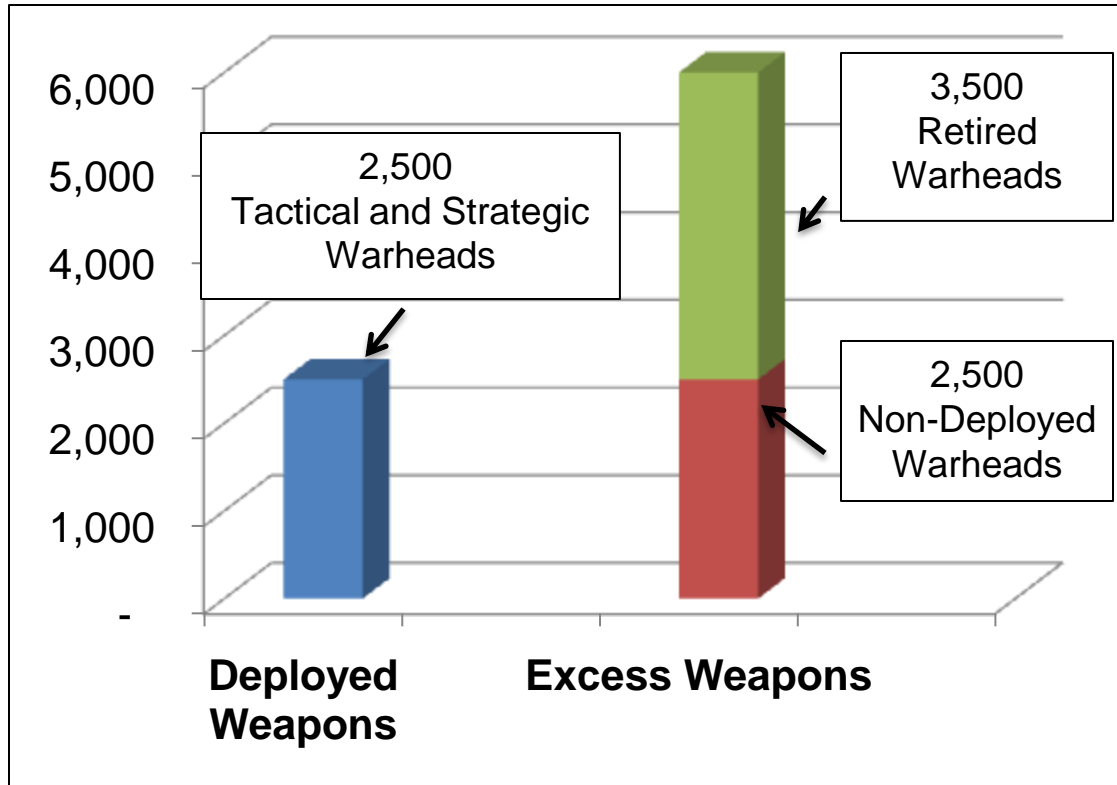
B61 warheads

Over the next 20 years, the DOE plans for the U.S. to spend about \$167 billion to maintain the U.S. nuclear weapons stockpile and refurbish the weapons research and production complex.

Although the U.S. nuclear arsenal has been cut in half since the end of the Cold War, and new weapons production stopped 20 years ago, spending on nuclear warheads has increased by more than 30 percent since the late 1980s. By 2018, NNSA spending is planned to increase by 50 percent above Cold War levels.

This does not include an additional \$100 billion projected by the Defense department for missile, bombers and submarines to deploy nuclear weapons.

