

# Is It Time to Denuclearize the Department of Energy?

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## Abstract

Given the Obama administration's increased emphasis on global warming and energy efficiency and its efforts to realign and diminish the role of nuclear weapons in U.S. national security posture, and a growing recognition that the status quo for the management of the nuclear weapons production complex is not sustainable, the time has come to consider all reasonable alternatives for managing the complex in the 21st century. These include transferring responsibility for the nuclear weapons program to the Department of Defense, spinning off the National Nuclear Security Administration as an independent agency, or creating a new independent agency.

Anyone not familiar with the primary mission of the U.S. Department of Energy (DOE), which is to say almost everyone, would assume that the energy department focuses on energy. In fact, energy-related programs comprise only a small portion of the agency's overall budget whereas nuclear weapons and weapons-related programs consume 67 percent of annual funding (in fiscal 2008).<sup>2</sup>

Longstanding questions about the DOE's performance and a renewed emphasis on energy programs have raised the prospect of transferring the nuclear weapons mission to another agency, freeing the DOE to focus its full attention on energy programs. This paper reviews how the DOE came to "own" the nuclear

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<sup>2</sup> Stephen I. Schwartz with Deepti Choubey, *Nuclear Security Spending: Assessing Costs, Examining Priorities* (Carnegie Endowment for International Peace, 2009), 7, 62.

weapons mission, explores the key issues regarding the DOE's management of nuclear weapons, and examines the pros and cons of various alternative scenarios.

## **Historical Background**

When the United States embarked on an effort to develop nuclear weapons during World War II, the U.S. Army Corps of Engineers was put in charge of the project. The innocuously named Manhattan Engineer District, commonly known as the Manhattan Project, in turn asked some of the country's largest corporations to both construct and operate the large industrial facilities required for the project. E.I. du Pont de Nemours, General Electric, Eastman Kodak, Carbide and Carbon Chemical Corp. (later Union Carbide), and others willingly answered the call. The University of Chicago and the University of California also played critical roles, with the latter responsible for running Los Alamos laboratory in New Mexico, the intellectual and scientific center of the program.

The government turned to private corporations because it had neither the expertise nor the personnel to accomplish the job on its own. This arrangement laid the groundwork for what today is known as GOCO—government-owned, contractor operated. No other government agency relies so heavily on private contractors to carry out its mission. Today, as in the past, just a few hundred government employees are charged with overseeing tens of thousands (and during the construction boom of 1950s and early 1960s, hundreds of thousands) of contractor personnel, an arrangement that makes it difficult to provide adequate supervision and hold contractors fully accountable.

Immediately after the war ended, scientists and others involved in the Manhattan Project began to debate publicly the future of the program, and in particular whether it would continue to be controlled by the military or whether a civilian agency should take charge. Strong arguments were made on both sides, but in the end Congress passed the Atomic Energy Act of 1946, mandating the creation of an Atomic Energy Commission (AEC).

The AEC took control of the nuclear weapons program in January 1947.<sup>3</sup> In the early years, it not only managed research, development, testing, and manufacture

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<sup>3</sup> The military aspects of the Manhattan Project were incorporated into the Armed Forces Special Weapons Project, known today as the Defense Threat Reduction Agency.

of nuclear weapons, it also controlled access to the arsenal itself (an arrangement at which the military chafed and one which began to be reversed in stages beginning in 1950). The AEC oversaw the expansion of the nuclear stockpile from a few dozen weapons in 1947 to more than 32,000 by the mid-1960s. Enabling that expansion was a significant increase in the size of the weapons production complex itself, including the construction of the Savannah River Plant in South Carolina (to manufacture plutonium and tritium), the Rocky Flats Plant near Denver, Colorado (to process and fabricate plutonium into weapons cores), and the creation of the Nevada Test Site outside Las Vegas (to facilitate an increase in the rate of nuclear explosive testing), along with the construction of new facilities at existing sites.

In addition to its weapons-related roles, the AEC was also charged with both regulating and promoting the development of nuclear energy for civilian purposes. It excelled at the latter, aided by the powerful congressional Joint Committee on Atomic Energy (also created by the Atomic Energy Act). Over the years, critics in Congress and elsewhere raised questions about the AEC's actions and priorities, noting the inherent conflict between regulating and promoting nuclear energy. So in 1975, Congress abolished the AEC and in its place created two new agencies. The Nuclear Regulatory Commission (NRC) would take responsibility for regulating nuclear power and civilian uses of nuclear technology and the Energy Research and Development Administration (ERDA), in addition to assuming control of various energy-related programs, would inherit the nuclear weapons activities previously overseen by the AEC. Two years later, ERDA itself was abolished, replaced by the Department of Energy.

