

The U.S. Department of Energy's Fiscal Year 2011 Budget Request



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B-61 nuclear warheads

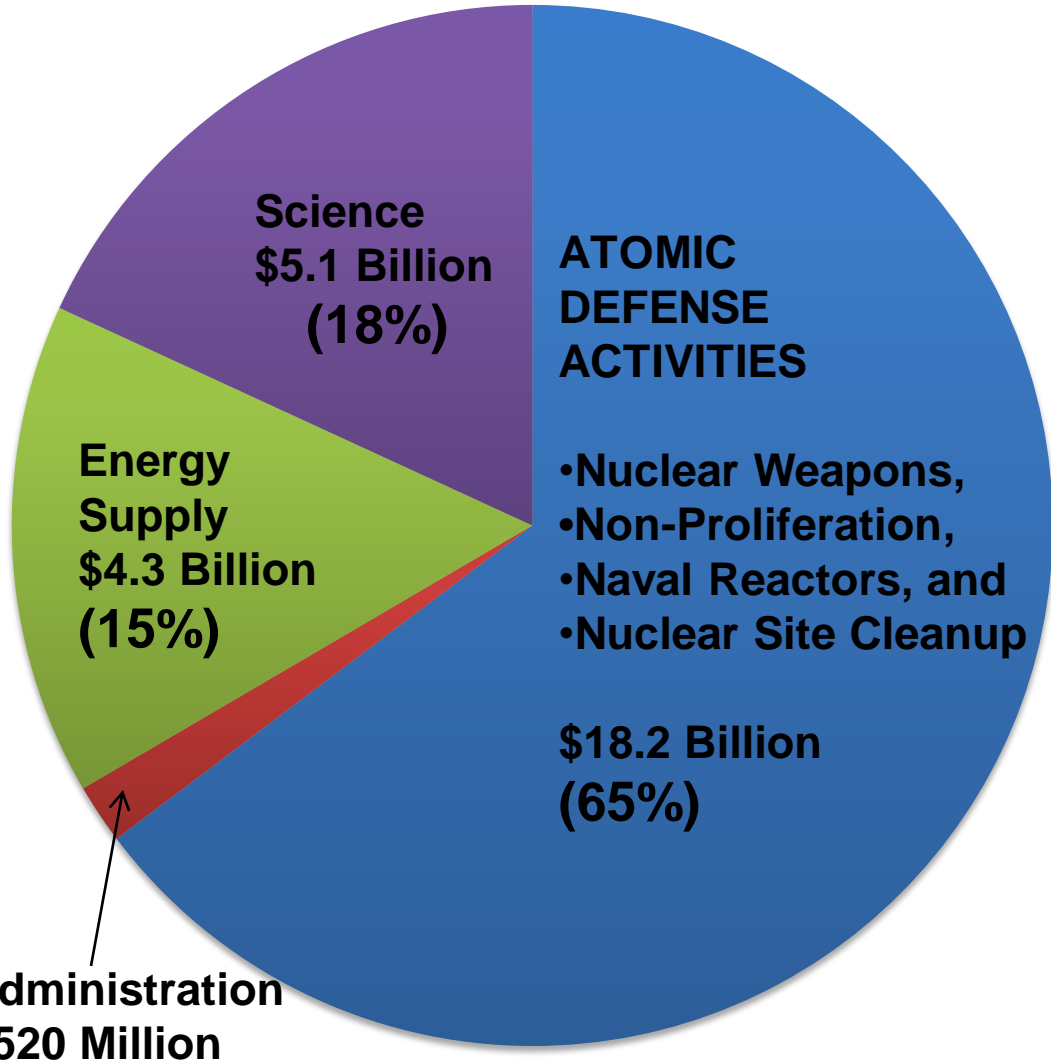


plutonium waste container



wind farm

U.S. Department FY 2011 Budget Request



Energy Activities Include:

- Energy Efficiency and Renewable Energy: \$2.2 Billion
- Fossil Energy: \$760 Million
- Nuclear Energy (fission & fusion): \$1.8 Billion
- Electric Transmission: \$186 Million
- Energy Information Administration: \$129 Million
- Power Marketing Administrations: \$95 Million

DOE plans to spend 10 times more on nuclear weapons than for energy conservation.



