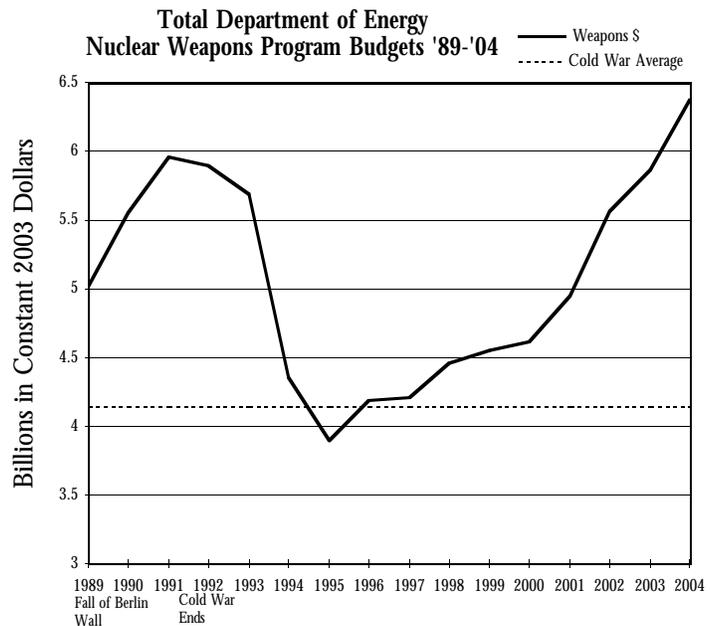


An Overview of Programs at the Los Alamos and Sandia National Laboratories: *Why Cleanup and Renewable Energy R&D Lose Out*

Introduction:

The Cold War ended over a decade ago, yet one would hardly guess it from a glance at U.S. nuclear weapons budgets over the last decade. Even though the Soviet threat dissolved into bankruptcy, the U.S. continues to sink vast sums of money into research, development, design, re-design, and maintenance of its nuclear weapons stockpile. The close of the Cold War saw a phase in U.S. nuclear weapons policy that could have dramatically shifted the national laboratories away from nuclear weapons program to programs that are of more direct societal benefit. That new policy had its roots in the self-imposed nuclear weapons testing moratorium under the Bush Sr. Administration, but, unfortunately, a tremendous opportunity was lost. The national laboratories and the Department of Energy were too heavily entrenched in and financially committed to the nuclear weapons program. While facing massive budget cuts and restructuring as a result from the then pending ratification of the Comprehensive Test Ban Treaty and expected ratification of the Strategic Arms Reduction Treaty II, the national labs successfully persuaded Congress that a new research program was needed to ensure the “safety and reliability” of the U.S. nuclear weapons arsenal.¹ The treaties never made it past Congress, and it is doubtful they ever will.



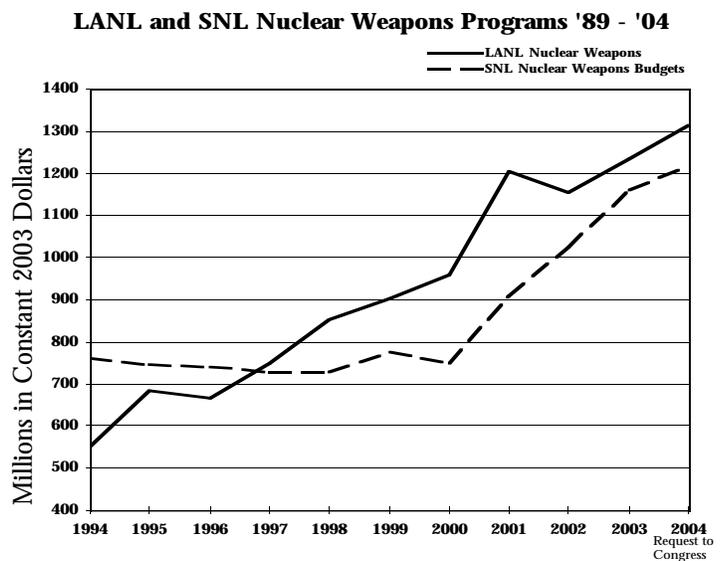
A moment to dramatically refocus the Nation’s priorities was lost, and a new nuclear weapons program was born whose primary goal is to ensure that nuclear weapons are preserved forever. That new program is called Stockpile Stewardship. According to the Department of Energy’s (DOE) National Nuclear Security Administration, or NNSA, (the semi-autonomous agency responsible for the U.S. nuclear weapons labs and programs) the thrust of this program is two-fold. First, it is tasked with maintaining a safe, reliable, and robust nuclear weapons stockpile and second, to create a complex super-computing system and a web of new, expensive experimental facilities to be used to simulate nuclear weapons tests.² In truth, however, the NNSA has undertaken an aggressive and comprehensive mission of upgrading the nuclear weapons stockpile and the facilities within the national laboratory complex responsible for that stockpile, in spite of international commitments made by the U.S. to disarm. Funding for nuclear

weapons programs dropped or stabilized for the individual national laboratories in the mid 1990s. It has since taken off towards the stratosphere, now more than half again what the Cold War average was in constant dollars. As a result, the national laboratories have maintained their historic and primary mission of nuclear weapons R&D and production, thereby denying other vital programs (such as cleanup) the attention that they so critically deserve.