Management of the nuclear weapons program within the DOE remained largely unchanged until 2000, when Congress—frustrated by serious and sustained management lapses and alarmed by allegations of Chinese espionage—created the semi-autonomous National Nuclear Security Administration (NNSA) to oversee the nuclear weapons program from within the DOE.

## **Key Issues**

When considering whether and how to change the way nuclear weapons and weapons-related programs are managed, there are several key issues to keep in mind.

First, as noted above, relatively little of the DOE's annual budget is actually spent on energy-related programs. In fiscal 2008, the amount was less than \$4 billion, or about 16 percent of the entire budget. By contrast, in fiscal 2008, 67 percent of DOE's budget was devoted to nuclear weapons and weapons-related programs.

Second, although nuclear weapons-related costs borne by the DOE are part of the "050" national defense account, they have never been considered part of the Department of Defense (DOD) budget, either by the DOD, the military services, or Congress. As a result, nuclear weapons have historically been treated as "free goods" by the military. While the military has to cover the costs of developing, producing, and maintaining delivery systems, the cost of warheads and bombs has always been paid by the DOE or its predecessors. Thus, the DOD has never had a disincentive not to request a nuclear warhead when a conventional one might be just as good (or better), or to request large numbers of nuclear weapons. In essence, the DOE has functioned as a kind of nuclear pharmacy, filling prescriptions on demand *and* covering the entire cost.

Third, there is growing concern within Congress and the NNSA that excessive regulation and oversight is hindering the ability of the agency to do its job. And in the past several years, a number of external observers—including the Defense Science Board, the American Association for the Advancement of Science, the Congressional Strategic Posture Commission, the Stimson Center, and a Council on Foreign Relations Task Force—have stated that the current management system for the nuclear weapons production complex is less than optimal or dysfunctional.<sup>4</sup>

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<sup>4</sup> *Report of the Defense Science Board Task Force on Nuclear Capabilities*, "Report Summary," December 2006, 26-34; Report by a Joint Working Group of AAAS, the American Physical Society, and the Center for Strategic and International Studies, *Nuclear Weapons in 21<sup>st</sup> Century U.S. National Security*, December 2008; Task Force on Leveraging the Scientific and Technological Capabilities of the NNSA National Laboratories for 21<sup>st</sup> Century National Security, *Leveraging Science for Security: A Strategy for the Nuclear Weapons Laboratories in the 21<sup>st</sup> Century*, March 2009; William J. Perry, Chairman, James R. Schlesinger, Vice-Chairman, *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (United States Institute of Peace Press, Washington, D.C., 2009); William J. Perry & Brent Scowcroft, Chairs, Charles D. Ferguson, Project Director, *U.S. Nuclear Weapons Policy*, Independent Task Force Report No. 62 (Council on Foreign Relations, 2009), 79-80.

## To Change or Not to Change

In late January or early February 2009, word leaked out that the Office of Management and Budget (OMB) had tasked the DOD and the DOE, in consultation with the NRC and the departments of State and Homeland Security, to study “the costs and benefits of transferring budget and management of NNSA or its components to DoD and elsewhere, as appropriate, beginning in FY 2011.”<sup>5</sup> Not surprisingly, elected officials supportive of the nuclear weapons laboratories were quick to condemn the idea. In a letter to OMB Director Peter Orszag, Senators Jeff Bingaman (D-New Mexico) and Lisa Murkowski (R-Alaska), the chair and ranking member, respectively, of the Senate Energy and Natural Resources Committee, Senators Byron Dorgan (D-North Dakota) and Robert Bennett (R-Utah), the chair and ranking member, respectively, of the Energy and Water Development appropriations subcommittee, and Senator Bill Nelson (D-Florida), chair of the Strategic Forces Subcommittee of the Armed Services Committee, wrote that “Nonmilitary control over the development of nuclear weapons technology has ensured independence of technical judgment over issues associated with our nuclear arsenal, has attracted the best scientific and technical talent to these important programs, and has served to underline the crucial differences between nuclear weapons and conventional military munitions.” In addition, they wrote, “civilian control is the cornerstone that has enhanced the ability of U.S. funded and staffed programs to negotiate access to and trust of other nuclear nations.” Although the quintet agreed that the relationship between the NNSA and the DOE “is in many ways dysfunctional,” they argued against even studying whether to move the nuclear weapons mission out of the DOE.<sup>6</sup> By August, *Global Security Newswire* was reporting that no formal study had been initiated and that the administration had decided to address the issue within the context of the Nuclear Posture Review.<sup>7</sup>

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<sup>5</sup> LANL: The Rest of the Story, “Organizational Assessment of the NNSA,” February 4, 2009, <http://lanl-the-rest-of-the-story.blogspot.com/2009/02/organizational-assessment-of-nnsa.html>.