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



Pantex Plant



NEVADA TEST SITE

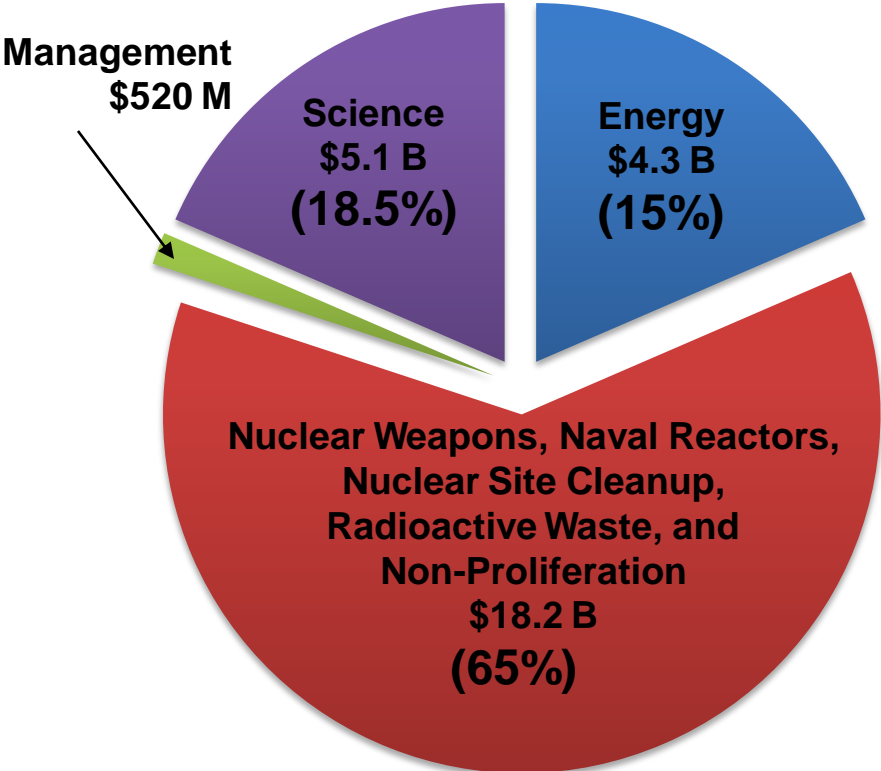


Department of Energy
HANFORD SITE

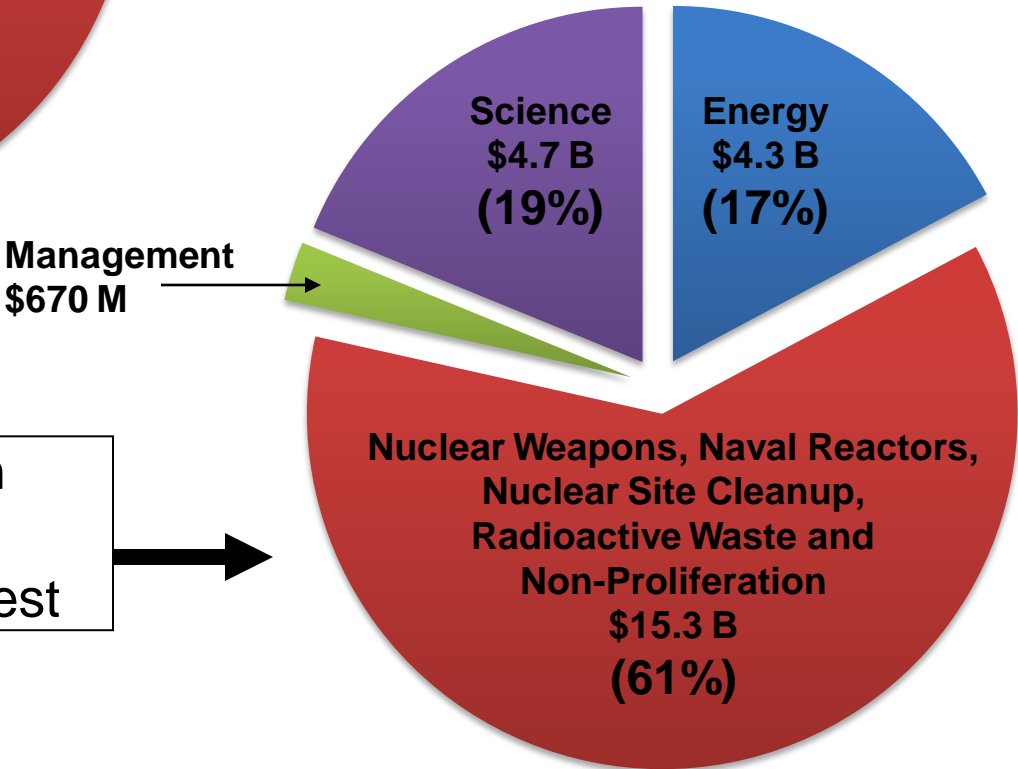
The main reason for the DOE's ineffectiveness is that it's not structured to usher in the country's energy future.