The U.S. Nuclear Arsenal in 2010



Source: Federation of American Scientists

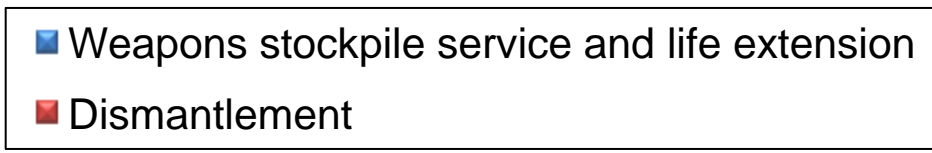
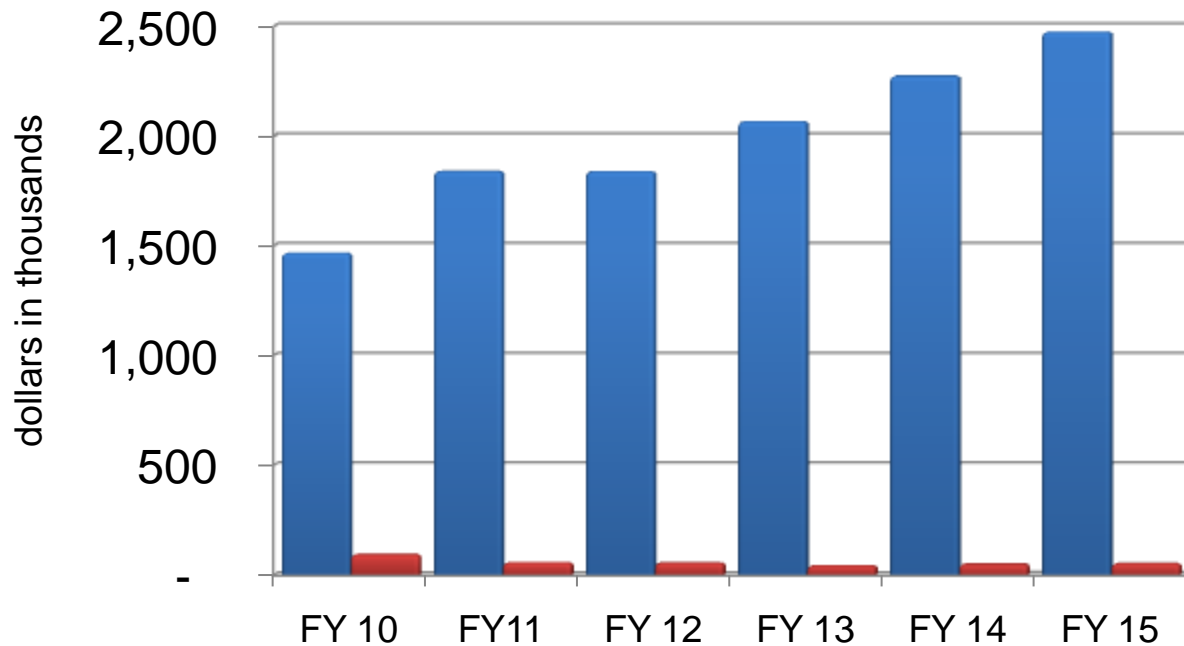
The U.S. nuclear stockpile has 400 times the destructive power of explosives used by all combatants in World War II.

About 70 percent of the U.S. nuclear arsenal is not deployed.

About 40 percent has been discarded by the U.S. military.

The primary targets are mostly those selected during the Cold War, which ended 20 years ago.