Much has been written on the economic repercussions of the Cold War for the U.S. and the Soviet Union and how both nations neglected important social programs and infrastructure. However, very little attention is being paid to the DOE current spending spree, endorsed by Congress, on nuclear weapons programs. The proposed 2004 funding is the second highest ever, in constant dollars, beat only by the 1985 funding level at the height of Ronald Reagan's military build-up. Though this fact sheet is not the place to discuss the over-arching issues of the U.S. nuclear weapons program versus the important social needs this Nation currently faces, it will underscore the overwhelming emphasis that nuclear weapons programs receive at the two national laboratories in New Mexico and the environmental impact of these programs in this State. This paper initially started as an examination of the de-prioritizing of environmental cleanup at New Mexico's nuclear weapons labs. However, new questions emerged, such as the George W. Bush plan to create a so-called "hydrogen economy" as announced in his 2003 State of the Union Address. The Administration has chosen nuclear power to be the primary source for its hydrogen initiative. Accordingly, Nuclear Watch of New Mexico wanted to see how hydrogen research funding would be affected. Substantially increased funding for hydrogen research, if tied to nuclear materials, would have had an environmental impact of no small significance. While we were at it, we also decided to include all renewable energy research and development efforts at the labs, as they also serve as an indicator of the true focus of the national laboratories in New Mexico.

Nuclear Weapons:

In its budget request for Fiscal Year (FY) '04, the DOE asked for \$6.38 billion for its nuclear weapons programs.^{3, 4} This is 54% over the yearly Cold War average spent by the DOE and its predecessors from FY '48 to FY '92 as demonstrated in the graph on the previous page.⁵ Budgets had dramatically shrunk directly after the Cold War. By FY '95 funding for the entire nuclear weapons program was down to its post-Cold War low, a mere \$3.89 billion. It is worth noting that the FY '95 budget was the lowest funding level since FY '80, but they were to begin rising again in FY '96. The FY '04 request is 64% higher than the funding received in FY '95. Out of the requested \$6.38 billion for total nuclear weapons programs in FY '04, Los Alamos National Laboratory (LANL) and Sandia National Laboratories (SNL) will receive \$2.53 billion combined, 40% of the total nuclear weapons budget for DOE.⁶



LANL: Out of the \$2.53 billion to be divided between the two New Mexico national laboratories, LANL will receive the larger share. The DOE has requested that LANL's nuclear weapons programs be funded at \$1.31 billion. This accounts for 76% of the entire \$1.72 billion of DOE funding for the lab in FY '04. This leaves 24% for other programs, including cleanup (only 2% of total DOE funding) of 60 years of environmental contamination left behind by the nuclear weapons program.

SNL: Sandia will receive \$1.23 billion for its nuclear weapons programs in FY '04. Total DOE funding has been requested at the level of \$1.51 billion, meaning that nuclear weapons R&D and production consumes 81% of DOE's funding for the lab, leaving a mere 19% for other R&D programs, including SNL's often touted renewable energy projects.

Both LANL and SNL receive funding under a category called "Work for Others." Work for Others would include agencies such as the Department of the Army, Health and Human Services, National Aeronautics and Space Administration, as well as others. These agencies provide separate funding for research projects that they have commissioned the labs to work on. During the 1990s, Work for Others funding at SNL was between \$200-\$400 million annually in addition to the funding already received from DOE. At LANL, the funding was between \$100-\$200 million annually. FY '02 Work for Others funding at LANL was \$246.5 million. At the time of this writing, funding under the Work for Others category in FY '03 and FY '04 is not publicly available for either lab, and funding at SNL for FY '02 is not publicly available.

The DOE, and more particularly the directors of LANL and SNL, want us to believe that they are on the cutting edge of research programs on topics ranging from environmental restoration to cleaner energy generation and energy efficiency, and renewable energy sources. Hand-in-hand with this argument is a not so tacit claim that nuclear weapons programs are no longer the heartbeat of the two labs. In late September 2002, John Browne, then Director of LANL, was quoted by local media as stating that "[LANL's] role in the next 10 to 20 years [will be] one that will focus more on reducing the threat of biological weapons and finding ways to reduce pollution in the atmosphere."^{7, 8} This is an interesting projection, and one that NWNM would welcome, but it is a projection that is at odds with historic budgetary trends. Those trends have demonstrated that nuclear weapons programs take priority above all else, and it is highly unlikely that the trend will change in the coming decade. For Browne's claims to be fulfilled, the DOE and the national laboratories would have to undergo massive restructuring and refocusing of their current mission of nuclear weapons R&D and production. Such a refocusing would require a drastic policy change originating from the highest levels of the Federal government, specifically the Executive Branch. Even if there were some degree of policy change, it is highly unlikely that funding for the programs that Browne mentions will ever come close to the funding levels currently enjoyed by the nuclear weapons R&D and production mission. History itself can be very telling about the overwhelming emphasis the DOE and national labs have and will continue to place upon nuclear weapons R&D and production programs above all else.