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.

The DOE budget for FY 2011 looks a lot like that of George W. Bush and several presidents before him.

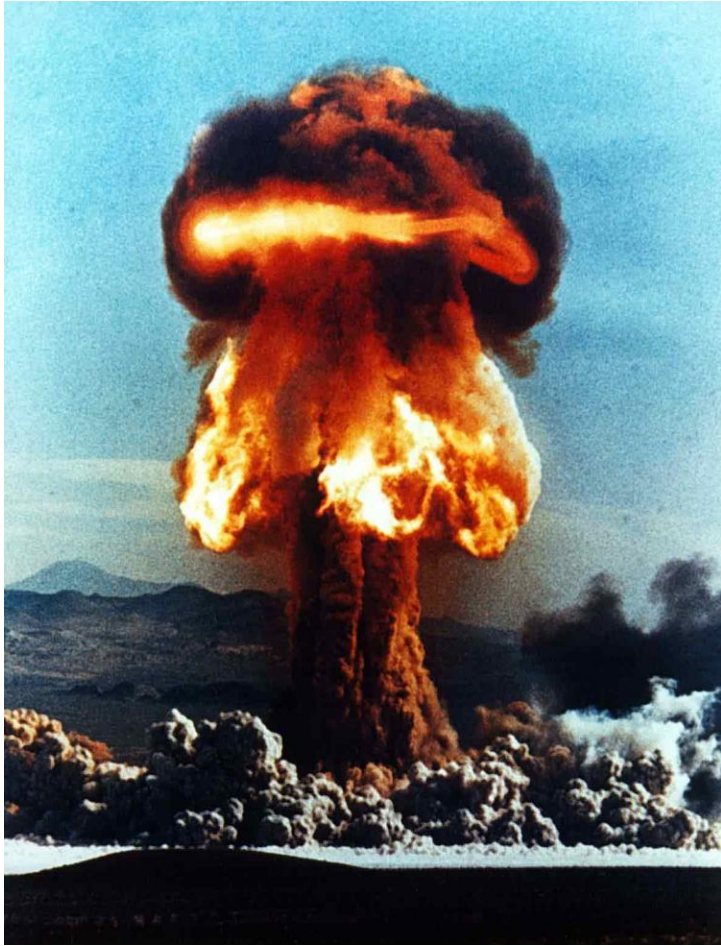


Obama Administration Energy Department
FY2011 Budget Request



Bush Administration Energy Department
FY2009 Budget Request

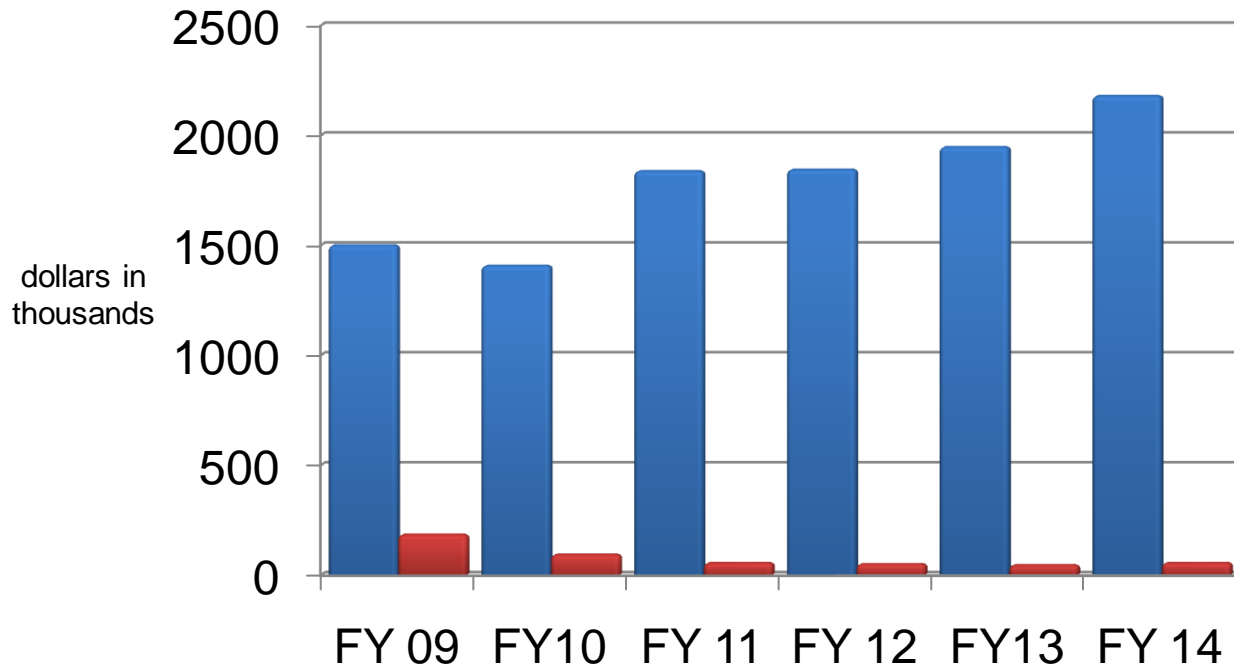
More Money for Nuclear Weapons



Nearly 44 percent of the Energy Departments' budget is for military nuclear activities.

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

Elimination of Nuclear Weapons Has a Low Priority