Elimination of Nuclear Weapons has a Low Priority

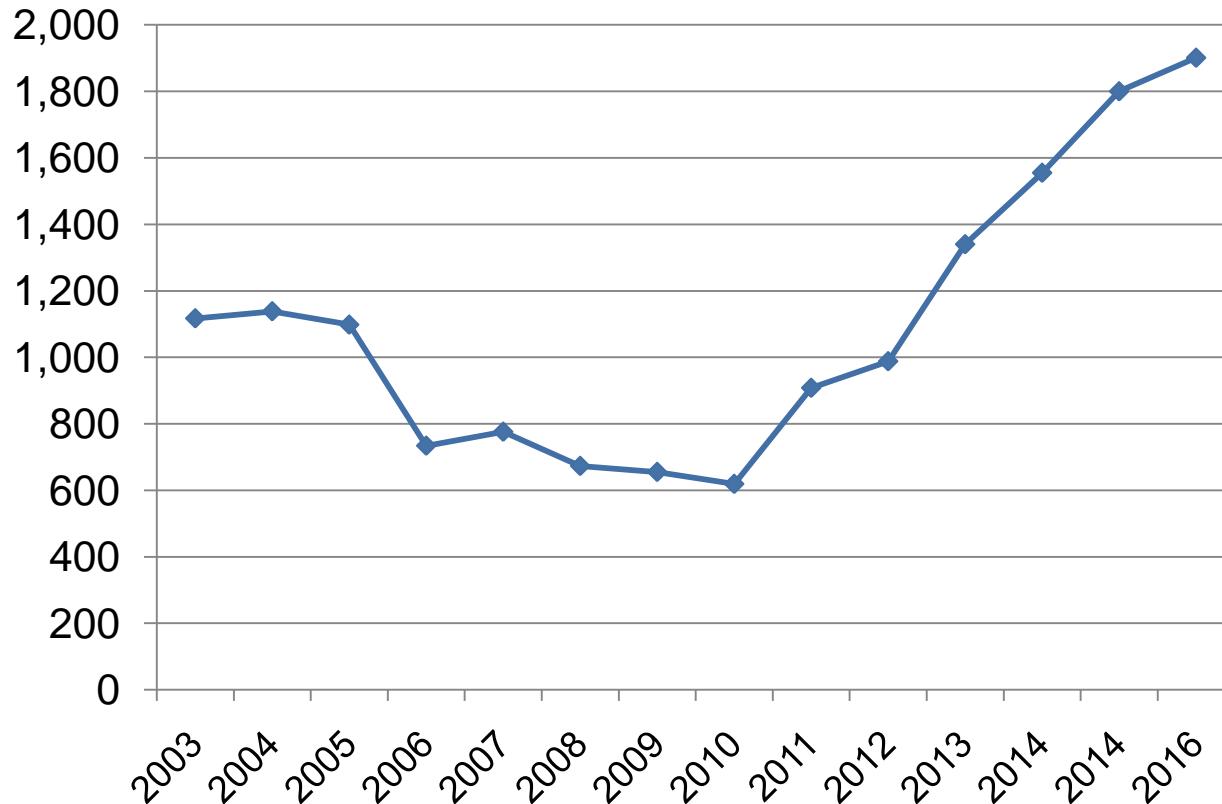


There is a 15-20 year backlog of some 3,500 retired nuclear warheads awaiting dismantlement.

Yet, funding for dismantlement will drop by nearly 50 percent over the next five years.

Costs for Nuclear Warhead Life Extension

(thousands of dollars)



Between FY 2003 and 2016, about \$15 billion will be spent on nuclear warheads life extension

The per unit life extension cost for the B-61 and W76 warheads are between \$11 and \$12 million.

Sources: DOE Congressional Budget Requests, Natural Resources Defense Council and Federation of American Scientists-U.S. Nuclear Arsenal 2009

Lifetimes of Nuclear Warheads Could be Extended for Decades



Because of the 20-year voluntary moratorium on nuclear weapons testing by the United States, the design labs have claimed that long-term stockpile reliability cannot be guaranteed without new-design nuclear weapons.