Urgent Needs, Shrinking Budgets:

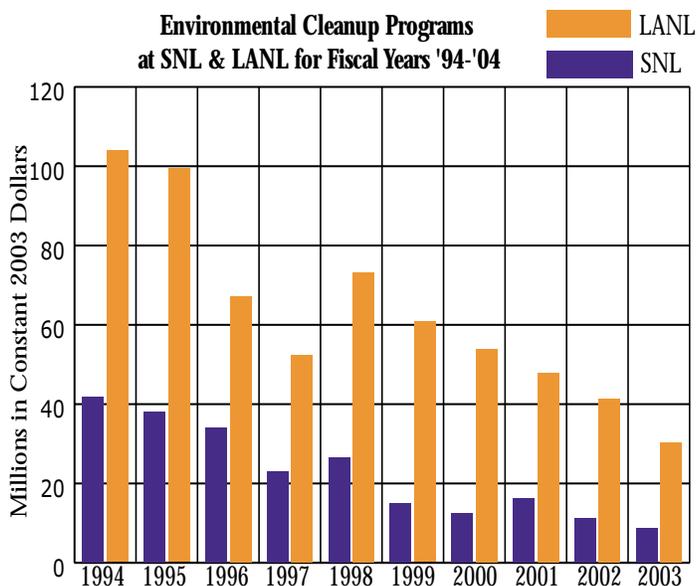
Declining Funding for Cleanup Programs

Environmental Cleanup: DOE categorizes its “Environmental Management” programs into two classes. The first is environmental restoration (ER) and the second is waste management (WM). ER programs at both New Mexico laboratories are responsible for cleaning up the hazardous, mixed, and radioactive wastes generated during the Cold War era.⁹ During the Cold War, there were poor or even no environmental standards that regulated releases of contaminants. As an example, for years LANL dumped radioactive waste water directly into the canyon systems found throughout laboratory property. Solid wastes were dumped into unlined pits and trenches, which are now beginning to leak into the surrounding environs. The ER program attempts to address these issues, but not as quickly and effectively as NWNM and State regulators would like to see.

WM is generally considered to be the management, packaging, and disposal of wastes generated from the ongoing post-Cold War nuclear weapons missions. WM is not cleanup, as it does nothing to remove existing contaminants from the soil and water at the national labs. In essence, WM is the continuation of business as usual. The New Mexico Environment Department (NMED), armed with environmental laws such as the Resource Conservation and Recovery Act (RCRA), is now in the process of attempting to compel both LANL and SNL to meet their ER obligations for some 50 years of negligent dumping of wastes. In its most laudable effort to date, NMED has issued Corrective Action Orders to LANL and SNL.

DOE and the respective labs’ managers, the University of California (UC) and Sandia Corporation (a wholly owned subsidiary of Lockheed Martin Corporation), are vigorously challenging these Orders in court. If they are successful, the precedent set would greatly weaken the ability of all 50 States to effectively regulate environmental compliance by Federal facilities within their boundaries.

The DOE has neglected environmental restoration at all of its facilities within the nuclear weapons complex. Under the early Clinton Administration, ER programs were heavily funded, but with the Republican takeover of Congress and the appointment of more conservative DOE officials, funding for ER programs has dropped dramatically. Furthermore, DOE has lumped together ER and WM funding in its annual aggregate “Environmental Management” budgets, which is a blatant obfuscation of the facts. Combining these two budget categories makes the DOE look good on paper and enables it to make the claim to Congress and the public that it is pursuing a rigorous cleanup schedule that is amply funded, a claim that reality on the ground proves false. This is particularly noticeable at SNL and LANL. By breaking down the combined WM/ER budget category, ER receives about half of the total environ-



mental management program funding at each lab. This sounds good in theory, but the funding levels are ultimately very poor, despite the environmental degradation caused by five decades of contamination. NMED has declared that there is an “imminent and substantial endangerment to health or the environment” at both labs.¹⁰ The sorry tale of DOE’s lack of fiscal commitment to cleanup at the labs can be seen in the graph on the previous page.

