



Los Alamos Study Group

Nuclear Disarmament • Environmental Protection • Social Justice • Economic Sustainability

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To: [Congressional appropriators]

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- 1. Ample opportunities exist to lower Congress' proposed overall Energy and Water Development (EWD) FY08 appropriations to well below those proposed by the President while preserving all congressionally-proposed increases in titles I, II, and IV.**
- 2. Significant cuts in selected Title III (Department of Energy, DOE) programs are appropriate and overdue. Such cuts can be made without the least compromise to overarching energy and national security objectives. In fact U.S. energy research and national security posture could be significantly improved within a \$22.6 billion (B) DOE and an overall \$29 B EWD appropriations bill. Some indications of how such cuts could be made are offered below.**
- 3. It is important to have an EWD appropriations bill, rather than a continuing resolution for a second year, *provided* key policy reforms embedded in the House markup can be included. These reforms halt some (not all) of the looming disasters in DOE's programs. (It appears that large civilian nuclear loan guarantees may be added to this bill and if so they must also be halted, for reasons discussed below). As we show here, there are ample funds available to accomplish needed policy reforms within the President's overall request.**
- 4. If any of you believe it would be helpful I will come to Washington immediately (this week and/or next) to discuss detailed funding and program perspectives within my areas of competence with any party during this crucial time.**
- 5. The political waters swirling around the EWD appropriations process are obviously deep. The work of professional staff associated with both parties in protecting the public interest is particularly important this year and is deeply appreciated.**

Congress is widely reported to be working on an omnibus appropriations bill covering the remaining 11 appropriation bills for FY08. News and other reports suggest that such an omnibus bill would spend about \$11 B more than the President's request. As of this writing, the fate of such a package is unknown. It is not known whether EWD appropriations for FY08 will be passed as part of an omnibus bill, passed as a separate bill, or not passed at all. I know virtually nothing about the continuing resolution (CR) process, but clearly many approaches to a CR are possible with differing approaches to overall spending, control level, and individual budget lines.

It is my opinion that DOE spending in several programs is very high. It is possible to lower total EWD appropriations below the President's request by lowering appropriations in Title III only.

This memo is silent regarding the merits of, and appropriations for, most DOE programs. It focuses on what appear to Los Alamos Study Group eyes to be some of the most problematic and least necessary

DOE programs and budget lines. With numerous exceptions DOE, along with its semi-autonomous sub-agency the National Nuclear Security Administration (NNSA), is a badly-run department with often-appalling technical judgment. In both these agencies, judgment is easily captivated by contractor interests, parochial political interests, and science fiction. Big programs are often proposed and run for years on the basis of what amounts to little more than fantasy, ideology, self-interest, and pride.

This is not surprising given that DOE contractors spend more than 94% of the agency's funds. DOE functions too much like an impresario, accountant, and apologist for its laboratory contractors.

At the same time DOE seems to find itself in the business of marketing technological fairy-tales to temporize the important energy decisions now facing a frightened nation. In this regard, DOE offers the services of its labs for a hefty price as so many "Santa Clauses," with uneven results. The truth is that many DOE programs, military and civilian, will never produce much in the way of useful results. Many people know this already. It would be helpful if DOE were less of a "rube agency," one less captivated by its own myths.

DOE's problems mostly stem from its nuclear origins and its biggest problems are still tied to military and civilian nuclear promotionalism, largely based in the labs. There, the two strains of nuclearism institutionally blend. DOE's nuclear labs, especially the weapons labs, are the agency's biggest "problem initiators" and "problem promoters." Their collective scale significantly exceeds their utility.

This realization was once more common than it is today. On February 8, 1992, House Science Committee Chairman George Brown (D-Riverside, CA) wrote Secretary of Energy James Watkins regarding the future of the DOE nuclear weapons laboratories. The problem, as he saw it, was that

...the end of the Cold War has left the DOE weapons labs scrambling to define new missions for themselves, yet they are all reaching for the same new missions....With the end of the Cold War, do we still need three nuclear weapons labs, each funded at approximately one billion dollars per year and each with employment of about 8,000 people?¹

His answer was no. Among other measures, Brown advocated shrinking budgets.

Reduce the DOE nuclear weapons research, development, and testing budget by 20 percent per year over the next four years...the annual nuclear weapons RDT&E budget of nearly two billion per year could be cut in half.

These cuts look about right to me and this approach is still a good reference point for policy. The cuts proposed by the House of Representatives for FY08 are about one-third of these and they could be substantially increased toward Chairman Brown's deep cuts. I think the House cuts could be doubled, without detriment to the stockpile now or later. I largely concur in the House's line-by-line priorities and can suggest others. Much of the Weapons Activities budget is "holographic," however, and once

¹ Brown's "one billion" 1992 dollars, inflated to 2007 dollars, is about \$1.5 B. That is also the average DOE funding for these same labs today. (Overall budgets for the three labs are about one-third greater than this, falling in the \$2 B range, on the average). His employment estimate roughly holds if subcontractors are excluded.

the policy directions embodied in the House cuts are included, an across-the-board cut would work out fine.