This claim has been repudiated by the Jason group, a highly regarded group of special experts with a long history of credible advice to the U.S. nuclear weapons program. The Jason Group concluded:

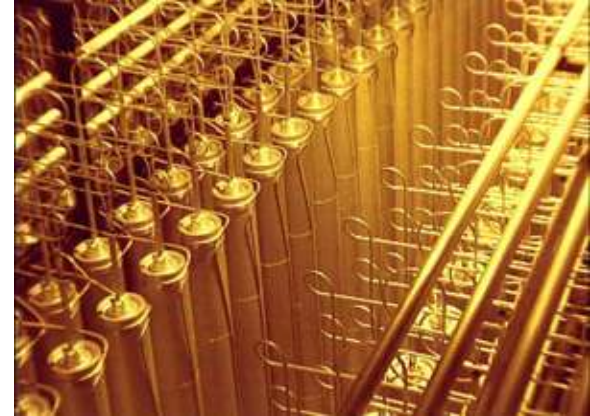
- Lifespan of today's nuclear warheads could be extended for decades, with no anticipated loss in confidence, by using approaches similar to those employed in life extension programs (LEPs) to date.
- There is no evidence that accumulation of changes incurred from aging and LEPs have increased risk to certification of today's deployed nuclear warheads.

High Risk Projects

The U.S. Government Accountability Office (GAO) identified the DOE nuclear weapons program to be one of the government's top "high-risk" programs vulnerable to waste, fraud, and abuse. For instance:

- The Chemical and Metallurgy Research and Replacement (CMMR) facility at the Los Alamos National Laboratory in New Mexico. The main purpose of the CMMR is to ramp up manufacturing capability of plutonium pits to as many as 80 per year by 2022. Its estimated costs increased from \$666 million in 2004 to \$5.8 billion in 2010.
- The Uranium Processing Facility (UPF) at the Y-12 weapons plant in Oak Ridge, TN. This facility is expected to replace an aged plant built in the 1950's. The estimated cost for this project has increased from \$600 million to \$6.5 billion.
- The NNSA's Life Extension Program costs for nuclear warhead types have increased by 400 percent.

Nuclear Proliferation



Uranium enrichment

“20 or 30 States...have the capacity to develop nuclear weapons in a very short span of time.”

Director General Dr. Mohamed El Baradei,
International Atomic Energy Agency, October 16,
2006



Reprocessing

Less for Non-proliferation

Defense Nuclear Nonproliferation

Overview

Appropriation Summary by Program

(dollars in thousands)

	FY 2010 Actual Appropriation	FY 2011 Request	FY 2011 CR	FY 2012 Request
Defense Nuclear Nonproliferation				
Nonproliferation and Verification Research and Development	311,274	351,568		417,598
Nonproliferation and International Security	187,202	155,930		161,833
International Nuclear Materials Protection and Cooperation *	572,749	590,118		571,639
Elimination of Weapons-Grade Plutonium Production	24,507	0		0
Fissile Materials Disposition	701,900	1,030,713		890,153
Global Threat Reduction Initiative	333,500	558,838		508,269
Congressional Directed Projects	250	0		0
Total, Defense Nuclear Nonproliferation	2,131,382	2,687,167	2,136,709	2,549,492

The Energy Department is seeking \$137.6 million less than requested in FY 2011.

The Mixed Oxide Program (MOX)

\$650 million (25%) of DOE's non-proliferation spending for FY 2012 is going to build facilities to mix plutonium from weapons with uranium for use in nuclear power plants (MOX) at DOE's Savannah River Site in South Carolina.