<sup>6</sup> *Global Security Newswire*, “Senators Call for Keeping U.S. Nuclear-Weapons Research Under Civilian Control,” March 19, 2009.

<sup>7</sup> Elaine Grossman, “Potential Action on Nuclear Agency Reform Deferred to Year’s End,” *Global Security Newswire*, August 24, 2009.

## Exploring Alternatives

There appear to be four possible alternatives to the status quo:

- a. Transferring the NNSA, in whole or in part, to the DOD or making the NNSA a defense agency;
- b. Transferring parts of the NNSA to other agencies, as appropriate;
- c. Spinning off the NNSA as an independent agency; or
- d. Creating a new independent agency reporting directly to the president or through the secretary of energy.

Let us examine each in turn.

*Transfer the NNSA, in whole or in part, to the DOD or make the NNSA a defense agency*

This appears to have been the objective behind the study requested by the OMB, although the exact reasoning for the request is still unclear. Giving the DOD full responsibility for the nuclear weapons program for the first time since 1947 would lead to significant changes. First and foremost, it would require the DOD to devote greater attention, and funding, to nuclear weapons. Given a spate of recent problems at the operational unit level relating to nuclear readiness and security, this could be a good thing.

The concerns raised by the senators cited above and others with regard to a military “takeover” of the program are largely misplaced. As a practical matter, the DOD has controlled all operational nuclear weapons deployed outside the United States since 1952, after wresting control from the AEC, and all deployed nuclear weapons since the early 1960s. There is no evidence of a more cavalier military attitude toward nuclear weapons since then. In fact, compared to civilian leaders and policymakers, military officials have been generally more restrained about and more supportive of reductions in nuclear weapons.

Under this option, the DOD would have to budget for the full cost of maintaining, enhancing, and reducing the nuclear stockpile, and consider tradeoffs vis-à-vis conventional weapons. Some knowledgeable outside observers seem to view this as a threat to the continuing viability of the nuclear stockpile, fearing that the relatively small nuclear weapons program (about \$6.6 billion in fiscal 2008) will

not receive sufficient funding or attention within the large DOD bureaucracy.<sup>8</sup> That could happen, but it is not a given that it would. Nevertheless, it is telling that critics of this option worry that the DOD at the senior leadership level is insufficiently interested in nuclear weapons to maintain an effective nuclear arsenal. Importantly, however, shifting responsibility to the DOD would also shift primary congressional budgetary responsibility from the frequently critical energy and water development subcommittees (especially in the House of Representatives) to the generally more supportive defense appropriations subcommittees.

Removing the nuclear weapons program from the DOE would allow that agency to devote far more attention to energy research and development, an issue of growing concern in an era of climate change and dwindling natural resources like oil and natural gas. But other nuclear weapons-related programs would probably remain under the DOE's purview. These include environmental restoration and waste management programs, which address the toxic and radioactive legacies of past weapons production activities. In addition, the DOE, through the national laboratories, oversees a host of nonproliferation programs. If the laboratories were to come under the control of the DOD, it probably would not make sense to split off the nonproliferation programs, given the overlap in personnel and facilities.

This raises an important intangible concern. Notwithstanding the military's general circumspection regarding nuclear weapons, putting the DOD in complete control of the program could be misinterpreted—by adversaries and allies alike—as an effort to “revive” nuclear weapons or increase their importance relative to conventional weapons. Such a view, if widely held, could work at cross-purposes with the Obama administration's efforts to deemphasize nuclear weapons. In addition, the DOE is far more transparent than the DOD when it comes to nuclear weapons, budgetarily and in many other ways. A shift to the DOD could undo decades of work to make the nuclear weapons complex more open and accountable to Congress and local stakeholders.

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<sup>8</sup> See, for example, Linton F. Brooks, “Alternatives to the Current NNSA Model,” in Taylor A. Bolz, ed., *In the Eyes of Experts: Analysis and Comments on America's Strategic Posture* (United States Institute of Peace Press, 2009), 114-25. Brooks, the former administrator of the NNSA, does an excellent job of explaining the various options available to policymakers.

*Transfer parts of the NNSA to other agencies, as appropriate*

This option would seem to be a nonstarter, primarily because it would create more problems than it would resolve.