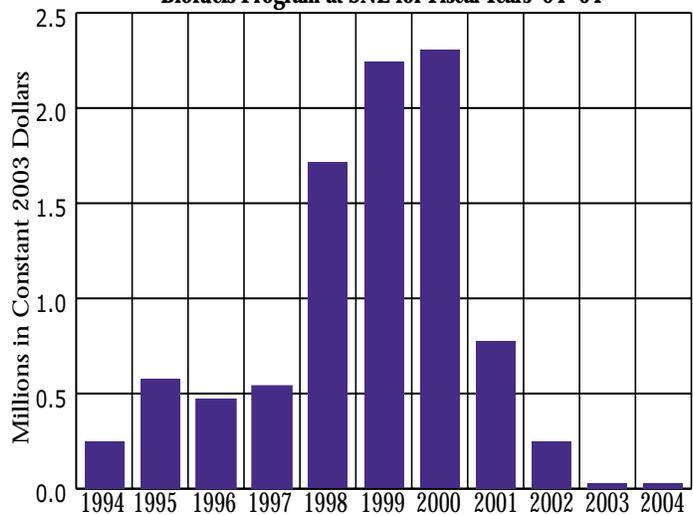
In FY ‘94, funding for cleanup was at its highest levels since the ER program’s inception. LANL’s ER program saw funding levels of \$104.2 million and SNL’s program was funded at \$41.9 million. By FY ‘03 that funding is down to \$30.3 million for LANL and \$8.6 million for SNL, which is a decrease of 71% and 79% respectively. Funding for ER programs at LANL makes up 2% of the lab’s total DOE funding. For SNL, ER funding consumes about 1/2 of 1 percent of SNL’s DOE funded budget. Complete budget data is not yet available for FY ‘04 on ER programs pending decisions by DOE.

Declining Budgets for Renewable Energy R&D Programs

Biofuels: Fuels based upon biomass appear to be a very promising source of energy, allowing farmers, small towns and large cities to capture gases such as methane from decomposing solid wastes and generate electricity by burning that methane. Furthermore, biomass fuels such as wood, corn, etc., may be used to extend the life of the massive and costly coal fired electricity generating plants by replacing coal with biofuels. Such a substitution, in addition to being a renewable fuel cycle, could greatly reduce the amount of heavy metals (like lead) that are produced by firing plants with coal.

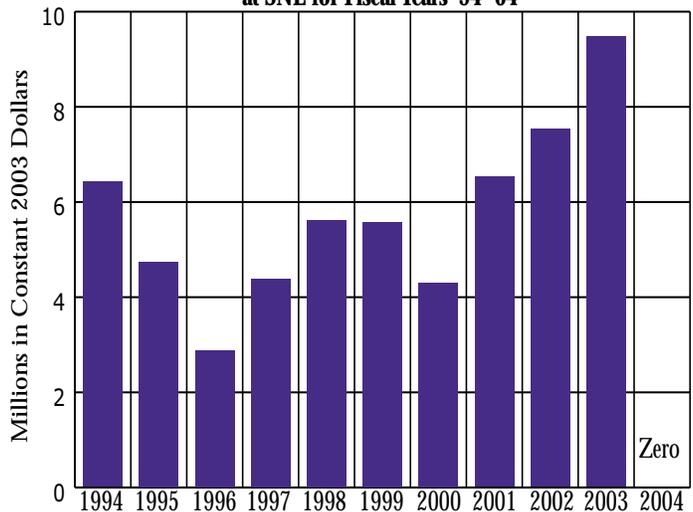
The only national laboratory that receives discrete funding for biofuels and biomass R&D is SNL. In FY ‘00 DOE dedicated \$2.31 million to such programs, but that has now been decreased to \$30,000 in FY ‘04, representing less than 1/10 of one percent of SNL’s total DOE funding. In comparison to the highest point of funding in FY ‘00, funding for biofuels programs has been slashed by 99%.

Biofuels Program at SNL for Fiscal Years '94-'04



Note: LANL receives no funding for Biofuels Programs.

Energy Storage Technologies Programs at SNL for Fiscal Years '94-'04

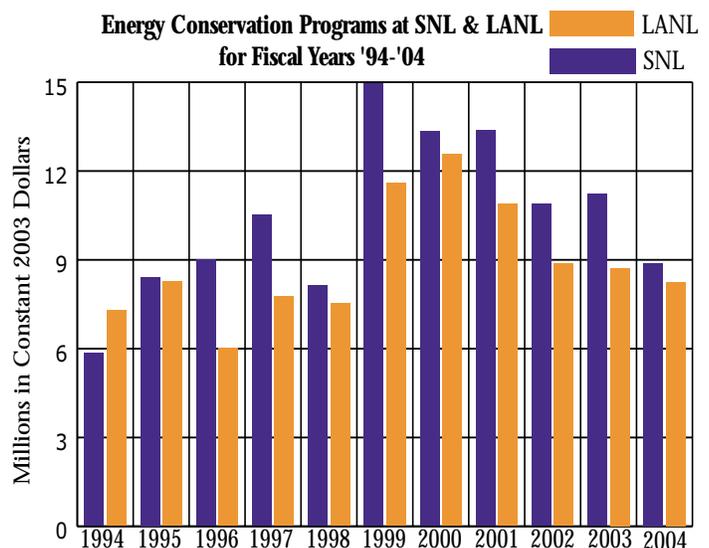
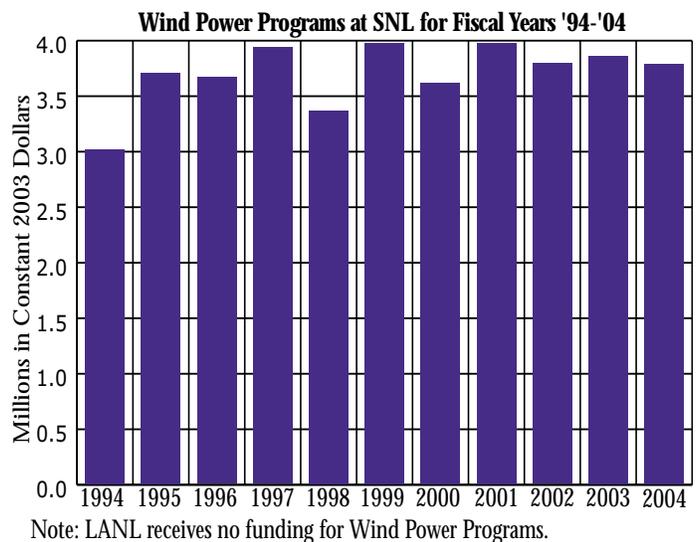