Source: MOX Project.com

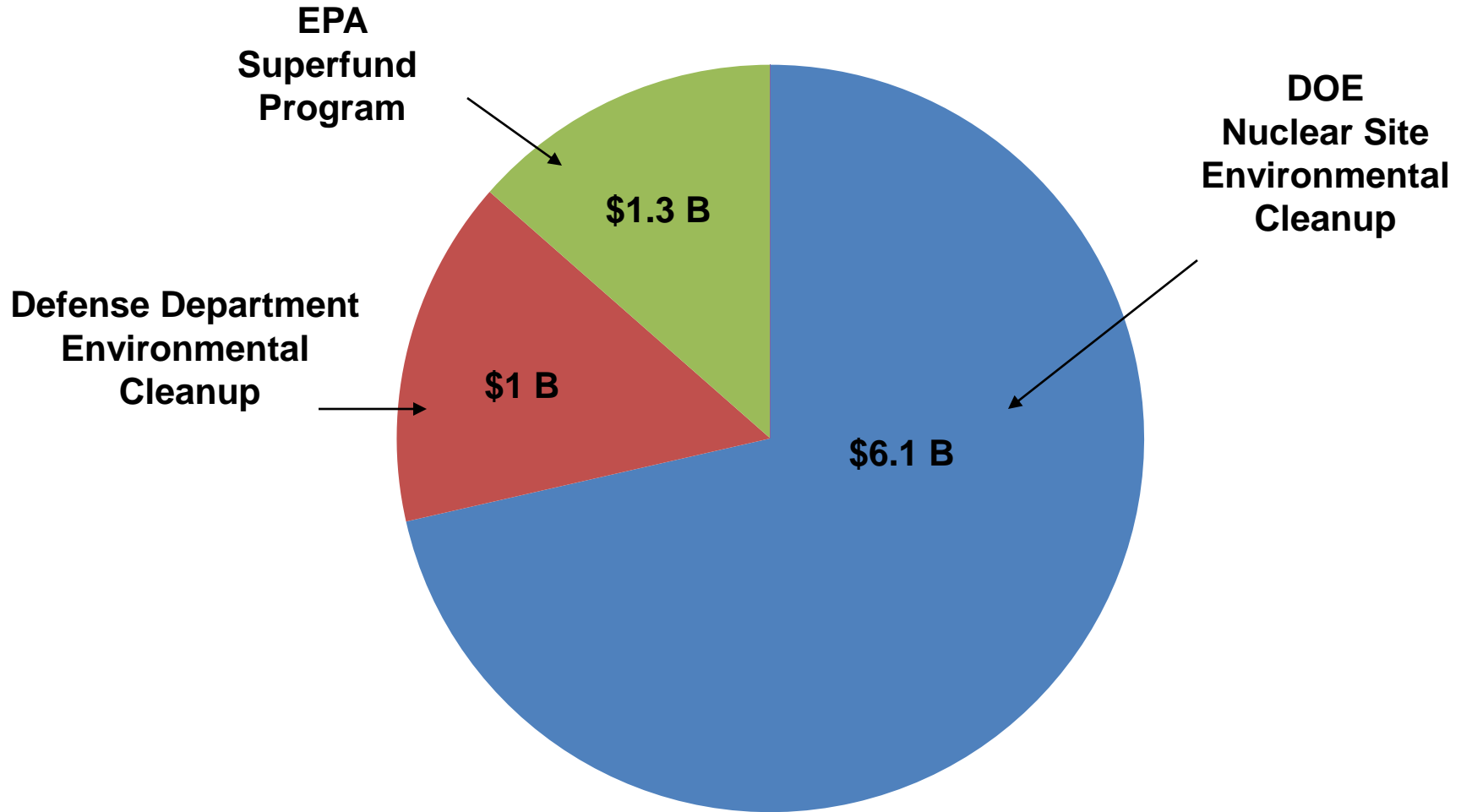
The MOX project was originally the centerpiece of a 2000 agreement with Russia for each nation to mutually rid 34 metric tons of weapons plutonium.

However, the agreement has fallen apart because Russia will not pay for its MOX program.