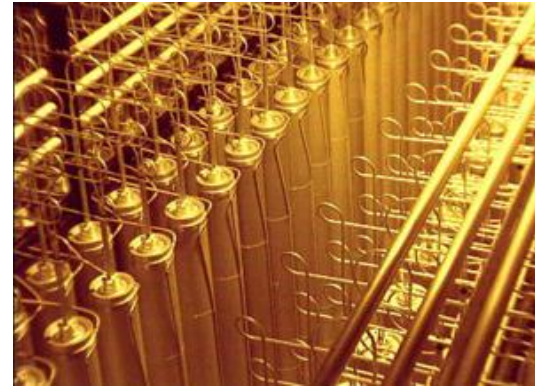
There is a 15 year backlog of some 4,200 retired nuclear warheads awaiting dismantlement.

Thousands more will be added if President Obama's pledge to cut nuclear arms is realized.

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

- Weapons stockpile service and life extension
- Dismantlement

Nuclear Proliferation



Uranium enrichment



Reprocessing

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

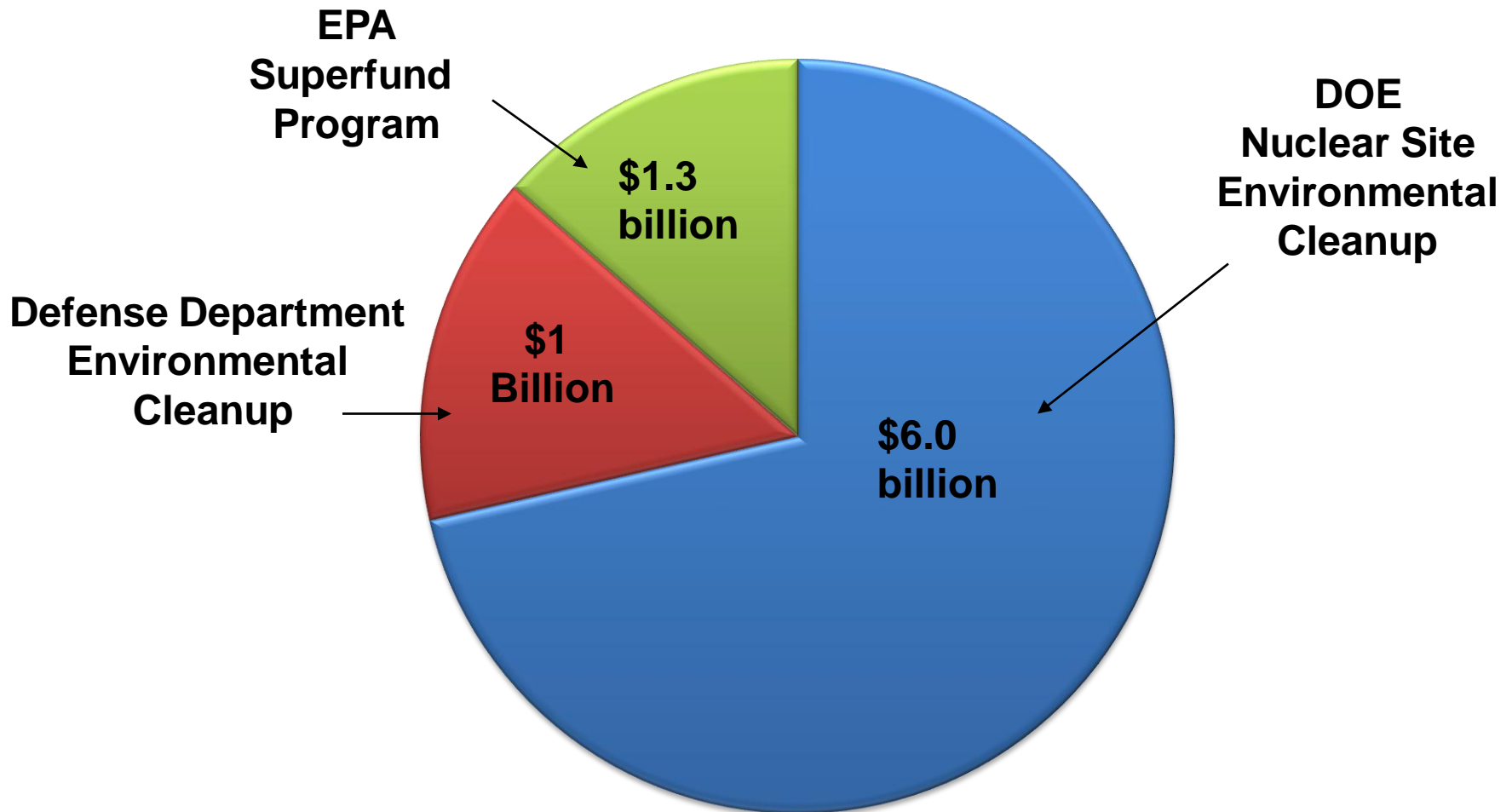
Director General Dr. Mohamed El Baradei, International Atomic Energy Agency, October 16, 2006

