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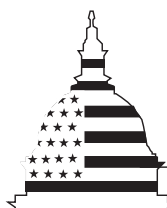
Before the Subcommittee on Energy and Environment,
Committee on Science and the Subcommittee on Energy
and Power, Committee on Commerce, House of
Representatives

For Release
on Delivery
Expected at
10:00 a.m. EDT
Tuesday
July 13, 1999

DEPARTMENT OF ENERGY

Need to Address Longstanding Management Weaknesses

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G A O

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Messrs. Chairmen and Members of the Subcommittees:

We are here today to testify on proposals for reorganizing the Department of Energy (DOE). As you know, there is renewed concern about DOE's management of its missions after recent revelations that foreign countries have obtained nuclear weapons designs and other classified information. Our testimony today discusses (1) long-standing weaknesses in DOE's management that we have identified over the past several years, (2) the effect that current proposals to deal with national security weaknesses would have on addressing these weaknesses, and (3) a framework for evaluating DOE's missions and possible reorganization. Our testimony is based on our management reviews of DOE and our past and ongoing work on a wide variety of DOE programs and activities.¹

In summary, the current security problems facing DOE underscore long-standing weaknesses in the Department's management structure and processes. While the current security lapses raise serious concerns, any number of past DOE management problems could have easily triggered today's debate. For example, DOE's long-standing failures in managing major environmental cleanup projects also illustrate the need to fundamentally change how DOE operates. At the core of DOE's weaknesses is its inability to manage its disparate missions within a highly complex organizational structure. In particular, unclear lines of authority throughout DOE have long resulted in weak oversight of contractors and poor accountability for program management, leading us to identify contracting as a "high risk" activity. For decades, DOE has failed to respond to reports by us, external experts, and its own consultants that highlight these weaknesses. Additionally, DOE has resisted independent regulatory oversight over nuclear and worker safety, perpetuating a perception that it lacks accountability. DOE has also been reluctant to open up key laboratory contracts to new bidders, reducing confidence that it has hired the most capable and responsive contractor.

While the recent proposals for reorganizing DOE's national security mission will clarify some lines of authority, a more complete solution is needed. Current proposals assume that existing missions are still valid in their present forms and that DOE is still the best place to manage them. Along with many of the experts we surveyed, we think a more fundamental rethinking of missions is in order. A framework exists for evaluating DOE's missions by asking basic questions about both the validity of missions and

¹A list of related products appears at the end of this statement.

their organizational placement. Indeed, now is an ideal time for reconstructing DOE into a more manageable agency.

Background

Created predominantly to deal with the energy crisis of the 1970s, DOE's mission and budget priorities have changed dramatically over time. By the early 1980s, its nuclear weapons production had grown substantially; and following revelations about environmental mismanagement in the mid-to-late-1980s, DOE's cleanup budget began to expand—and now overshadows other activities. With the Cold War's end, DOE found new or expanded missions in industrial competitiveness and science. Responding to changing missions and priorities with organizational structures, processes, and practices that had been established largely to build nuclear weapons has been a daunting task for DOE. For example, DOE's approach to contract management, first created during the World War II Manhattan Project, allowed private contractors to manage and operate billion-dollar facilities with minimal direct federal oversight, yet reimbursed them for all their costs regardless of their actual achievements. After a number of reports by us and other oversight groups, DOE is now attempting to impose modern standards for accountability and performance.

DOE Has Long-Standing Management Weaknesses

We recently testified that security problems at DOE's laboratories reflect a lack of accountability.² The well-documented history of security lapses in the nuclear weapons complex shows that DOE fails to hold its contractors accountable for meeting essential responsibilities. Achieving accountability in DOE is made difficult by its complex and ever-changing organizational structure. Past advisory groups and internal DOE studies have often reported on the Department's dysfunctional structure, with unclear chains of command among headquarters, field offices, and contractors. For example:

- The FBI, which examined DOE's counterintelligence activities in 1997, noted a gap between authority and responsibility, particularly when national interests compete with the specialized interests of the academic or corporate managements that operate the laboratories. The FBI found that the autonomy that DOE grants has made national guidance, oversight, and accountability of counterintelligence programs arduous and inefficient.