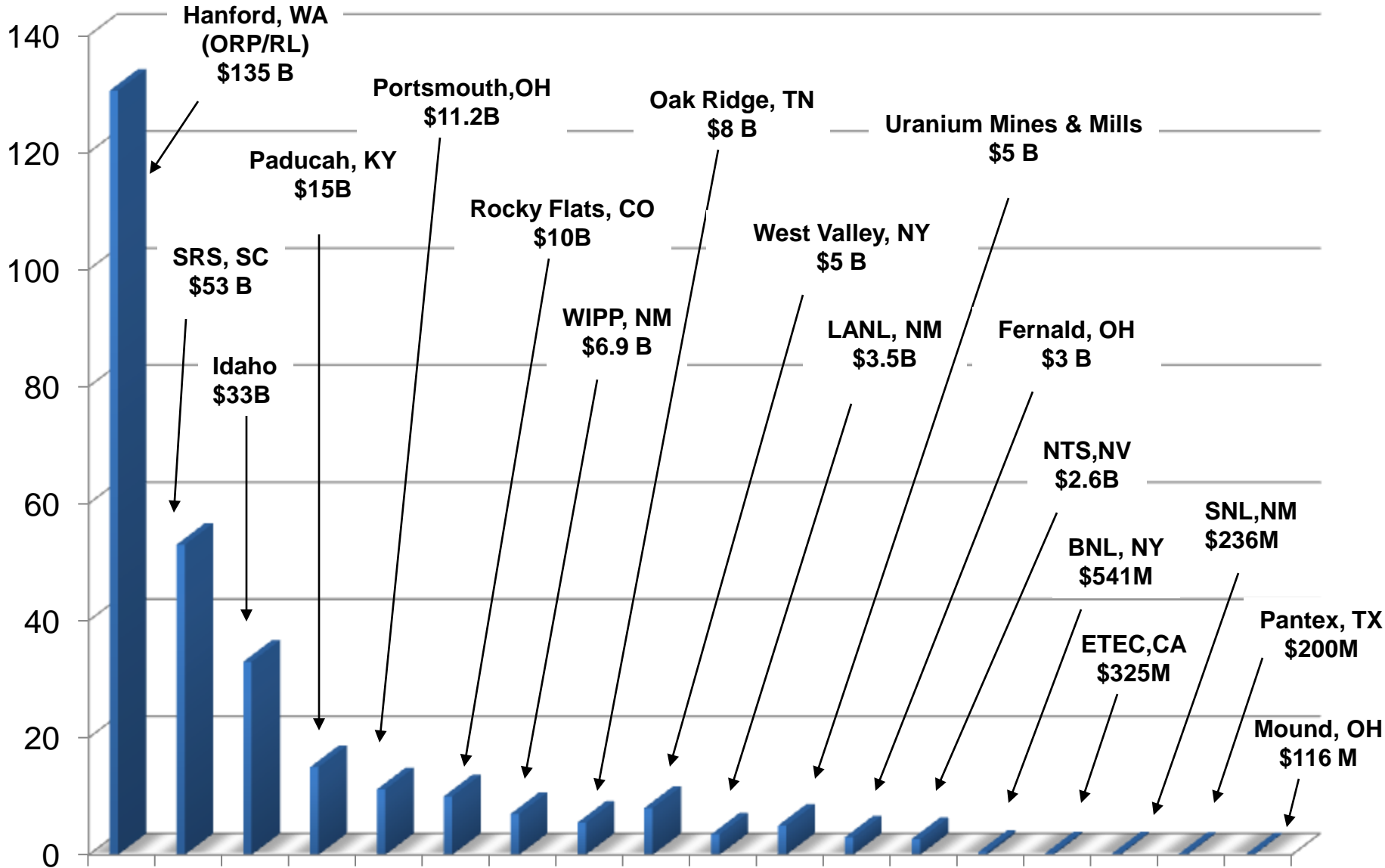
This \$4.8 billion project is 10 years behind schedule and U.S. nuclear utilities are balking at using MOX fuel.

“Taxpayers are pouring hundreds of millions of dollars a year into a facility that may never be used,” says Edwin Lyman, a nuclear expert at the Union of Concerned Scientists.