More Money for Nuclear Non-Proliferation

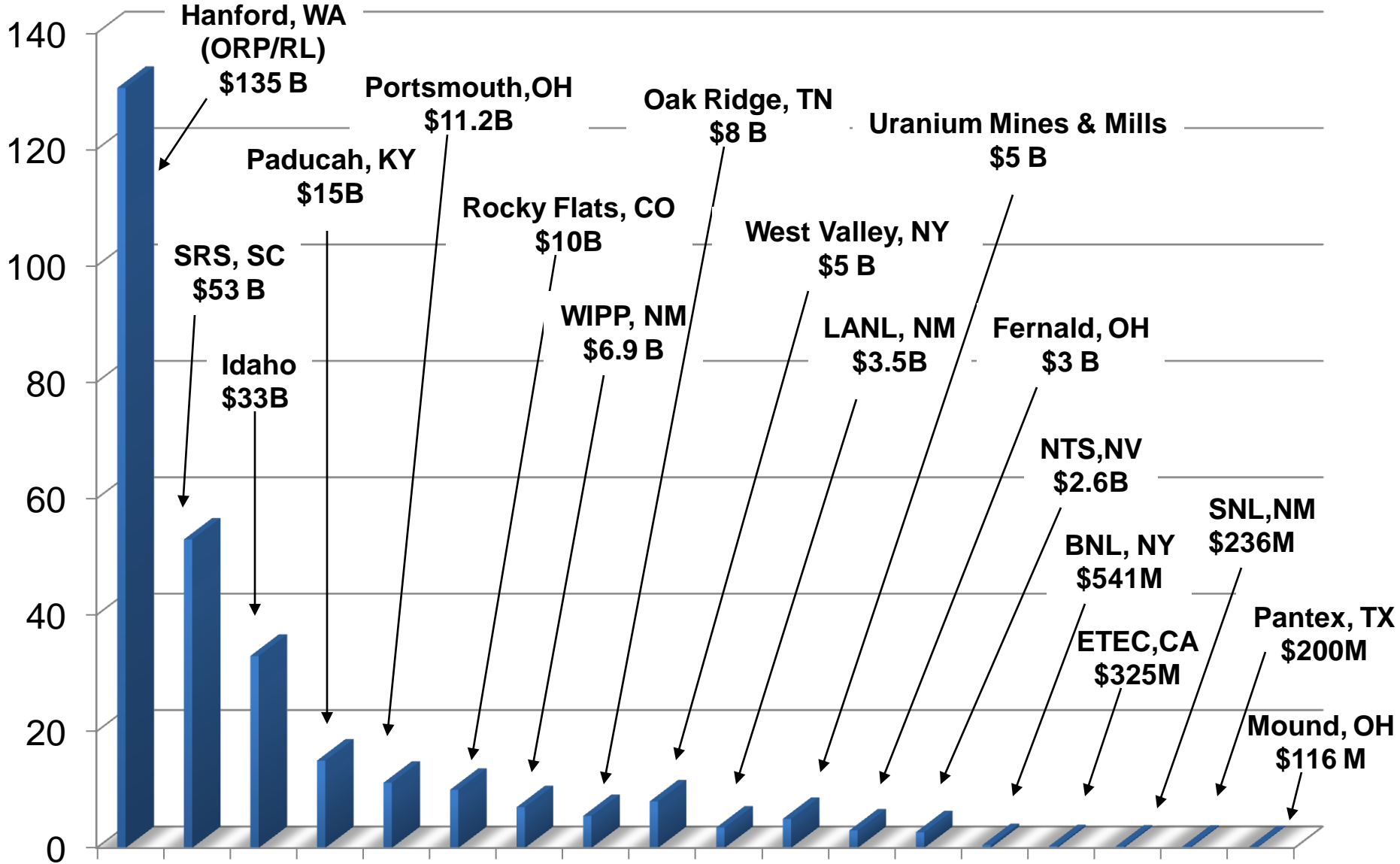
(dollars in thousands)