²Department of Energy: Key Factors Underlying Security Problems at DOE Facilities (GAO/T-RCED-99-159, April 20, 1999).

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- A 1997 report by the Institute for Defense Analyses (IDA) cited serious flaws in DOE's organizational structure. IDA noted long-standing concerns in DOE about how best to define the relationships between field offices and the headquarters program offices that sponsor work. IDA concluded that "the overall picture that emerges is one of considerable confusion over vertical relationships and the roles of line and staff officials." As a consequence of DOE's complex structure, the Institute reported, unclear chains of command led to the weak integration of programs and functions across the Department and confusion over the difference between line and staff roles.³
 - A 1997 DOE internal report stated that "lack of clarity, inconsistency, and variability in the relationship between headquarters management and field organizations has been a longstanding criticism of DOE operations This is particularly true in situations when several headquarters programs fund activities at laboratories."⁴
 - DOE's Laboratory Operations Board also reported in 1997 that there were inefficiencies due to DOE's complicated management structure. The Board recommended that DOE undertake a major effort to rationalize and simplify its headquarters and field management structure to clarify roles and responsibilities.⁵
 - As far back as 1982, an advisory group recognized the need for organizational change in DOE. In its 1982 report, DOE's Energy Research Advisory Board noted the "layering and fractionation of managerial and research and development responsibilities in DOE on an excessive number of horizontal and vertical levels."⁶

Our own work has shown that DOE's success with managing big projects is not outstanding. From 1980 through 1996, we found that DOE conducted 80 projects that it designated as "major system acquisitions"—its largest and

³The Organization and Management of the Nuclear Weapons Program, Institute for Defense Analyses (March 1997).

⁴DOE Action Plan for Improved Management of Brookhaven National Laboratory, DOE (July 1997).

⁵Department of Energy: Uncertain Progress in Implementing National Laboratory Reforms, (GAO/RCED-98-197, Sept. 10, 1998).

⁶The Department of Energy Multiprogram Laboratories: A Report of the Energy Research Advisory Board to the United States Department of Energy (Sept. 1982).

most critical projects—ranging in cost from \$100 million to billions of dollars.⁷ As of June 1996, 31 of the projects had been terminated before completion after total expenditures of over \$10 billion. Only 15 of the projects were completed, and most of them were finished behind schedule and with cost overruns. Furthermore, 3 of the 15 completed projects had yet to be used for their intended purposes. The remaining 34 projects continue, many with substantial overruns and “schedule slippage.” For example, we found that DOE has spent a decade and almost one-half billion dollars building the in-tank precipitation facility at its Savannah River location. While initially expected to cost \$32 million and take 3 years, DOE now estimates it will take until 2007 to complete and cost \$2-3 billion. DOE estimates that that it may cost up to \$75 billion if the proposed alternative is not effective. The project was originally expected to cost \$103 million and is still not completed.⁸ A National Research Council committee that examined DOE’s project management skills recently concluded, “The fundamental deficiency is DOE’s organization and culture.”⁹

DOE’s fundamental organizational problem is that laboratory contractors and their field offices receive funding, program direction and oversight from several different headquarters offices, which sometimes have overlapping responsibilities. Creating a “clean” line of accountability within DOE’s complex structure has not yet been achieved.