Nuclear Weapons Production has Resulted in the Most Expensive Environmental Cleanup Program in the United States



DOE Site Cleanup Costs*



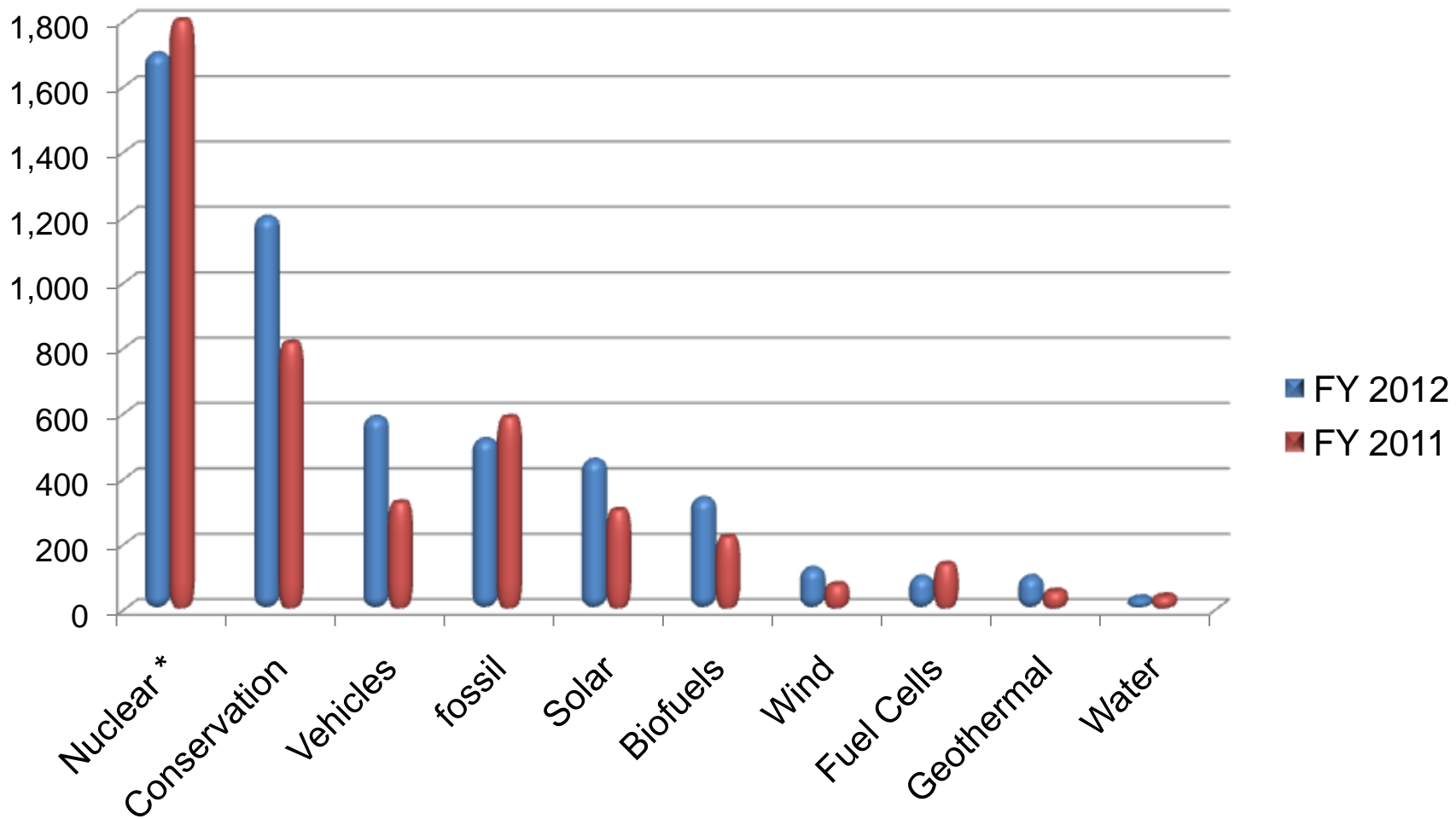
Sources: DOE 2008, GAO 2005, EIA 2006

Total Cost = \$283 Billion

*Does not include NNSA projects


Energy R&D Spending for FY 2011 and 2012

(thousands of dollars)



*Includes fission and fusion R&D

Loans and Loan Guarantees



\$78.5 billion in loan guarantees for renewable and electric transmission

\$25 billion for auto Industry loans

\$56.5 billion in loan guarantees for nuclear projects

\$8 billion in loan guarantees for coal projects

DOE is proposing to provide \$166 B in federal loans and loan guarantees to aid the ailing auto industry, and help finance nuclear, coal, renewable energy projects and to restructure and modernize the nation's electric grid system.