Note: LANL receives no funding for Energy Storage Technologies.

Energy Storage Systems: This SNL program, which includes research on advanced battery technologies, had actually seen a rise in funding over the past decade. For FY '03 the DOE had requested that the program be funded at \$9.5 million. However, DOE removed funding for it in FY '04. The FY '03 funding was a three-fold increase in funding compared to its previous low point in FY '96. It is unfortunate that funding has been eliminated for energy storage technologies. Research in this field will become increasingly important, particularly as more hybrid (gas/electric) and electric cars make a bid to enter the U.S. market.

Wind Power: The DOE has requested that SNL's wind power research program be funded at a level of \$3.8 million in FY '04. Funding for this program would be less than 1/4 of one percent of SNL's total funding from DOE in FY '04. This is probably the most shockingly under-funded program. Wind energy production is one of the fastest growing sources of electricity in the U.S., and New Mexico is commonly thought to be one of the best states to locate wind farms. Technologies developed by SNL could greatly benefit the State economy by creating high-tech spin-off opportunities. Furthermore, wind energy technologies, and the development of wind farms could greatly improve smog problems now seen in the Middle Rio Grande Valley that are due in part to the coal fired power plants in the Four Corners region of the State. The use of wind power would also greatly reduce water consumption were it to be used as an alternative to the State's coal fired plants.

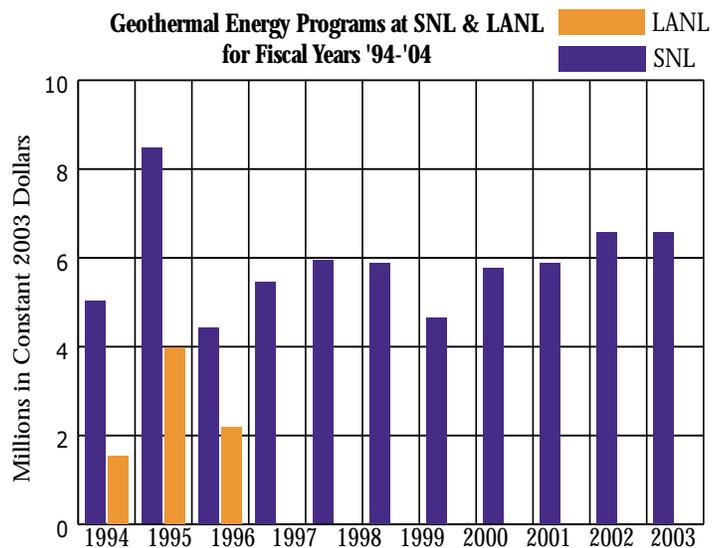
Energy Conservation: Research under this category is conducted at both LANL and SNL. Work in this field supports Federal agency initiatives to improve the use of electricity and heating and air conditioning systems in office buildings, among other things. This program also provides the public sector with new technologies, materials, equipment, and appliances that reduce the nation's consumption and waste of energy. The DOE requested funding for this program at LANL and SNL for FY '04 is \$8.27 million and \$8.91 million respectively. FY '99 saw the peak funding rate at \$11.63 million and \$14.99 million respectively. In comparison to overall DOE funding for LANL and SNL, energy conservation receives less than 1/2 of one percent at LANL and just over 1/2 of one percent at SNL.



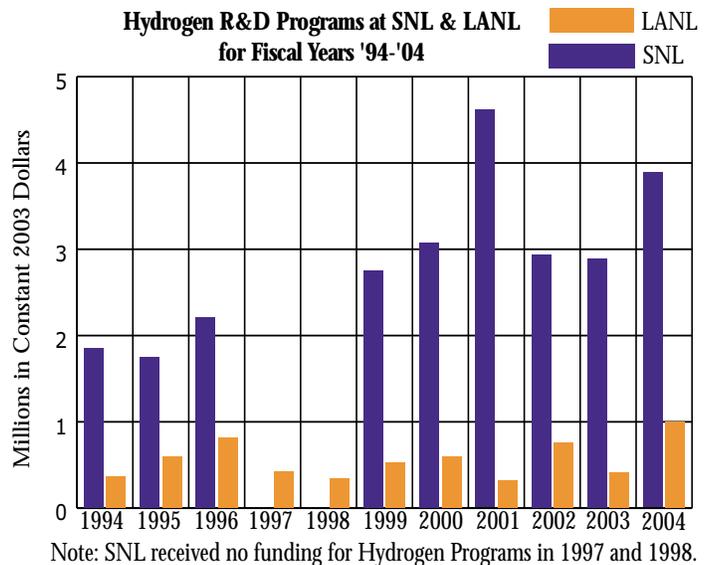
Geothermal Energy: LANL has not received funding for geothermal energy research since FY '96, despite the fact that the Jemez Mountain range, in which LANL is situated, is a hotbed of geothermal activity. For FY '04, DOE requested that SNL's geothermal energy program be funded at a level of \$6.6 million, or just under 1/2 of one percent of SNL's total DOE funding. This is surprising given that New Mexico has strong potential for energy production due to the amount of geothermal activity within the State. Application of this technology could also provide the State with economic benefits, including jobs generated from the development of geothermal energy production.