The events in 1997 at the Brookhaven National Laboratory in New York illustrate the consequences of organizational confusion and accountability lapses. The Secretary of Energy at that time—Frederico Peña—fired the contractor operating the laboratory when he learned that the contractor had breached the community’s trust by failing to ensure it could operate safely. DOE’s own oversight report on Brookhaven concluded that the Department did not have a clear chain of command over environment, safety, and health matters and, as a result, laboratory performance suffered in the absence of DOE accountability. In another example, DOE gave the University of California an “excellent” score for managing safeguards and security at the Los Alamos National Laboratory for 1998, even though the number of security breaches had risen dramatically. Another DOE evaluation, for 1998, criticized the University for its handling of safeguards and security matters. DOE’s complex organization stems from the multiple levels of reporting that exist among contractors, field offices,

⁷Department of Energy: Opportunity to Improve Management of Major System Acquisitions, (GAO/RCED-97-17, Nov. 26 1996).

⁸Nuclear Waste: Process to Remove Radioactive Waste From Savannah River Tanks Fails to Work (GAO/RCED-99-69, Apr. 30, 1999).

⁹Improving Project Management In The Department of Energy, National Research Council, 1999.

and headquarters program offices. To improve accountability, DOE has tried several different reporting schemes over the past several years. For example, until recently DOE's field units—operations offices—reported directly to a central office, under a structure that had been in place for several years. Thus, while the Los Alamos National Laboratory is primarily funded by Defense Programs, it reported to a field manager who, in turn, reported to a central field management office that then reported to an Under Secretary. To correct this meandering line of authority, operations offices now report directly to program offices. But this approach to reporting was tried under former Secretary Watkins and was eventually abandoned when field and laboratory staff became frustrated by having to report to both program and staff offices on the same issues. The former Secretary wanted more direct lines of reporting to allow focused attention on environment, safety and health matters.

Furthermore, DOE's reluctance to allow external oversight for nuclear safety and worker health and safety at its facilities perpetuates the Department's chronic lack of accountability. Virtually all other federal agencies are externally regulated for nuclear and worker safety. Similarly, despite a 5-year-old competition policy, DOE has never opened up for bidding its multi-billion dollar laboratory contracts with the University of California. As a result, DOE cannot know whether other contractors could perform better at lower cost than the University of California. By contrast, DOE has competed many other laboratory contracts.

Current Proposals for Change Are Incomplete and Will Not Address DOE's Major Problems

We believe that DOE's organizational weaknesses are a major reason for the Department's failure to develop long-term solutions to its recurring problems. To solve the national security problems revealed in recent allegations, several reorganization options have been proposed. One approach would create a separate agency within DOE, to be managed by a new Under Secretary for National Security. Another would create a semiautonomous agency whose director would report directly to the Secretary. Another would transfer DOE's nuclear weapons activities to the Department of Defense.

While each of these proposals clarifies some lines of authority in the national security area, they are a piecemeal approach to DOE's structural problems and ignore the broader organizational issues. Historically, DOE has made piecemeal changes in response to contemporary problems without undertaking a more fundamental assessment of its missions. For example, former Secretary Watkins redirected lines of reporting to correct

environment, safety, and health deficiencies, and former Secretary O’Leary made changes to reflect DOE’s expanding role in science and technology competitiveness issues. None of these efforts had long-term success. Reorganization efforts that ignore the broader picture could create new, unintended consequences.

To gain insight into DOE’s structural issues, experts we consulted in a 1994 survey supported the view that, at a minimum, a serious reevaluation of DOE’s basic missions is needed. We surveyed nearly 40 former DOE executives and experts on energy policy about how the Department’s missions relate to current and future national priorities. Our respondents included a former President, four former Secretaries of Energy, former Deputy and Assistant Secretaries of Energy, and individuals with distinguished involvement in issues of national energy policy.

Overwhelmingly, those respondents emphasized that DOE should focus on its core missions. Many believed that DOE must re-focus its attention to such energy-related missions as energy policy, energy information, and research and development on energy supply. A majority favored removing many of the remaining missions from DOE to other agencies or entities. For example, many respondents suggested moving

- basic research to the National Science Foundation, the Commerce or Interior departments, other federal agencies, or a new public-private entity;
- some multiprogram national laboratories to other federal agencies (or sharing their missions with other agencies);
- the management and disposal of civilian nuclear waste to a new public-private organization, a new government agency, or the Environmental Protection Agency (EPA);
- nuclear weapons production and waste cleanup to the Department of Defense (DOD) or a new government agency and waste cleanup to the Environmental Protection Agency;
- environment, safety, and health activities to the Environmental Protection Agency or other federal entities;
- arms control and verification to DOD, the State Department, or a new government nuclear agency;
- activities furthering industrial competitiveness to the Commerce Department or a public-private organization; and
- science education to the National Science Foundation or another federal agency.