Nuclear loans totaling \$56.5 B are likely to come from the U.S. Treasury. With a greater than 50-50 chance of default, Wall Street will not finance nuclear projects.

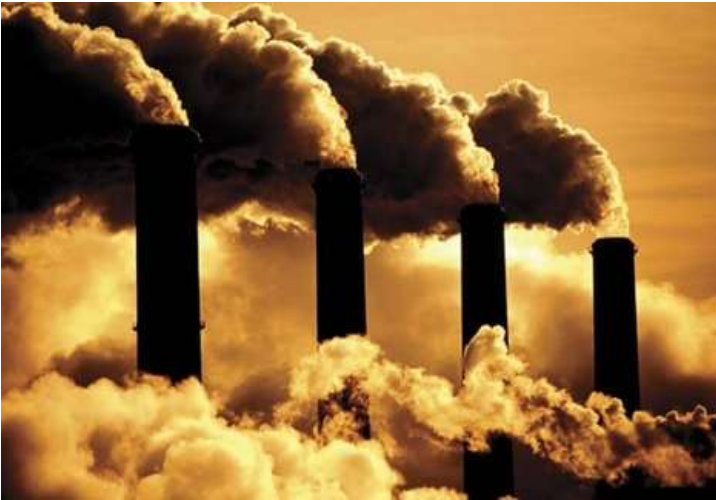
DOE's Office of Science

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2011 Continuing Resolution	FY 2012 Request
Office of Science			
Advanced Scientific Computing Research	383,199		465,600
Basic Energy Sciences	1,598,968		1,985,000
Biological and Environmental Research	588,031		717,900
Fusion Energy Sciences	417,650		399,700
High Energy Physics	790,811		797,200
Nuclear Physics	522,460		605,300
Workforce Development for Teachers and Scientists	20,678		35,600
Science Laboratories Infrastructure	127,600		111,800
Safeguards and Security	83,000		83,900
Science Program Direction	189,377		216,863
Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (STTR) (SC funding)	107,352 ^a		0
Subtotal, Office of Science	4,829,126		5,418,863
Congressionally directed projects	74,737		0
SBIR/STTR (Other DOE funding)	60,177 ^b		0
Use of prior year balances	-153		-2,749
Total, Science Appropriation	4,963,887	4,903,710^c	5,416,114

About 45 percent of Energy's Science budget reflects its historical emphasis on nuclear-related and physics research.

Summary



Created in 1977 in response to oil disruptions, the U.S. Department of Energy has done little since to stem the country's burgeoning energy problems.

With about 5.5 percent of the world's population, the United States consumes more oil than any other nation, three-fourths of which comes from foreign sources.

As U.S. energy dependence has worsened, its greenhouse gas emissions have grown worse as well:

- Increasing by 17 percent since 1990
- Accelerating potentially disastrous climate disruptions



Summary (cont)



Kansas City Plant

NEVADA TEST SITE

Pantex Plant



Department of Energy
HANFORD SITE

The main reason for the DOE's ineffectiveness is that it's not structured to usher in the country's energy future.

For most of its existence, about two-thirds of the DOE's annual spending has gone to maintaining the U.S. nuclear weapons complex and cleaning up its environmental legacy.

Now, a large funding increase is being sought as a down payment for nuclear weapons research and production modernization – estimated to cost about \$167 billion over the next 20 years.

Actual energy functions continue to take a back seat with less than 20 percent of DOE's FY 2012 budget request.