Hydrogen Energy Sources: This category, which includes research in hydrogen fuel cell technology for applications such as automobiles will receive funding at the level of \$1.0 million and \$3.9 million at LANL and SNL respectively for FY '04. This translates into a budget commitment of 1/4 of one percent at LANL, and 1/2 of one percent at SNL. The lack of funding for this program boggles the mind, given that hydrogen fuel technology promises to be one of the more important energy frontiers in the coming decade, and that President George W. Bush declared in his 2003 State of the Union Address that substantial resources would be devoted to hydrogen research in FY '04.

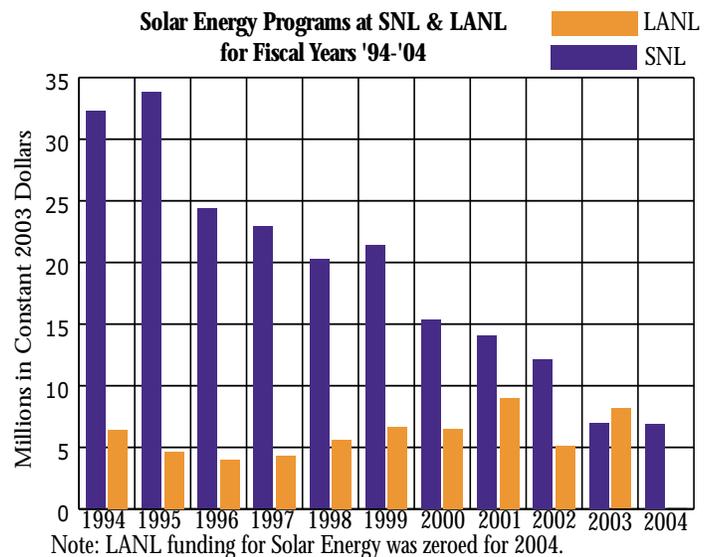
Solar Energy: During the mid-90s, SNL invested a sizeable amount of money into solar energy technology development. In FY '95 solar energy R&D received a budget commitment of \$33.94 million. That funding, however, has dropped to a paltry \$6.92 million requested for FY '04. At LANL the funding is yet worse, at a mere \$8.18 million last year and zeroed in FY '04. In comparison to the DOE's total funding for the two labs in its FY '03 request, solar energy R&D



Note: LANL funding for Geothermal Energy was zeroed after 1996.



Note: SNL received no funding for Hydrogen Programs in 1997 and 1998.



Note: LANL funding for Solar Energy was zeroed for 2004.

will receive 1/2 of one percent at SNL and zero at LANL. On a commercial scale solar energy is much more land-use intensive than wind energy.

However, given the potential in the Southwest it is shocking that so little effort by the two national labs goes into technologies that could be used to make solar energy capture more efficient and economical.

Downbeat:

The above-discussed programs are the only cleanup and renewable energy R&D programs that receive specific line-item budgets in DOE's congressional funding requests over the past decade. The two national labs may perhaps conduct research on renewable energy within other budget categories (i.e., at the sub-program level), however the funding for such research can be certain to be miniscule. As a result, funding at the sub-program level would not make a calculable difference in the figures presented above. Therefore, these program descriptions represent an accurate and complete picture of LANL and SNL's commitment to renewable energy R&D over the past decade.

The DOE's SNL funding request for FY '04 for renewable energy programs R&D totals \$30.16 million, or 2.0% of SNL's total budget. Further, renewable energy R&D will receive only 10.3% of the SNL funding that is not already solely dedicated to nuclear weapons R&D and production.

At LANL, renewables have a total requested funding level of \$9.27 million for FY '04. That amounts to just over 1/2 of one percent of LANL's total DOE operating budget. Of the funding not specifically earmarked for nuclear weapons programs, renewables will receive only 2.2% of LANL's financial commitment to non-nuclear weapons budget items. We find this to be a strange irony as both labs are owned by and operated for the so-called Department of *Energy*.