A great deal has been learned about nuclear weapons in the past 15 years. Many of the problems originally posed for the stewardship program have been solved. It is a mature program. It never needed to grow as it has grown, but since it has it can certainly be cut and cut deeply without risking damage to core stockpile maintenance programs. Managing efficient, safe programs and making tough choices is what we pay NNSA to do, not promote new bomb programs every year.

Such WA economies will not be possible, of course, if the problematic Reliable Replacement Warhead (RRW) or Chemistry and Metallurgy Research Replacement (CMRR) proceed. The RRW would maximize cost, risk, and infrastructure requirements across the warhead complex while providing no ancillary benefit at all.

The CMRR nuclear facility is the flagship of unnecessary infrastructure commitments. A glance at the project's official web site² reveals a number of vague and competing missions for the new building, belying official claims that the CMRR is necessary to maintain any sort of plutonium pit production capability at LANL. Like LANL's existing PF-4 plutonium facility, where pit production uses about ¼ of the total space, the CMRR nuclear facility would be a multi-function space. The national commitment to those functions has not yet been vetted, still less authorized, and still less funded.

Overall DOE and NNSA are now poised to create much bigger problems than currently exist in both the military and civilian nuclear fields. They would do this through new programs, especially: a) the RRW, b) the pell-mell weapons complex transformation embodied in the CMRR project at Los Alamos National Laboratory (LANL) and related projects, c) the Global Nuclear Energy Partnership (GNEP), and d) the huge civilian nuclear loan guarantees aimed at luring private capital to risky nuclear investments that capital markets would not otherwise touch.

A "renaissance" in civilian nuclear investments, precisely *because* of these loan guarantees, would guarantee decades of high profits to DOE's largest contractors for electrical base-load technologies that are far less capable (less cost-effective, less quick, less sure, with far fewer job, land-use, and social benefits and with essentially unsolvable proliferation and security problems) than other alternatives. Society-wide investments in conservation using existing technologies are far at the top of the list of preferred alternatives.

Technology-specific market interventions of this magnitude have the potential to substantially direct the nation's energy future away from reality-based solutions and toward ever-receding promises of future payback that are likely to gravely damage national energy security if implemented. GNEP, of course, lies well beyond even this. It is mostly vaporware at best. Virtually every claim made about it is demonstrably false and I am very sorry so much time has been wasted on it by so many parties. I fear the seriousness with which GNEP is treated is a measure of how far our collective ability to assess technology has fallen, a frightening perspective for a technological civilization. It is also a measure of DOE's ability to muster scientific and engineering realism from its staff and contractors.

² <http://www.lanl.gov/orgs/cmrr/>

Among other implications, the ridiculousness of GNEP is just one bright light throwing DOE's "educational" programs into sharp relief. Acceptance of the notion that DOE can help lead the U.S. in scientific and technical education is a product of sitting through too many DOE PowerPoint presentations.

DOE's nuclear propensities and its research orientation (as opposed to engineering and implementation), have so badly distorted energy policy that we might be far ahead in energy security if DOE as we know it didn't even exist.

Some programs, particularly in Weapons Activities, have become so technically ornate that the original simple objectives are now lost in vague, open-ended aspirations that create endless, useless, and damaging complications. The Stockpile Stewardship program grew from 1995 to 2005 at a real rate approaching 6% per year, while accomplishing many of its original goals and in the process demonstrating that many of its most expensive components were not actually necessary (as some of us said all along).

If titles I, II, and IV were all funded at the higher of House and Senate, about \$0.9 B would need to be cut from the President's Title III request, i.e. DOE would need to be funded at no more than \$24.0 B. The following cuts from the President's DOE request are proposed:

- Cut Weapons Activities by \$1.3 B (20% from the request). This by itself would more than achieve the cuts needed.
- Cut DOE Science could be cut by about \$0.9 B, an amount comparable to the overall DOE cuts needed. For illustration purposes this cut could be composed of cuts in High-Energy Physics (~ \$0.2 B), Nuclear Physics (~\$0.1 B) Biological and Environmental Research (~ \$0.1 B), Basic Energy Sciences (~\$0.3 B), and Fusion Energy Sciences (~ \$0.2 B).
- Priorities in Energy Supply and Conservation (ESC) are badly skewed. For reasons alluded to, Nuclear Energy, especially the Advanced Fuel Cycle Initiative, could be cut by ~\$0.4 B. Hydrogen technologies are impractical for fundamental reasons and could be cut by ~\$0.1 B. This would free up \$0.5 B for investment in sound energy efficiency and renewable energy programs.
- Under Fossil Energy R&D DOE has long provided subsidies to industry it should not have provided, notably in coal technologies. When all is said and done this amounts to trying to make a silk purse from a sow's ear. Significant cuts are possible here, for illustration's sake say ~ \$0.2 B, which could also be applied to sound programs in energy efficiency and renewable energy.