DOE is taking some steps to improve its management of both national security activities and its other missions. For example, DOE recently realigned several of its national security functions into new offices to eliminate overlap and to sharpen focus. To improve its laboratory management, a Laboratory Operations Board was created to provide policy direction on laboratory mission and management issues. DOE also identified four “business lines” for making strategic decisions, developed “roadmaps” for managing its major science and technology activities, and began a long-range program to make its contracting practices more business-like and results-oriented. Although these changes are important, they all assume that existing missions are still valid in their present forms and that DOE is still the best place to manage them. Along with many of the experts we surveyed, we concluded that a more fundamental rethinking of missions is in order.

A Framework Exists for Evaluating DOE’s Missions

Two fundamental questions are a good starting point for developing a framework to evaluate the future of DOE and its missions:

- Which missions should be eliminated because they are no longer valid governmental functions?
- For those missions that are governmental, what is the best organizational placement of the responsibilities?

Once agreement is reached on the appropriate governmental missions, a practical set of criteria could be used to evaluate the best organizational structure for each mission. These criteria—originally used by an advisory panel for evaluating alternative approaches to managing DOE’s civilian nuclear waste program¹⁰ allow for rating each alternative structure on the basis of its ability to promote cost-effective practices, attract talented technical specialists, be flexible in responding to changing conditions, and be accountable to stakeholders. Using these criteria could help identify more effective ways to implement missions, particularly those that could be privatized or reconfigured under alternative governmental forms.

Appendix I summarizes these criteria.

Our work and others’ has revealed the complex balancing of considerations in reevaluating missions. In general, deciding the best place to manage a specific mission involves assessing the advantages and

¹⁰Managing Nuclear Waste—A Better Idea, Advisory Panel on Alternative Means of Financing and Managing Radioactive Waste Facilities (Dec. 1984).

disadvantages of each alternative institution for its potential to achieve that mission, produce integrated policy decisions, and improve efficiency. Potential efficiency gains (or losses) that might result from moving parts of DOE to other agencies need to be balanced against the policy reasons that first led to placing that mission in the Department.

For example, transferring the nuclear weapons complex to DOD, as is proposed by some, would require carefully considering many policy and management issues. Because of the declining strategic role of nuclear weapons, some experts argue that DOD might be better able to balance resource allocations among nuclear and other types of weapons if the weapons complex were completely under its control. Others argue, however, that the need to maintain civilian control over nuclear weapons outweighs any other advantages and that few gains in efficiency would be achieved by employing DOD rather than DOE supervisors. Some experts we consulted advocated creating a new federal agency for weapons production.

Similarly, moving the responsibility for cleaning up DOE's defense facilities to another agency or to a new institution, as proposed by some, requires close scrutiny. For example, a new agency concentrating its focus on cleanup exclusively would not have to allocate its resources among competing programs and could maximize research and development investments by achieving economies of scale in applying cleanup technology more broadly. On the other hand, separating cleanup responsibility from the agency that created the waste may limit incentives to reduce waste and to promote other environmentally sensitive approaches. In addition, considerable startup time and costs would accompany a new agency, at a time when the Congress is interested in limiting the size of government and controlling its costs.