A Nuclear Weapons Tax?:

Both national labs have a program called Laboratory Directed Research and Development (LDRD). LDRD is an internal tax of up to 6% on all DOE funding that the lab can apply to other programs at its discretion. The LDRD funding is intended to "maintain the scientific and technical vitality of the laboratories; enhance the laboratories' ability to address future DOE missions; foster creativity and stimulate exploration of forefront science and technology..."¹¹ Because of the great emphasis placed upon nuclear weapons by the DOE and its national laboratories, LDRD primarily supports advanced nuclear weapons R&D. SNL taxed its budget to the tune of 5.5% in FY '02, thereby re-directing \$78 million from other programs such as cleanup and renewable energy R&D to support its primary mission of nuclear weapons work. If SNL taxes its budget at the same 5.5% level in FY '04, funding for cleanup and renewable energy R&D will be decreased by more than \$1.66 million. If LANL were to do the same, funding for cleanup and renewables would be decreased by \$2.16 million, the majority of it to benefit nuclear weapons work at the labs.

Conclusion:

The public relations machines at the labs may be in high gear in an attempt to remake the labs' historic image as designers, developers, and producers of nuclear weapons. Just under the surface, however, is the underlying truth that they remain overwhelmingly committed to nuclear weapons and that they stake their own ongoing future on that commitment. In internal program documents, neither LANL nor SNL attempts to paint a different picture. In its 2002 Institutional Plan, LANL states that "LANL's core mission is nuclear stockpile stewardship..." LANL relegates research programs, such as renewable energy and the environment (cleanup), to the category of being merely "Ancillary."¹² Such statements collide with the claims of former lab Director Browne when he asserts that research programs such as the environment will come to the forefront of the lab's strategic mission. In its 5-year Institutional Plan, SNL opens the section titled "Strategic Objectives and Intermediate Goals" with "Nuclear Weapons: Our Primary Mission."¹³ The nuclear weapons industry in New Mexico is far from over; to the contrary, it is growing by leaps and bounds. All this is at the cost of important R&D programs, such as renewables and long-needed environmental cleanup, which could have a positive impact on our State's economy as well as our environment.

In a recent analysis of the impacts of renewable energy infrastructure development, such as the construction of wind farms, geothermal plants, and solar energy sources, the New Mexico Public Interest Research Group (NMPIRG) came up with some interesting data. Using conservative models and data developed by the DOE's National Renewable Energy Laboratory (RNEL), NMPIRG asserts "New Mexico could generate over 116,000 GWh/y [gigawatt hours per year] of electricity" from wind, "over three times the amount the state generated in 1999."¹⁴ According to the U.S. Bureau of Reclamation states that 5 GWh/y is enough to supply electricity to 625,000 homes for one year. NMPIRG writes that total wind generating capacity grew in the Nation by 60% during 2001. Taking that model and existing knowledge of prime locations in New Mexico for wind generation, they claim that by 2010 New Mexico could be "generating more than 3,500 GWh/y of electricity emission free."¹⁵ Calling for an aggressive but still reasonable approach to renewable energy development, NMPIRG claims that by 2010 New Mexico could be generating a majority of its energy from renewable sources, which, when combined with energy efficiency and conservation programs, would allow the state to replace many of its conventional energy generators, such as coal, and still remain a large exporter of electricity to other states. Such a transition, NMPIRG asserts, would not hit the consumers' pocket book, as the cost of renewable energy production is easily on a par with conventional power per kW/h given recent advances in technology. Furthermore, they claim that such initiatives would have a net gain of "4,200 additional jobs by 2010."¹⁶ These jobs would come in the form of technically skilled maintenance crews, as well as possible small companies dedicated to supplying or manufacturing parts for the energy systems.

Should the national labs refocus their attention away from nuclear weapons towards renewables and environmental technologies, the potential for spin-off would be immense. Additionally, there would be a direct conduit between the R&D community and direct field application. This in turn could further advance the degree of efficiency as well as increase job potential. NMPIRG's projection of a net gain of 4,200 new jobs by 2010 is more than half the number of jobs that were held at SNL's Albuquerque facilities during 2003. Therefore, without even considering the secondary and tertiary job impacts, and a

possible “high-tech” boom that would likely result in a reasonable but aggressive renewable energy program, it is clear that the direct beneficial impact on the State’s economy would be vast.

There are huge untapped potentials, yet those potentials are being neglected at both DOE national laboratories and at the State level. New Mexico is gifted with a huge research and development community centered around the national laboratories, as well as an ideal climate and geology that make it a prime potential source for renewable power generation. Combined, these two factors could make New Mexico a model of renewable energy development for other states. Why is this not happening?

Recommendations for Citizens:

Cleanup:

- Let your members of Congress know what you think is appropriate funding necessary for DOE to meet all of its cleanup requirements;
- Tell your members of Congress that funding for cleanup at DOE facilities should be exempt from the “nuclear weapons tax,” also known as Laboratory Directed Research and Development;
- Let Congress know what you think about DOE’s failure to segregate waste management and cleanup funding from each other, thereby obfuscating the true amounts of dollars being used to restore the environment;
- Let New Mexico Governor Bill Richardson and your New Mexican State Legislators know what you think about the New Mexico Environment Department’s increasing efforts to compel DOE to clean up;
- Tell the New Mexico Environment Department’s office of the Secretary how you feel about their Corrective Action Orders against LANL and SNL; and
- Write letters to your local newspaper describing the negligence of DOE’s cleanup programs. Help dispel the myth that the nuclear weapons business is over.