The NNSA can be divided up by functions or by facilities. Functionally, the NNSA works on nuclear weapons, nuclear nonproliferation, and naval reactors (the latter being a program jointly run with the navy and thus probably the easiest and most logical thing to transfer to the DOD). Within the nuclear weapons program, the NNSA's activities include maintaining and certifying the nuclear stockpile, maintaining the capability to fabricate components for nuclear weapons, testing nuclear weapons, dismantling nuclear weapons, and being prepared to respond to incidents of nuclear terrorism. Nuclear nonproliferation work includes managing, securing, and disposing of fissile materials (plutonium and highly enriched uranium) primarily in the United States but also overseas (largely in Russia and the former Soviet republics). Counterterrorism incident response could be relocated to the Department of Homeland Security, but it is far from clear that this would save money or improve accountability or effectiveness. Naval reactors, as previously mentioned, could be moved to the DOD with little or no disruption, but this program is relatively small (less than \$1 billion a year) and among the better managed components in the NNSA portfolio. And moving the nonproliferation work anywhere else is problematic given its dependence on people and equipment associated with the weapons laboratories and other NNSA weapons facilities. That work does not have a natural constituency within the DOD (apart from the small cadre of people working on cooperative threat reduction programs) or any other agency, and transferring it elsewhere risks disrupting its work or worse. Given the Obama administration's emphasis on nuclear security, and in particular on securing weapons-usable nuclear materials worldwide over the next several years, reshuffling this particular part of the nuclear bureaucracy does not seem particularly auspicious.

*Spin off the NNSA as an independent agency*

In this option, NNSA would move from being semi-autonomous to fully autonomous. By making a clean break from the DOE, civilian oversight of the nuclear weapons program would be retained and the DOE could focus its complete attention on energy-related programs and the cleanup of formerly used nuclear weapons facilities.



But the problems confronting the NNSA run deeper than lines of authority. To a very real extent they permeate the culture of the organization, a culture dating back decades. Although operating on its own could remove some constraints and problems, it seems likely that at least some managerial and budgetary problems, as well as attitudes about the proper role of congressional oversight, could migrate to the “new” NNSA.

It is also worth noting that some advocates of a change in NNSA management, including Linton Brooks, argue that excessive oversight and regulation, in particular by senior DOE managers, is impeding the NNSA’s ability to do its job. While this may be true, it is important to remember that a persistent lack of oversight and regulation—by the DOE and by Congress—contributed to a number of serious problems at the weapons complex, including huge cost overruns, major programs falling years behind schedule, and, not least, the scope and ultimate expense of the environmental management program, created in 1989 to address decades of mismanagement of radioactive and toxic waste. Drastically curtailing or removing regulations intended to prevent a repeat of such serious problems should be done with great care and only with congressional and public stakeholder involvement.

*Create a new independent agency reporting directly to the president or through the secretary of energy*

If the NNSA’s problems truly reside within, perhaps a better approach is to start from scratch. Creating an entirely new agency from the ground up would have many advantages. New lines of authority and managerial approaches could be made to order instead of being borrowed or inherited. Increased operational and budgetary transparency could be built in, not tacked on. A completely new agency would reflect the President Obama’s preference for transformational—as opposed to incremental—change.

But such change would not come easily. Completely reorganizing a major bureaucracy would take time to implement, perhaps one or two years. And as the creation of the NNSA itself and the more recent formation of the DHS demonstrate, such change can be complicated and confusing. Moreover, given the unique nature of many of the NNSA’s functions, more than a few essential positions would have to be filled, at least initially, by NNSA holdovers, increasing the risk of old habits migrating to new offices. Strong, effective, and consistent oversight by the new

agency leader, his or her deputies, and by the relevant congressional committees could lessen the risk, but only to a certain extent. And it is important to note that no one has proposed changing the GOCO model, which lies at the heart of many of the NNSA's longstanding problems. Indeed, it is difficult to imagine a system that does not involve private contractors, although changes in federal oversight could make a significant difference in containing cost overruns and keeping programs on schedule.

Another concern is how new reporting arrangements would affect the status and effectiveness of the nuclear weapons program. If the program did not reside in a cabinet-level agency, or have a cabinet-level advocate, some worry that it might not get the attention or resources it needs, especially during a period of budgetary constraints.

## **Conclusion**

Any change from the status quo has the potential to create serious distractions at a time when the Obama administration is making nonproliferation and disarmament a cornerstone of U.S. foreign policy. On the other hand, *not* changing anything could jeopardize implementation of the administration's plans, including those in the Nuclear Posture Review.

As debate grows about the future purpose and utility of U.S. nuclear weapons, and as the president moves to reorient U.S. nuclear policy and posture to at long last reflect the changes wrought by the end of the Cold War, it is an ideal time to review the leadership and management structure of the nuclear weapons production complex.