	FY 2009 Actual Appropriation	FY 2010 Current Appropriation	FY 2011 Request
Defense Nuclear Nonproliferation			
Nonproliferation and Verification Research and Development	356,281	317,300	351,568
Nonproliferation and International Security	150,000	187,202	155,930
International Nuclear Materials Protection and Cooperation	460,592 ^a	572,050	590,118
Elimination of Weapons-Grade Plutonium Production	141,299	24,507	0
Fissile Materials Disposition	41,774	701,900	1,030,713
Global Threat Reduction Initiative	404,640 ^b	333,500	558,838
Congressional Directed Projects	1,903	250	0
Subtotal, Defense Nuclear Nonproliferation	1,556,489	2,136,709	2,687,167
Use of Prior Year Balances	-11,418	0	0
Total, Defense Nuclear Nonproliferation	1,545,071	2,136,709	2,687,167

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

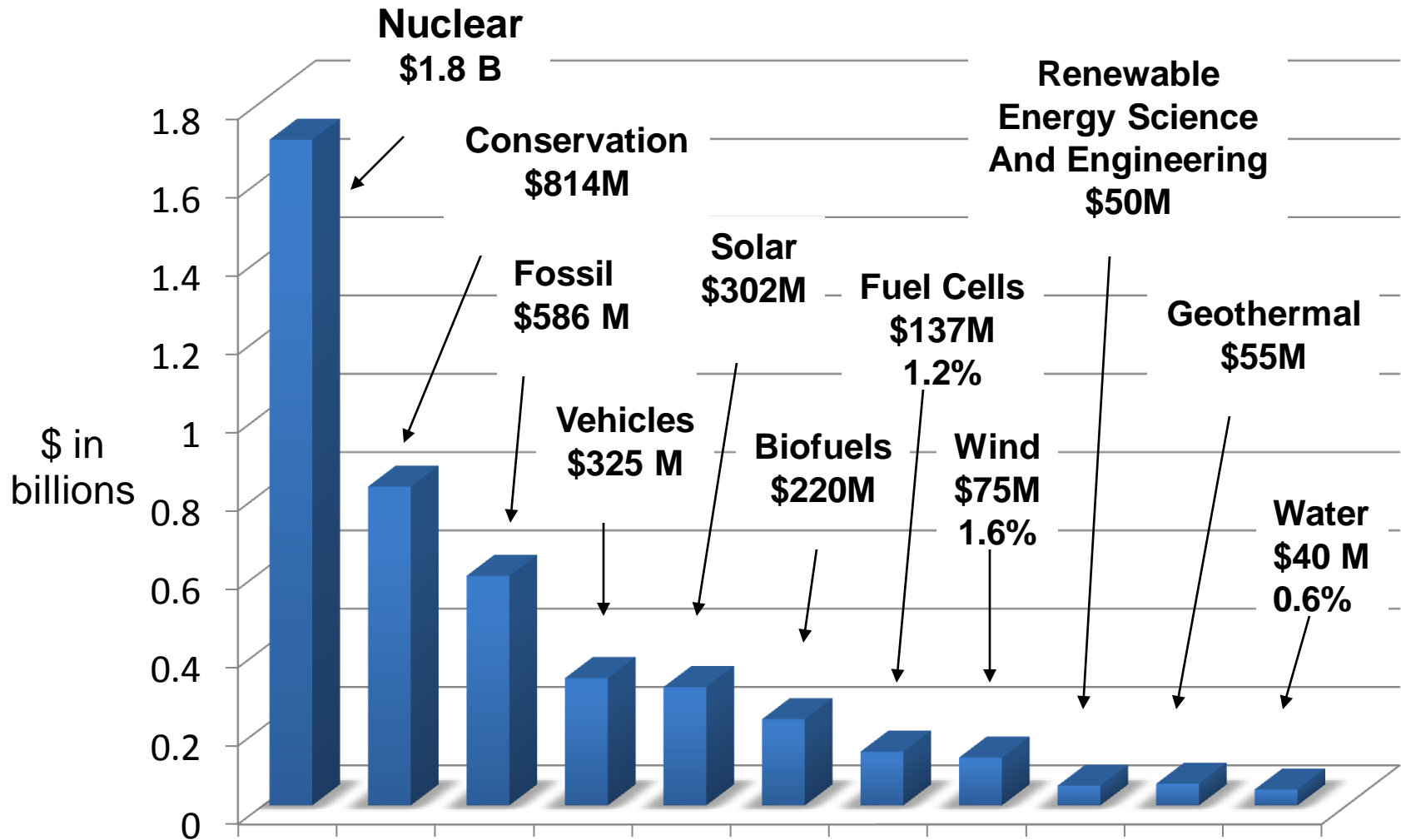
Total Cost = \$283 Billion

*Does not include NNSA projects