DOE's task force on the future of the national laboratories (the Galvin Task Force) has suggested creating private or federal-private corporations to manage most or all of the laboratories.¹¹ Under this arrangement, nonprofit corporations would operate the laboratories under the direction of a board of trustees that would channel funding to various laboratories to meet the needs of both government and nongovernment entities. DOE would be a customer, rather than the direct manager, of the labs. The Galvin proposal raises important issues for the Congress to consider, such

¹¹The Secretary of Energy asked Robert Galvin, Chairman of Motorola Corporation, to chair a task force to analyze the national laboratories. Its report was titled Alternative Futures for the Department of Energy National Laboratories, Secretary of Energy Advisory Board, Task Force on Alternative Futures for the Department of Energy National Laboratories (Feb. 1995).

as how to (1) monitor and oversee the expenditure of public funds by privately managed and operated entities; (2) continue the laboratories' significant responsibilities for addressing environment, safety, and health problems at their facilities, some of which are governed by legal agreements between DOE, EPA, and the states; and (3) safeguard federal access to facilities so that national priorities, including national security missions, are met. Other alternatives for managing the national labs exist: Each has advantages and disadvantages, and each needs to be evaluated in light of the laboratories' capabilities for designing nuclear weapons and pursuing other missions of national and strategic importance. Furthermore, the government may still need facilities dedicated to national and defense missions, a possibility that would heavily influence any future organizational decisions.

Finally, another set of criteria, developed by the National Academy of Public Administration in another context, could be useful for determining whether DOE should remain a cabinet-level department.¹² These criteria, which are summarized in appendix II, pose such questions as the following: "Is there a sufficiently broad national purpose for the Department? Are cabinet-level planning, executive attention, and strategic focus necessary to achieve the Department's mission goals? Is cabinet-level status needed to address significant issues that otherwise would not be given proper attention?"

Although DOE has a strategic plan, it assumes the validity of the existing missions and their placement in the Department. But DOE alone cannot make these determinations. They require a cooperative effort among all stakeholders, with the Congress and the administration responsible for deciding which missions are needed and how best to implement them. The requirements of the Government Performance and Results Act reinforce this concept by providing a legislative vehicle for the Congress and agencies to use to improve the way government works. The act requires, among other things, strategic plans based on consultation with the Congress and other stakeholders. These discussions are an important opportunity for the Congress and the executive branch to jointly reassess and clarify the agencies' missions and desired outcomes.¹³

Our work has shown that to be effective, decisions about the structure and functions of the federal government should be made in a thorough

¹²Evaluation of Proposals to Establish a Department of Veterans Affairs (Mar. 1988).

¹³Managing for Results: Key Steps and Challenges in Implementing GPRA in Science Agencies (GAO/T-GGD/RCED-96-214, July 10, 1996).

manner, with careful attention to the effects of changes in one agency on the workings of other agencies.¹⁴ Specifically, reorganization demands a coordinated approach, within and across agency lines, supported by a solid consensus for change; it should seek to achieve specific, identifiable goals; attention must be paid to how the federal government exercises its role; and sustained oversight by the Congress is needed to ensure effective implementation.

Messrs. Chairmen, this concludes our statement. We would be happy to respond to any questions you or Members of the Subcommittees may have.

Contacts and Acknowledgements

For future contacts regarding this testimony, please call Victor Rezendes at (202) 512-3841. Individuals making key contributions to this testimony included Gary R. Boss, William Lanouette, and Melissa Francis.

¹⁴Government Reorganization: Issues and Principles (GAO/T-GGD/AIMD-95-166, May 17, 1995).

Criteria for Evaluating DOE's Missions

The following criteria, adapted from a former DOE advisory panel that examined the Department's civilian nuclear waste program, offers a useful framework for evaluating alternative ways to manage missions. These criteria were created to judge the potential value of several different organizational arrangements that included an independent federal commission, a mixed government-private corporation, and a private corporation.

Mission orientation and focus: Will the institution be able to focus on its mission(s) or will it be encumbered by other priorities? Which organizational structure will provide the greatest focus on its mission(s)?

Credibility: Will the organizational structure be credible, thus gaining public support for its action?