Renewables:

- Let the State Legislature know what you think about a strong renewable energy R&D and implementation effort;
- Tell Governor Richardson what you think about making renewable energy development a policy of his Administration;
- Educate local city and county level government, as well as chambers of commerce, about the local job creation possibilities of renewable energy development;
- Let your New Mexico Congress people know what you think are appropriate funding levels for renewable energy R&D programs at LANL and SNL. Additionally, let them know what you think about a cooperative partnership between LANL and SNL and the State, local communities, and utility companies which would provide the research and development base behind a strong renewable energy program.
- If an option, choose to specifically purchase “green” energy from your utility company.

Notes:

¹ The U.S. Senate did ratify START II, however during consideration of the treaty prior to its ratification in Russia the Dumas inserted additional requirements. These requirements needed re-ratification by the U.S. Senate. However, foreign policy

conservatives within the Senate, lead by Jesse Helms, killed the treaty.

² For more information on the Stockpile Stewardship Program and the nuclear weapons work that fall under its rubric, please see the following documents: *Alterations, Modifications, Refurbishments, and Possible New Designs For the US Nuclear Weapons Stockpile, An Overview of Current and Planned U.S. Nuclear Weapons*, and *Focus On LANL & Sandia: The NNSA's FY04 Nuclear Weapons Budget*. These documents can be found electronically at www.nukewatch.org.

³ A Federal Fiscal Year begins October 1 and ends September 30 of the following calendar year.

⁴ All FY '04 budget figures are for DOE's funding request to Congress. During the appropriations process, it is likely that Congress will make some adjustments, in recent years always adding to the nuclear weapons programs.

⁵ The Cold War average was compiled from *Atomic Audit*, Stephen I. Schwartz, Editor, The Brookings Institution Press, 1998. All other budget figures have been compiled from DOE Congressional Budget Requests, LANL and SNL Institutional Plans, and LANL Comprehensive Site Plans. All budget figures have been adjusted to 2003 dollars using the Consumer Price Index, as calculated by the Federal Reserve Bank.

⁶ The U.S. has three nuclear weapons national laboratories within the DOE's nuclear weapons complex, Los Alamos in Northern New Mexico, Lawrence Livermore 40 miles east of the San Francisco Bay Area, and Sandia with its main lab in Albuquerque, New Mexico. Sandia also has satellite labs at Livermore, CA, the Nevada Test Site, and at Kauai, Hawaii (the southern end of the Pacific missile testing range). The first two labs are the nuclear design labs, with some major production mission as well. Sandia designs all of the non-nuclear components (such as firing and fusing systems) and also mates nuclear weapons to delivery systems, plus produces key non-nuclear components as well. For much more on all three labs, go to www.nukewatch.org.

⁷ *Albuquerque Journal, North Edition*, "Lab Not Pursuing Pits," September 27, 2002.

⁸ In early January 2003 LANL Director John Browne resigned from his position amidst allegations that the Lab's upper management covered up fraud and theft of government property. Investigators have determined that lab employees stole lab computers and printers, and used government purchase cards for personal transactions such as the purchase of thousands of dollars in golf equipment and an attempted purchase of a \$30,000 Ford Mustang.

⁹ Mixed wastes are a combination of hazardous and radioactive wastes generally regulated under the Resource Conservation and Recovery Act (RCRA), a Federal law which gives states primary regulation authority.

¹⁰ "Secretary's Determination of an Imminent and Substantial Endangerment to Health and the Environment," issued for SNL, NMED, September 3, 2002, http://www.nmenv.state.nm.us/HWB/SNL/order/SNL_ORDER_SNG.pdf. "Determination of an Imminent and Substantial Endangerment to Health and the Environment" issued for LANL, NMED, May 2, 2002, <http://www.nmenv.state.nm.us/HWB/lanl/ISE.pdf>.

¹¹ Institutional Plan, FY 2002-2007, Sandia National Laboratories, p. 6-41.

¹² Institutional Plan, FY 2002-2007, Los Alamos National Laboratory, p. 1.

¹³ Institutional Plan, FY 2002-2007, Sandia National Laboratories, p. 3-3.

¹⁴ "Clean Energy Solutions, Energy Efficiency and Renewable Energy in New Mexico," Marianne Zugal and Brad Heavner, NMPIRG Educational Fund, March 2002, p. 16, <http://www.nmpirg.org/reports/CleanEnergyReport.pdf>.

¹⁵ *Ibid.*

¹⁶ *Ibid.*, p. 39.

Comments, questions, and corrections are always welcomed. Please address them to Colin King, Research Director, Nuclear Watch of New Mexico, 551 West Cordova Rd., 808, Santa Fe, New Mexico, 87505, (505) 989.7342, or colinking@nukewatch.org.

Colin King, June 2003