Energy Department Stimulus Spending

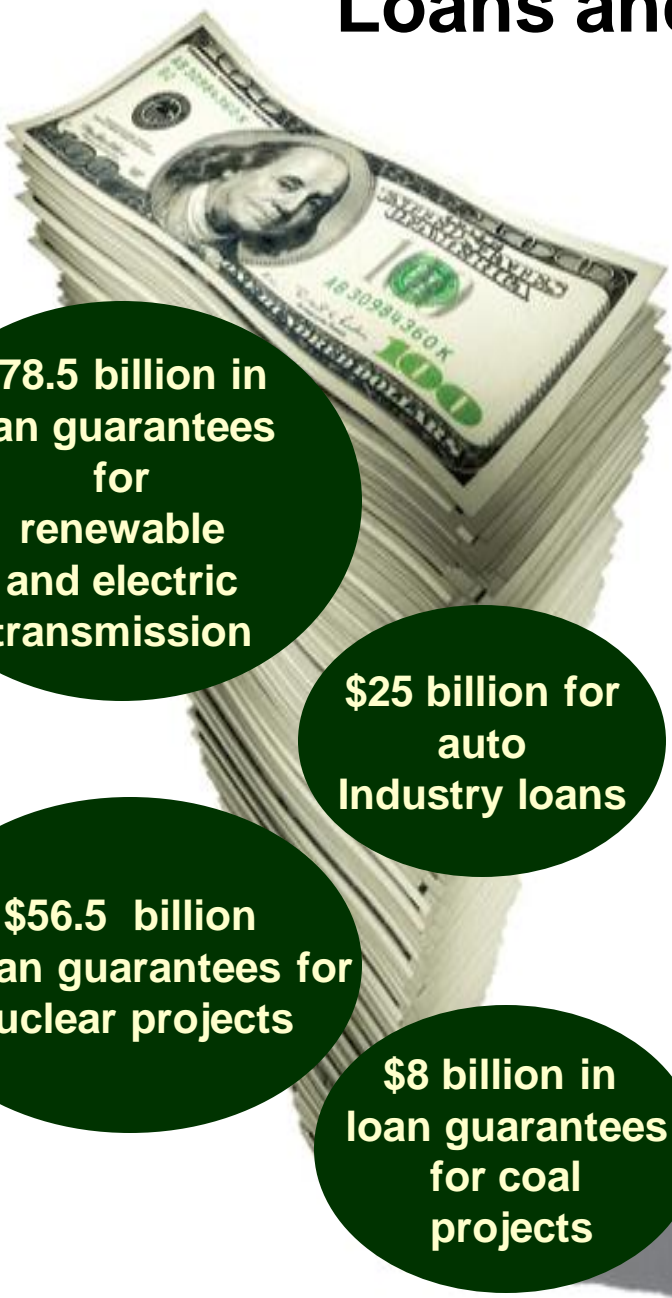
Weatherization and Intergovernmental Activities	\$ 11.6 billion
Nuclear Site Cleanup	\$6.0 billion
Innovative Technology Loan Guarantee Subsidy Costs	\$5.99 billion
Electricity Delivery and Reliability	\$4.5 billion
Fossil Energy	\$3.4 billion
Advanced Battery Manufacturing	\$2.0 billion
Science	\$1.6 billion
Energy Efficiency, Renewable Energy Research, Development and Demonstration	\$951.4 million
Biomass and Bio-refinery Systems R&D	\$786 million
Advanced Research Projects Agency – Energy	\$400 million
Geothermal Energy	\$400 million
Transportation Electrification	\$400 million
Alternative Fuel Vehicles	\$300 million
Wind Energy	\$118 million
Facilities and Infrastructure	\$101 million
Industrial Technologies	\$50 million
Fuel Cell Technologies	\$43.4 million
Program Direction	\$61 million
TOTAL	\$38.7 billion