Stability and continuity: Will the institution be able to plan for its own future without undue concern for its survival?

Programmatic authority: Will the institution be free to exercise needed authority to accomplish its mission(s) without excessive oversight and control from external sources?

Accessibility: Will stakeholders (both federal and state overseers as well as the public) have easy access to senior management?

Responsiveness: Will the institution be structured to be responsive to all its stakeholders?

Internal flexibility: Will the institution be able to change its internal systems, organization, and style to adapt to changing conditions?

Political accountability: How accountable will the institution be to political sources, principally the Congress and the President?

Immunity from political interference: Will the institution be sufficiently free from excessive and destructive political forces?

Ability to stimulate cost-effectiveness: How well will the institution be able to encourage cost-effective solutions?

Technical excellence: Will the institution attract and retain highly competent people with the requisite skills needed to accomplish its mission?

Ease of transition: What will be the costs (both financial and psychological) of changing to a different institution?

Criteria for Evaluating Cabinet-Level Status

The following criteria were developed by the National Academy of Public Administration as an aid to deciding whether a government organization should be elevated to be a cabinet department. However, they raise issues that are relevant in judging cabinet-level status in general.

1. Does the agency or set of programs serve a broad national goal or purpose not exclusively identified with a single class, occupation, discipline, region, or sector of society?
2. Are there significant issues in the subject area that (1) would be better assessed or met by elevating the agency to a department, and (2) are not now adequately recognized or addressed by the existing organization, the President, or the Congress?
3. Is there evidence of impending changes in the type and number of pressures on the institution that would be better addressed if it were made a department? Are such changes expected to continue into the future?
4. Would a department increase the visibility of, and thereby substantially strengthen the active political and public support for, actions and programs to enhance the existing agency's goals?
5. Is there evidence that becoming a department would provide better analysis, expression, and advocacy of the needs and programs that constitute the agency's responsibilities?
6. Is there evidence that elevation to a cabinet department would improve the accomplishment of the existing agency's goals?
7. Is a department required to better coordinate or consolidate programs and functions that are now scattered throughout other agencies in the executive branch of government?
8. Is there evidence that a department—with increased centralized political authority—would result in a more effective balance within the agency between integrated central strategic planning and resource allocation and the direct participation in management decisions by the line officers who are responsible for directing and managing the agency's programs?

9. Is there evidence of significant structural, management, or operational weaknesses in the existing organization that could be better corrected by elevation to a department?

10. Is there evidence that there are external barriers and impediments to timely decision-making and executive action that could be detrimental to improving the efficiency of the existing agency's programs? Would elevation to a department remove or mitigate these impediments?

11. Would elevation to a department help recruit and retain better qualified leadership within the existing agency?

12. Would elevation to a department promote more uniform achievement of broad, cross-cutting national policy goals?

13. Would elevation to a department strengthen the Cabinet and the Executive Office of the President as policy and management aids for the President?

14. Would elevation to a department have a beneficial or detrimental effect upon the oversight and accountability of the agency to the President and the Congress.

Related GAO Products

Department of Energy: Key Factors Underlying Security Problems at DOE Facilities (GAO/T-RCED-99-159, Apr. 20, 1999)

Department of Energy: Uncertain Progress in Implementing National Laboratory Reforms (GAO/RCED-98-197, Sept. 10, 1998).

Department of Energy: Contract Reform Is Progressing but Full Implementation Will Take Years (GAO/RCED-97-18, Dec. 10, 1996).

Department of Energy: Opportunity to Improve Management of Major System Acquisitions (GAO/RCED-97-17, Nov. 26, 1996).

Department of Energy: A Framework For Restructuring DOE and Its Missions (GAO/RCED-95-197, Aug. 21, 1995).

Department of Energy: National Laboratories Need Clearer Missions and Better Management (GAO/RCED-95-10, Jan. 27, 1995).

Department of Energy: Challenges to Implementing Contract Reform (GAO/RCED-94-150, Mar. 24, 1994).

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