Energy R&D Spending for FY 2011



Nuclear energy gets 44% of energy R&D funds.

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 Billion in federal loans and loan guarantees to aid the ailing auto industry, help finance nuclear, coal, renewable energy projects, and to restructure and modernize the nation's electric grid system.

Nuclear loans totaling \$56.5 billion 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.

Nuclear Waste Disposal



Proposed Yucca Mountain Project in Nevada

The Obama administration has terminated funds for the Yucca Mountain disposal site in Nevada.

Will Reprocessing and “Fast” Reactors Solve the Nuclear Waste Problem ?



DOE's FY 2011 budget has about \$201 million for reprocessing R&D and \$21.8 million for “fast reactors,” which would utilize separated plutonium.

Advocates claim that reprocessing will allow for the recycle of uranium and the separation of long-lived radionuclides that can be transformed in fast reactors into less troublesome elements.

Reprocessing is dirty, expensive and is a key technology for making nuclear weapons – now underscored by North Korea.

In the past 60 years at least 15 “fast reactors” around the world were closed for safety and economic reasons – including two core melts in the United States.

Spent Nuclear Fuel will Accumulate at the Nations' 104 Power Reactors for an Indefinite Time

The U.S. has the world's largest inventory of spent nuclear fuel (~60,000 MT), which is expected to almost double over the coming decades.

The U.S. needs a national spent nuclear fuel storage policy that provides safety and security in the post 9/11 era.

In particular, spent fuel older than five years should be placed into dry hardened storage.



After nearly 30 years of trying, disposal of high-level radioactive waste is proving to be extremely difficult.

Meanwhile, the Obama administration convened a blue-ribbon panel of experts to recommend what to do with some of the planets' most dangerous material in the next two years.

One thing is clear: The last thing that both political parties want is to reopen a nuclear waste disposal site selection process before the 2010 and 2012 elections and probably beyond.



Summary

Like those of his predecessors, nearly two-thirds of Obama's FY 2011 Energy Department budget is to shore up and clean up the government's nuclear weapons infrastructure.

The single largest expenditure in DOE's budget is to maintain an oversized nuclear arsenal of some 9,200 warheads. They have about 400 times more destructive force than for all explosives used in World War II combined.

Funding for weapons dismantlement is being shortchanged, despite a 15-year backlog of discarded weapons, and thousands more expected if President Obama's nuclear arms reduction pledge is realized.

The environmental legacy of DOE weapons sites remains perhaps the largest, most complex, and expensive cleanup challenge in the world.

Summary

Actual energy-related spending is only 15 percent of Energy's FY 2010 budget request.

Energy R&D spending (44 percent) is dominated by nuclear.

Spent nuclear fuel will remain indefinitely at reactor sites and major attention should be given to reducing spent fuel pool vulnerabilities and dry, hardened onsite storage.

After stimulus funds are spent in FY 2011, energy R&D it is likely to go back to "business as usual."

Conclusion

The United States should re-establish its long-standing policy of discouraging reprocessing to stem proliferation risks.

Finally, a major restructuring of the DOE is needed.

The first step is to expeditiously transfer the department's nuclear weapons and cleanup programs outside of DOE.

Freed from its nuclear millstone, there's much that can be done do to make the DOE a major player in constituting a sustainable U.S. energy policy.